**Form 20-F // YE 2018**
**Including Management Report (IFRS)**


morphosys
Engineering the Medicines of Tomorrow

**Form 20-F // YE 2018 Including Management Report (IFRS)**

## REFERENCE TABLE 20-F

This document contains information required for the Annual Report on Form 20-F for the year ended December 31, 2018 of MorphoSys AG. Reference is made to the Form 20-F cross reference table contained herein under 'Reference Table – 20-F'. Only the information in this document that is referenced in this Form 20-F cross reference table and this paragraph shall be deemed to be filed with the Securities and Exchange Commission for any purpose. Any additional information in this document which is not referenced in this Form 20-F cross reference table, or the Exhibits themselves, shall not be deemed to be incorporated by reference, shall not be part of the 2018 Annual Report on Form 20-F and is furnished to the Securities and Exchange Commission for information only.

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## 1. INTRODUCTION

We are a clinical-stage biopharmaceutical company dedicated to the discovery, development and commercialization of exceptional, innovative therapies for patients suffering from serious diseases, with a focus on cancer. Based on our leading expertise in antibody, protein and peptide technologies, we, together with our partners, have developed and contributed to the development of more than 100 product candidates. Our broad pipeline spans two business segments: Proprietary Development, in which we invest in and develop product candidates, and Partnered Discovery, in which we generate product candidates for our partners in the pharmaceutical and biotechnology industries against targets identified by our partners. We currently have 29 product candidates in clinical development, including our most advanced proprietary product candidate, MOR208, for the treatment of relapsed or refractory diffuse large B cell lymphoma, or r/r DLBCL. We believe our pipeline of novel and differentiated product candidates has the potential to treat serious diseases and improve the lives of patients.

Based on our heritage as an antibody discovery and development company, we have a large and diverse pipeline, composed of both proprietary and partnered programs, in multiple therapeutic areas and across all development phases. The combination of our technology platforms and antibody expertise has allowed us to generate promising product candidates and enter into multiple strategic collaborations with leading global pharmaceutical and biotechnology companies. These collaborations provide us with an additional funding source and allow us to leverage our collaborators' expertise to advance the development of our proprietary product candidates.

## 2. SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This report contains forward-looking statements concerning our business, operations and financial performance and condition as well as our plans, objectives and expectations for our business operations and financial performance and condition. Any statements that are not of historical facts may be deemed to be forward-looking statements. You can identify these forward-looking statements by words such as "believes", "estimates", "anticipates", "expects", "plans", "intends", "may", "could", "might", "will", "should", "aims" or other similar expressions that convey uncertainty of future events or outcomes. Forward-looking statements appear in a number of places throughout this report and include statements regarding our intentions, beliefs, assumptions, projections, outlook, analyses or current expectations concerning, among other things, our intellectual property position, results of operations, cash needs, financial condition, liquidity, prospects, growth and strategies, the industry in which we operate and the trends that may affect the industry or us.

By their nature, forward-looking statements involve risks and uncertainties because they relate to events, competitive dynamics and industry change, and depend on economic circumstances that may or may not occur in the future or may occur on longer or shorter timelines than anticipated. Although we believe that we have a reasonable basis for each forward-looking statement contained in this report, we caution you that forward-looking statements are not guarantees of future performance and involve known and unknown risks, uncertainties and other factors that are in some cases beyond our control. All of our forward-looking statements are subject to risks and uncertainties that may cause our actual results to differ materially from our expectations. These forward-looking statements include, without limitation, statements about the following:

- the timing, progress and results of preclinical studies and clinical trials for our product candidates, including statements regarding the timing of initiation and completion of studies or trials and related preparatory work, the period during which the results of the trials will become available and our research and development programs;
- the timing of and our ability to obtain and maintain regulatory approval for our product candidates;
- the proposed clinical development pathway for MOR208 and our other product candidates, and the acceptability of the results of such trials for regulatory approval of such product candidates by the U.S. Food and Drug Administration (FDA) or comparable foreign regulatory authorities;

- our expectations regarding the size of the patient populations for our product candidates, if approved for commercial use;
- our expectations regarding timing for meetings with regulatory agencies;
- our intent regarding the commercialization of MOR208;
- our estimates of our expenses, ongoing losses, future revenue, capital requirements and our needs for or ability to obtain additional financing;
- our ability to identify and develop new product candidates;
- our ability to identify new collaboration partners and successfully enter into new collaboration arrangements;
- our ability to identify, recruit and retain key personnel;
- our and our collaborators' ability to protect and enforce our intellectual property protection for our proprietary and partnered product candidates, and the scope of such protection;
- our expectations with regard to our future revenues and our future financial condition;
- our expectations regarding the future development of MOR202 in MM;
- the development of and projections relating to our competitors or our industry; and
- our expectations regarding the time during which we will be an emerging growth company under the JOBS Act and a foreign private issuer.

Actual results could differ materially from our forward-looking statements due to a number of factors, including, the risks set forth under the section "Risk Factors" of this report and elsewhere in this report.

Any forward-looking statements that we make in this report speak only as of the date of such statement, and we undertake no obligation to update such statements to reflect events or circumstances after the date of this report or to reflect the occurrence of unanticipated events.

## 3. RISK FACTORS

Investing in our shares involves a high degree of risk. You should carefully consider the risks and uncertainties described below, which we believe are the material risks of our business, our industry, our intellectual property, our shares, before making an investment decision. If any of the following risks actually occurs, our business, financial condition and operating results could be harmed. In that case, the trading price of our shares could decline and you might lose all or part of your investment. In assessing these risks, you should also refer to the other information contained in this report, including MorphoSys AG's consolidated financial statements and the related notes thereto appearing elsewhere in this report. In addition, more detailed information on the risk management system as a basis for internal risk and opportunity management can be found in the "Risk and Opportunity Report" (see Section 4f).

### Risks Related to Our Financial Condition

**We cannot assure you of the adequacy of our capital resources to successfully complete the development and commercialization of our product candidates, and a failure to obtain additional capital, if needed, could force us to delay, limit, reduce or terminate one or more of our product development programs or commercialization efforts.**

As of December 31, 2018, we had cash and cash equivalents, financial assets at fair value, with changes recognized in profit or loss, and current and non-current financial assets at amortized cost of € 454.7 million. We

believe that we will continue to expend substantial resources for the foreseeable future developing our proprietary product candidates and in particular MOR208. These expenditures will include costs associated with research and development, conducting preclinical studies and clinical trials, seeking regulatory approvals, as well as launching and commercializing of products approved for sale, if any, and potentially acquiring new products. In addition, other unanticipated costs may arise. Because the outcome of our anticipated clinical trials is highly uncertain, we cannot reasonably estimate the actual amounts necessary to successfully complete the development and commercialization of our proprietary product candidates.

Our future funding requirements will depend on many factors, including but not limited to:

- the numerous risks and uncertainties associated with developing therapeutic product candidates;
- the number and characteristics of product candidates that we pursue;
- the rate of enrollment, the need to expand, progress, costs and outcomes of our clinical trials, which may or may not meet their intended end-points;
- the timing of, and cost involved in, conducting non-clinical studies that are regulatory prerequisites to conducting clinical trials of sufficient duration for successful product registration;
- the cost of manufacturing clinical supply and establishing commercial supply of our product candidates;
- the timing of, and the costs involved in, obtaining regulatory approvals for our product candidates if clinical trials are successful;
- the timing of, and costs involved in, conducting post-approval studies that may be required by regulatory authorities;
- the cost of commercialization activities for our product candidates, if any of our product candidates are approved for sale;
- the terms and timing of any collaborative, licensing, and other arrangements that we may establish, including any required milestone and royalty payments thereunder and any non-dilutive funding that we may receive;
- the costs involved in preparing, filing, prosecuting, maintaining, defending and enforcing patent claims, including litigation costs, if any, and the outcome of any such litigation;
- the timing, receipt, and amount of sales of, or royalties or milestones on, our existing and future products, if any; and
- the costs to recruit and build the commercial organization including key executives needed to transform.

In addition, our operating plan may change as a result of many factors currently unknown to us. As a result of these factors, we may need additional funds sooner than planned. We expect to finance future cash needs primarily through a combination of public or private equity offerings, strategic collaborations and non-dilutive funding. If sufficient funds on acceptable terms are not available when needed, or at all, we could be forced to significantly reduce operating expenses and delay, limit, reduce or terminate one or more of our product development programs or commercialization efforts.

**We have incurred significant losses since inception and anticipate that we will continue to incur losses in the future.**

We are a late-stage biopharmaceutical company. We have incurred significant losses since our inception. Our consolidated net loss for the year ended December 31, 2018 was €56.2 million. As of December 31, 2018, our accumulated deficit was approximately €152.8 million. We expect to continue to incur losses in the future as we continue our research and development of, and seek regulatory approvals for, our product candidates, prepare for

and begin to commercialize any approved product candidates and add infrastructure and personnel to support our product development efforts and operations as a public company in the United States. The net losses and negative cash flows incurred to date, together with expected future losses, have had, and likely will continue to have, an adverse effect on our shareholders' deficit and working capital. The amount of future net losses will depend, in part, on the rate of future growth of our expenses and our ability to generate revenue.

Because of the numerous risks and uncertainties associated with biopharmaceutical product development, we are unable to accurately predict the timing or amount of expenses or when, or if, we will be able to achieve profitability. For example, our expenses could increase if we are required by the FDA or the European Medicines Agency (EMA) to perform trials in addition to those that we currently expect to perform, or if there are any delays in completing our currently planned clinical trials, the partnering process for our proprietary product candidates or in the development of any of our proprietary product candidates.

Our revenue to date has been primarily revenue from the license of our proprietary technology platforms and from milestone and royalty payments for our product candidates against targets provided by our collaborators. Our ability to generate revenue and achieve profitability in the future depends in large part on our ability, alone or with our collaborators, to achieve milestones and to successfully complete the development of, obtain the necessary regulatory approvals for, and commercialize, product candidates. This will require us to be successful in a range of challenging activities, including developing product candidates, obtaining regulatory approval for such product candidates, and manufacturing, marketing and selling those product candidates for which we may obtain regulatory approval. We may never succeed in these activities and may never generate revenue from product sales that is significant enough to achieve profitability. In addition, our revenues depend on the activities of our partners, over which we have no control, in respect of pursuing research and clinical trial activities and, where marketing approval has been granted, commercialization of our product candidates. Even if we achieve profitability in the future, we may not be able to sustain profitability in subsequent periods. Our failure to become or remain profitable would depress our market value and could impair our ability to raise capital, expand our business, develop other product candidates, or continue our operations. A decline in the value of our company could also cause you to lose all or part of your investment.

**Our operating results may fluctuate significantly in the future.**

Our results of operations may fluctuate significantly in the future due to a variety of factors, many of which are outside of our control. The revenues we generate, if any, and our operating results will be affected by numerous factors, including, but not limited to:

- the development status of our product candidates and, particularly, the timing of any milestone payments to be paid or received by us under our collaboration agreements;
- the incurrence of clinical expenses that could fluctuate significantly from period to period;
- the commercial success of the products marketed by our partners, in particular Tremfya®, and the amount of royalties to us associated therewith;
- foreign exchange fluctuations
- the unpredictable effects of collaborations during these periods;
- the timing of our satisfaction of applicable regulatory requirements;
- the rate of expansion of our clinical development and other development efforts;
- the effect of competing technologies and products and market developments; and
- general and industry-specific economic conditions.

If our operating results fall below the expectations of investors or securities analysts, the price of our ordinary shares could decline substantially and any fluctuations in our operating results and cash flows may, in turn, cause the price of our shares to fluctuate substantially.

**Raising additional capital may cause dilution to our shareholders, restrict our operations or require us to relinquish rights to our technologies or product candidates.**

Identifying and acquiring rights to develop potential product candidates and conducting preclinical testing and clinical trials is a time-consuming, expensive and uncertain process that may take years to complete. We may never generate the necessary data or results required to obtain regulatory approval and achieve product sales, and even if one or more of our product candidates is approved, they may not achieve commercial success. Accordingly, we will need to continue to rely on additional financing to achieve our business objectives. Adequate additional financing may not be available to us on acceptable terms, or at all.

We may seek additional funding through a combination of equity offerings, debt financings, including convertible bond offerings, collaborations, licensing arrangements, strategic alliances and marketing or distribution arrangements. To the extent that we raise additional capital through the sale of equity or convertible debt securities, your ownership interest will be diluted, and the terms may include liquidation or other preferences that adversely affect your rights as a holder of our shares. The incurrence of indebtedness or the issuance of certain equity securities could result in increased fixed payment obligations and could also result in certain additional restrictive covenants, such as limitations on our ability to incur additional debt or issue additional equity, limitations on our ability to acquire or license intellectual property rights and other operating restrictions that could adversely impact our ability to conduct our business. In addition, issuance of additional equity securities, or the possibility of such issuance, may cause the market price of our shares to decline. In the event that we enter into collaborations or licensing arrangements to raise capital, we may be required to accept unfavorable terms, including relinquishing or licensing to a third party on unfavorable terms our rights to technologies or product candidates that we otherwise would seek to develop or commercialize ourselves or potentially reserve for future potential arrangements when we might be able to achieve more favorable terms.

**A substantial portion of our historical revenues are from a limited number of strategic collaborations and partnerships, and the termination of these collaborations could have a material adverse effect on our business, financial condition and results of operations.**

Historically, we derived a substantial portion of our revenues from a limited number of collaborations, under which we generated revenues through licensing arrangements such as research and development payments, upfront payments, milestone payments, and, once a product is commercialized, royalty payments based on a portion of the revenue of product sold. We expect royalties from Janssen on sales of Tremfya® to account for a substantial portion of our revenues for the next several years. The loss of any significant collaborator or any significant reduction in payments by a collaborator may have a material adverse effect on our business, financial condition and results of operations.

## Risks Related to the Development, Clinical Testing and Commercialization of Our Product Candidates

**All of our proprietary product candidates are still in preclinical or clinical development, and only one of our partnered products has been approved for marketing and sale. We cannot give any assurance that any of our product candidates will receive regulatory approval, and if we are unable to obtain regulatory approval and ultimately commercialize our product candidates or experience significant delays in doing so, our business will be materially harmed.**

All of our proprietary product candidates are still in preclinical or clinical development, and only one of our partnered products, Tremfya®, has received regulatory approval. Although we may receive certain payments from our collaboration partners, including upfront payments, payments for achieving certain development, regulatory or commercial milestones and royalties, our ability to generate revenue from our product candidates' sales is dependent on receipt of regulatory approval for, and successful commercialization of, such product candidates, which may never occur. Our business and future success is in particular dependent on our ability to develop, either alone or in partnership, successfully, receive regulatory approval for, and then successfully

commercialize our proprietary product candidates, in particular MOR208. Each of our product candidates will require additional preclinical and/or clinical development, regulatory approval in multiple jurisdictions, manufacturing supply, substantial investment and significant marketing efforts before we generate any revenue from product sales or royalties. We are not permitted to market or promote any of our product candidates before we receive regulatory approval from applicable regulatory authorities. The success of our product candidates will depend on several factors, including the following:

- successful completion of preclinical and/or clinical studies;
- successful enrollment of patients in, and completion of, clinical trials;
- successful demonstration of reproducibility in the production process and ability for market supply;
- strategic commitment to particular product candidates and indications by us and our collaborators;
- receipt of regulatory authorizations from applicable regulatory authorities for future clinical trials;
- receipt of product approvals, including marketing approvals, from applicable regulatory authorities;
- successful validation of biomarkers and development of biomarker assays in those studies or programs where biomarkers are part of the development plan
- successful completion of all safety studies required to obtain regulatory approval in the United States, the European Union and other jurisdictions for our product candidates;
- obtaining and maintaining patent and trade secret protection or regulatory exclusivity for our product candidates;
- securing market supply and distribution network
- launching commercial sales of our product candidates, if and when approved, whether alone or in collaboration with others;
- acceptance of the product candidates, if and when approved, by patients, the medical community and third-party payors;
- effectively competing with other therapies and ability to demonstrate clinically meaningful results;
- obtaining and maintaining coverage and adequate reimbursement from third-party payors;
- enforcing and defending intellectual property rights and claims;
- maintaining a continued acceptable safety and quality profile of the product candidates following approval; and
- maintaining a continued, sufficient supply of drug substance in acceptable quality.

If we do not achieve one or more of these factors in a complete and timely manner or at all, we could experience significant delays or an inability to successfully commercialize our product candidates, which would materially adversely affect our business, financial condition, results of operations and prospects and, in case of product candidates, technologies and licenses we have acquired, may result in a significant impairment of assets.

We have not previously submitted a biologics license application, or BLA, to the FDA, or similar regulatory approval filings to comparable foreign authorities, for any product candidate, and we cannot be certain that any of our product candidates will be successful in clinical trials or receive regulatory approval. Further, our product candidates may not receive regulatory approval even if they are successful in clinical trials and CMC (chemistry, manufacturing and controls). If we do not receive regulatory approvals for our product candidates, we may not be able to continue our operations. Even if we successfully obtain regulatory approvals to market one or more of our product candidates, our revenues will be dependent, in part, upon the size of the markets in the territories for which we gain regulatory approval and have commercial rights. If the markets for patient subsets that we are targeting are not as significant as we estimate, we may not generate significant revenues from sales of such products, if approved.

We plan to seek regulatory approval to commercialize our product candidates both in the United States and the EU, and potentially in additional foreign countries. While the scope of regulatory approval is similar in other countries, to obtain separate regulatory approval in many other countries, we must comply with numerous and varying regulatory requirements of such countries regarding safety and efficacy and governing, among other things, clinical trials and commercial sales, pricing and distribution of our product candidates, and we cannot predict success in these jurisdictions.

**Clinical trials are very expensive, time consuming and difficult to design and implement and involve uncertain outcomes. If clinical trials or production of our product candidates are prolonged, delayed or terminated, we may be unable to obtain required regulatory approvals, and therefore be unable to commercialize our product candidates on a timely basis or at all, which may materially adversely affect our business, financial condition, results of operations and prospects.**

We are currently conducting clinical trials for MOR208, MOR202, and MOR106. Each of our clinical trials requires the investment of substantial expense and time and the timing of the commencement, continuation and completion of these clinical trials may be subject to significant delays or termination relating to various causes, including, among other things:

- scheduling conflicts with participating clinicians and clinical institutions;
- difficulties in identifying and enrolling patients who meet trial eligibility criteria;
- failure of patients to complete the clinical trials or return for post-treatment follow-up;
- delays in accumulating the required number of clinical events for data analyses;
- clinical investigators or sites deviating from trial protocol or failing to comply with regulatory requirements or meet their contractual obligations;
- delay or failure to obtain required approvals;
- delays in or failure to reach agreement on acceptable terms with prospective contract research organizations, or CROs, and clinical trial sites, the terms of which can be subject to extensive negotiation and may vary significantly among different CROs and trial sites;
- delays in or failure to obtain institutional review board, or IRB, approval at each site;
- failure of third-party contractors used in our clinical trials or contract manufacturing organizations, or CMOs, to comply with regulatory requirements or meet their contractual obligations in a timely manner, or not at all;
- changes in regulatory requirements;
- the development and approval of competitive products;
- results from clinical trials of competing compounds, which may give rise to concerns about the target, the envisioned mode of action, the compound class or the commercial potential of the product candidate we are evaluating;
- higher-than-expected costs of clinical trials of our product candidates; and
- insufficient, inadequate or prohibitively expensive supply or quality of our product candidates or other materials necessary to conduct clinical trials of our product candidate.

We do not know whether any of our clinical trials will begin as planned, will need to be redesigned or amended or will be completed on schedule, or at all. Clinical testing is expensive and can take many years to complete, and its outcome is inherently uncertain. Failure can occur at any time during the clinical trial process. We could encounter delays if a clinical trial is suspended or terminated by us, by the IRBs of the institutions in which such trials are being conducted, by a data review committee or data safety monitoring board for such trial or by the

FDA or other regulatory authorities. Such authorities may impose such a suspension or termination due to a number of factors, including failure to conduct the clinical trial in accordance with regulatory requirements or our clinical protocols, inspection of the clinical trial operations or trial site by the FDA or other regulatory authorities resulting in the imposition of a clinical hold, safety issues or adverse side effects, failure to demonstrate a benefit from using a drug, changes in governmental regulations or administrative actions or lack of adequate funding to continue the clinical trial. If we experience delays in the completion of, or termination of, any clinical trial of our product candidates, the commercial prospects of our product candidates will be harmed, and our ability to generate product revenues from any of these product candidates will be delayed. In addition, any delays in completing our clinical trials will increase our costs, slow down our product candidate development and approval process and jeopardize our ability to commence product sales and generate revenues. Significant clinical trial delays could also allow our competitors to bring products to market before we do or shorten any periods during which we have the exclusive right to commercialize our product candidates and impair our ability to commercialize our product candidates, and may harm our business and results of operations. In addition, some of the factors that cause, or lead to, a delay in the commencement or completion of clinical trials may also ultimately lead to the denial of regulatory approval of our product candidates.

Clinical trials must be conducted with supplies of our product candidates produced under current good manufacturing practice, or cGMP, requirements and other regulations. Furthermore, we rely on CROs and clinical trial sites to ensure the proper and timely conduct of our clinical trials and while we have agreements governing their committed activities, we have limited influence over their actual performance. We depend on our collaborators and on medical institutions and CROs to conduct our clinical trials in compliance with Good Clinical Practice, or GCP, requirements. To the extent our collaborators or the CROs fail to enroll participants for our clinical trials, fail to conduct the study to GCP standards or are delayed for a significant time or fail in the execution of trials, including achieving full enrollment, we may be affected by increased costs, program delays or both, which may harm our business.

If we are unable to successfully complete clinical trials of our product candidates or other testing, if the results of these trials or tests are unfavorable or are only modestly favorable, if there are safety concerns associated with our product candidates, we may decide to develop in the future, or if we are required to conduct additional clinical trials or other testing of our product candidates that we may develop in future beyond the trials and testing that we contemplate, we may:

- be delayed in obtaining marketing approval for our product candidates;
- not obtain marketing approval at all;
- obtain approval for indications or patient populations that are not as broad as intended or desired;
- obtain approval with product labeling that includes significant use or distribution restrictions or significant safety warnings, including boxed warnings;
- be subject to additional post-marketing testing or other requirements; or
- remove the product from the market after obtaining marketing approval.

The occurrence of any such events may materially adversely affect our business, financial condition, results of operations and prospects.

**The incidence and prevalence for target patient populations of our product candidates are based on estimates and third-party sources. If the market opportunities for our product candidates are smaller than we estimate or if any approval that we obtain is based on a narrower definition of the patient population, our business, financial condition, results of operations and prospects may be materially adversely affected.**

Periodically, we make estimates regarding the incidence and prevalence of target patient populations for particular diseases based on various third-party sources and internally generated analysis and use such estimates

in making decisions regarding our product development strategy, including determining indications on which to focus in preclinical or clinical trials.

These estimates may be inaccurate or based on imprecise data. For example, the total addressable market opportunity will depend on, among other things, the acceptance of such data by the medical community and patient access, product pricing and reimbursement, as well as the approval of new or competing medicines. The number of patients in the addressable markets may turn out to be lower than expected, patients may not be otherwise amenable to treatment with our products, or new patients may become increasingly difficult to identify or gain access to, all of which could materially adversely affect our business, financial condition, results of operations and prospects.

**The speed at which we complete our preclinical studies and clinical trials depends on many factors, including, but not limited to, patient enrollment. If we are unable to enroll patients in our clinical trials, our research and development efforts and business, financial condition, results of operations and prospects could be materially adversely affected.**

Patient enrollment, a significant factor in the timing and successful completion of clinical trials, is affected by many factors, including the size and nature of the patient population, the proximity of patients to clinical sites, the eligibility criteria for the trial, the design of the clinical trial, competing clinical trials and clinicians' and patients' perceptions as to the potential advantages of the product being studied in relation to other available therapies, including any new products that may be approved for the indications we are investigating. Because there is a relatively limited number of patients worldwide, patient enrollment may be challenging. Trials may be subject to delays as a result of patient enrollment taking longer than anticipated or patient withdrawal. Delays in the completion of any clinical trial of our product candidates will increase our costs, slow down our product candidate development and delay or potentially jeopardize our ability to receive regulatory approval, commence product sales and generate revenue. Any of these occurrences may harm our clinical trials, which could materially adversely affect our business, financial condition, results of operations and prospects.

**Results of previous preclinical studies and clinical trials may not be predictive of future results, and the results of our current and planned clinical trials may not satisfy the requirements of the FDA, the EMA or comparable foreign regulatory authorities.**

Positive or timely results from preclinical or early-stage trials do not ensure positive or timely results in late-stage clinical trials or product approval by the FDA, European Medicines Agency, or the EMA, or comparable foreign regulatory authorities. We will generally be required to demonstrate with substantial evidence through well-conducted, possibly controlled clinical trials that our product candidates are safe and effective for use in a well-defined patient population before we can seek regulatory approvals for their commercial sale. Our planned clinical trials may produce negative or inconclusive results, and we or any of our current and future collaborators may decide, or regulators may require us, to conduct additional clinical or preclinical testing. Success in preclinical studies or early-stage clinical trials does not mean that future clinical trials or registration clinical trials will be successful because product candidates in later-stage clinical trials may fail to demonstrate sufficient safety or efficacy to the satisfaction of the FDA, EMA and comparable foreign regulatory authorities, despite having progressed through preclinical studies and initial clinical trials. Product candidates that have shown promising results in early clinical trials may still suffer significant setbacks in subsequent clinical trials. For example, a number of companies in the pharmaceutical industry, including those with greater resources and experience than us, have suffered significant setbacks in advanced clinical trials, even after obtaining promising results in earlier clinical trials. Similarly, interim results of a clinical trial do not necessarily predict final results.

**The regulatory approval processes of the FDA and comparable foreign authorities are lengthy, time consuming and inherently unpredictable and if we fail to obtain regulatory approval in any jurisdiction, we will not be able to commercialize our products in that jurisdiction and our business, results of operations, financial condition and prospects, may be materially adversely affected.**

The time required to obtain approval by the FDA and comparable foreign authorities is unpredictable but typically takes many years following the commencement of clinical trials and depends upon numerous factors, including the substantial discretion of the regulatory authorities. In addition, approval laws, regulations, policies or the type and amount of clinical data or other information necessary to gain approval may change during the course of a product candidate's clinical development and may vary among jurisdictions. We have not obtained regulatory approval for any product candidate, and it is possible that none of our existing product candidates or any product candidates we may seek to develop in the future will ever obtain regulatory approval.

Our product candidates could fail to receive regulatory approval for many reasons, including the following:

- the FDA or comparable foreign regulatory authorities may disagree with the design or implementation of our clinical trials;
- we may be unable to demonstrate to the satisfaction of the FDA or comparable foreign regulatory authorities that a product candidate is safe and effective for its proposed indication;
- the designs of clinical trials might not be considered adequate, or the results of clinical trials may not meet the level of statistical significance required, by the FDA or comparable foreign regulatory authorities for approval;
- we may be unable to demonstrate that a product candidate's clinical and other benefits outweigh its safety risks;
- the FDA or comparable foreign regulatory authorities may disagree with our interpretation of data from preclinical studies or clinical trials;
- the data collected may not be sufficient to support the submission of a BLA or other submission, or to obtain regulatory approval in the United States, the EU or elsewhere;
- the FDA or comparable foreign regulatory authorities may fail to approve the manufacturing processes or facilities of third-party manufacturers with which we contract for clinical and commercial supplies; and
- the laws, regulations or policies of the FDA or comparable foreign regulatory authorities may significantly change in a manner rendering our clinical data or other regulatory submissions insufficient for approval.

In particular, with respect to the development and potential approval of MOR208, we are currently preparing a submission of a regulatory filing with the FDA based on the single-arm L-MIND trial. There may be a risk that the regulatory authorities do not accept a filing and/or grant approval based on single-arm data for MOR208 plus lenalidomide, due to the fact that there is no comparator arm in the study. There might be an additional risk that the regulatory authorities do not accept our strategies to present alternative data, for example by providing historical data as a virtual control arm. We may be unable to gather historical data that support filing or approval.

This approval process may result in failing to obtain regulatory approval to market any of our product candidates, which would significantly harm our business, results of operations and prospects. The FDA, the EMA and other regulatory authorities have substantial discretion in the approval process and determining when or whether regulatory approval will be obtained for any of our product candidates. Even if we believe the data collected from clinical trials of our product candidates are promising, such data may not be sufficient to support approval by the FDA, the EMA or any other regulatory authority.

In addition, even if we were to obtain approval, regulatory authorities may approve any of our product candidates for fewer or more limited indications than we request, may grant approval contingent on the performance of costly post-marketing clinical trials, or may approve a product candidate with a label that does not include the

labeling claims necessary or desirable for the successful commercialization of that product candidate. Any of the foregoing scenarios could materially harm the commercial prospects for our product candidates.

In order to commercialize our products in more than one jurisdiction, we will require separate regulatory approval in each market and compliance with numerous and varying regulatory requirements. The approval procedures vary from country to country and may require additional testing or other steps. Satisfying these and other regulatory requirements is costly, time consuming, uncertain and subject to unanticipated delays. In addition, in many countries outside the United States and in particular in many of the Member States of the European Union, a product must undergo health economic assessments to agree on pricing and/or be approved for reimbursement before it can be approved for sale in that country, or before it becomes commercially viable. The FDA and the EMA may come to different conclusions regarding approval of a marketing application. Approval by the FDA or EMA does not ensure approval by regulatory authorities in other countries or jurisdictions, and approval by one foreign regulatory authority does not ensure approval by regulatory authorities in other foreign countries or by the FDA or EMA. In addition, failure to obtain regulatory approval in any country may delay or have negative effects on the process for regulatory approval in other countries. Clinical trials conducted in one country may not be accepted by regulatory authorities in other countries. We may not obtain regulatory approvals on a timely basis, if at all. We may not be able to file for regulatory approvals and may not receive necessary approvals to commercialize our products in any market. We may be required to conduct additional preclinical studies or clinical trials, which would be costly and time consuming. If we or any future partner are unable to obtain regulatory approval for our product candidates in one or more significant jurisdictions, then the commercial opportunity for our product candidates, and our business, results of operations, financial condition and prospects, may be materially adversely affected.

**The FDA may rescind the breakthrough designation for MOR208 in combination with lenalidomide for the treatment of patients with r/r DLBCL who are not eligible for high-dose chemotherapy and autologous stem cell transplantation and we may be unable to obtain breakthrough therapy designation for other indications. In addition, breakthrough therapy designation by the FDA may not lead to a faster development, regulatory review or approval process, and it may not increase the likelihood that MOR208 will receive marketing approval in the United States.**

Under the Food and Drug Administration Safety and Innovation Act, or FDASIA, the FDA is authorized to give certain products "breakthrough therapy designation". A breakthrough therapy product candidate is defined as a product candidate that is intended, alone or in combination with one or more other drugs, to treat a serious or life-threatening disease or condition and preliminary clinical evidence indicates that such product candidate may demonstrate substantial improvement on one or more clinically significant endpoints over existing therapies. The FDA will seek to ensure the sponsor of a breakthrough therapy product candidate receives intensive guidance on an efficient drug development program, intensive involvement of senior managers and experienced staff on a proactive, collaborative and cross-disciplinary review and a rolling review process whereby the FDA may consider reviewing portions of a marketing application before the sponsor submits the complete application. Product candidates designated as breakthrough therapies by the FDA may be eligible for other expedited programs, such as priority review, if supported by clinical data.

The receipt of breakthrough therapy designation for a product candidate, or acceptance for one or more of the FDA's other expedited programs, may not result in a faster development process, review or approval compared to products considered for approval under conventional FDA procedures and does not guarantee ultimate approval by the FDA. For example, we are evaluating MOR208 in combination with lenalidomide for the treatment of r/r DLBCL; however, lenalidomide (being marketed by Celgene) is currently not approved for the treatment of r/r DLBCL. There are a number of reasons why the FDA may not grant an approval of a registration package for a product candidate. Among these reasons, a pivotal study of the combination of two unapproved product candidates in a particular indication may not alone be acceptable to support approval. Additionally, the FDA may later decide that the product candidate no longer meets the conditions for designation and may withdraw designation at any time or decide that the time period for FDA review or approval will not be shortened.

**Fast track designation for one or more of our product candidates may not actually lead to a faster development or regulatory review or approval process.**

In 2014, we received fast track designation for MOR208 for the treatment of r/r DLBCL. If a product candidate is intended for the treatment of a serious condition, and preclinical or clinical data demonstrate the potential to address unmet medical need for this condition, a product sponsor may apply for FDA fast track designation. Even though we have received fast track designation for MOR208 for the treatment of r/r DLBCL, fast track designation does not ensure that we will receive marketing approval or that approval will be granted within any particular timeframe. We may not experience a faster development or regulatory review or approval process with fast track designation compared to conventional FDA procedures. In addition, the FDA may withdraw fast track designation if it believes that the designation is no longer supported by data from our clinical development program. Fast track designation alone does not guarantee qualification for the FDA's priority review procedures.

**Our product candidates may cause undesirable side effects that could delay or prevent their regulatory approval, limit the commercial profile of an approved label, or result in significant negative consequences following regulatory approval, if any.**

Undesirable side effects that may be caused by our product candidates could cause us, our collaboration partners or the regulatory authorities to interrupt, delay or halt clinical trials and could result in a more restrictive label or the delay or denial of regulatory approval by the FDA, EMA or comparable foreign regulatory authorities. Results of our trials could reveal a high and unacceptable severity and prevalence of side effects. In such an event, our trials could be suspended or terminated and the FDA, EMA or comparable foreign regulatory authorities could order us to cease further development of or deny approval of our product candidates for any or all targeted indications. The product-related side effects could affect patient recruitment or the ability of enrolled patients to complete the trial or result in potential product liability claims.

Clinical trials assess a sample of the potential patient population. With a limited number of patients and duration of exposure, rare and severe side effects of our product candidates may only be uncovered with a significantly larger number of patients exposed to the product candidate. If our product candidates receive regulatory approval and we or others identify undesirable side effects caused by such product candidates (or any other similar products) after such approval, a number of potentially significant negative consequences could result, including:

- regulatory authorities may withdraw or limit their approval of such product candidates and require us to take our approved product(s) off the market;
- regulatory authorities may require the addition of labeling statements, such as a "boxed" warning or a contra-indication, or field alerts to physicians and pharmacies;
- we may be required to create a medication guide outlining the risks of such side effects for distribution to patients;
- we may be required to change the way such product candidates are distributed or administered, conduct additional clinical trials or change the labeling of the product candidates;
- regulatory authorities may require a Risk Evaluation and Mitigation Strategy, or REMS, plan to mitigate risks, which could include medication guides, physician communication plans, or elements to assure safe use, such as restricted distribution methods, patient registries and other risk minimization tools;
- we may be subject to regulatory investigations and government enforcement actions;
- we may decide or be required to remove such product candidates from the marketplace;
- we could be sued and potentially held liable for injury caused to individuals exposed to or taking our product candidates;
- sales of the product(s) may decrease substantially; and
- our reputation may suffer.

Any of these events could prevent us from achieving or maintaining market acceptance of the affected product candidates and could substantially increase the costs of commercializing our product candidates, if approved, and therefore could have a material adverse effect on our business, financial condition, results of operations and prospects.

**We and our collaboration partners have conducted and intend to conduct additional clinical trials for selected product candidates at sites outside the United States, and the FDA may not accept data from trials conducted in such locations or may require additional U.S.-based trials.**

We and our collaboration partners have conducted, currently are conducting and intend in the future to conduct, clinical trials outside the United States, particularly in the European Union where we are headquartered.

Although the FDA may accept data from clinical trials conducted outside the United States, acceptance of this data is subject to certain conditions imposed by the FDA. For example, the clinical trial must be well designed and conducted by qualified investigators in accordance with GCP, including review and approval by an independent ethics committee and receipt of informed consent from trial patients. The trial population must also adequately represent the U.S. population, and the data must be applicable to the U.S. population and U.S. medical practice in ways that the FDA deems clinically meaningful. Generally, the patient population for any clinical trial conducted outside of the United States must be representative of the population for which we intend to seek approval in the United States. In addition, while these clinical trials are subject to applicable local laws, FDA acceptance of the data will be dependent upon its determination that the trials also comply with all applicable U.S. laws and regulations. There can be no assurance that the FDA will accept data from trials conducted outside of the United States. If the FDA does not accept the data from any clinical trials that we or our collaboration partners conduct outside the United States, it would likely result in the need for additional clinical trials, which would be costly and time-consuming and delay or permanently halt our ability to develop and market these or other product candidates in the United States. In other jurisdictions, for instance, in Japan, there is a similar risk regarding the acceptability of clinical trial data conducted outside of that jurisdiction.

In addition, there are risks inherent in conducting clinical trials in multiple jurisdictions, inside and outside of the United States, such as:

- regulatory and administrative requirements of the jurisdiction where the trial is conducted that could burden or limit our ability to conduct our clinical trials;
- foreign exchange fluctuations;
- manufacturing, customs, shipment and storage requirements;
- cultural differences in medical practice and clinical research; and
- the risk that the patient populations in such trials are not considered representative as compared to the patient population in the target markets where approval is being sought.

**The design or our execution of clinical trials may not support regulatory approval.**

The design or execution of a clinical trial can determine whether its results will support regulatory approval and flaws in the design or execution of a clinical trial may not become apparent until the clinical trial is well advanced. In some instances, there can be significant variability in safety or efficacy results between different trials of the same product candidate due to numerous factors, including changes in trial protocols, differences in size and type of the patient populations, adherence to the dosing regimen and other trial protocols and the rate of dropout among clinical trial participants. We do not know whether any phase 2, phase 3 or other clinical trials we or any of our strategic partners may conduct will demonstrate consistent or adequate efficacy and safety to obtain regulatory approval to market our product candidates or whether the regulatory authorities will agree that the design of our or our partners' studies is adequate to support approval.

Further, the FDA, EMA or other regulatory authorities have substantial discretion in the approval process and in determining when or whether regulatory approval will be obtained for any of our product candidates. Our product candidates may not be approved even if they achieve their primary endpoints in future phase 3 clinical trials or registration trials. The FDA, EMA or other regulatory authorities may disagree with our trial design and our interpretation of data from preclinical studies and clinical trials. In addition, any of these regulatory authorities may change requirements for the approval of a product candidate even after reviewing and providing comments or advice on a protocol for a pivotal phase 3 clinical trial that has the potential to result in FDA, EMA or other agencies' approval. In addition, any of these regulatory authorities may also approve a product candidate for fewer or more limited indications than we request or may grant approval contingent on the performance of costly post-marketing clinical trials. The FDA, EMA or other regulatory authorities may not approve the labeling claims that we believe would be necessary or desirable for the successful commercialization of our product candidates.

**Even if we receive regulatory approval for any of our product candidates, we will be subject to ongoing obligations and continued regulatory review, which may materially adversely affect our business, prospects, financial condition and results of operations.**

If the FDA, EMA or a comparable foreign regulatory authority approves any of our product candidates, the manufacturing processes, labeling, packaging, distribution, adverse event reporting, storage, advertising, marketing, promotion and recordkeeping for the product will be subject to extensive and ongoing regulatory requirements. These requirements include submissions of safety and other post-marketing information and reports, registration, as well as continued compliance with cGMPs and GCPs for any clinical trials that we conduct post-approval, all of which may result in significant expense and limit our ability to commercialize such products. Any regulatory approvals that we receive for our product candidates may also be subject to limitations on the approved indicated uses for which the product may be marketed or to the conditions of approval, or contain requirements for potentially costly post-marketing testing and surveillance to monitor the safety and efficacy of the product.

In addition, regulatory policies may change or additional government regulations or legislation may be enacted that could prevent, limit or delay regulatory approval of our product candidates. If we fail to comply with existing requirements, are slow or unable to adapt to changes in existing requirements or the adoption of new requirements or policies, or if we are not able to maintain regulatory compliance, we may lose any regulatory approval that we may have obtained or face regulatory or enforcement actions, which may materially adversely affect our business, prospects, financial condition and results of operations.

**We may be subject to penalties if we fail to comply with regulatory requirements or experience unanticipated problems with any of our products that receive regulatory approval, which may materially adversely affect our business, prospects, financial condition and results of operations.**

Once a product is approved by the FDA, EMA or a comparable foreign regulatory authority for marketing, it is possible that previously unknown problems may occur with the product, including problems with third-party manufacturers or manufacturing processes, or failure to comply with regulatory requirements. If any of the foregoing occurs with respect to our products, it may result in, among other things:

- restrictions on the marketing or manufacturing of the product, withdrawal of the product from the market, or voluntary or mandatory product recalls;
- fines, warning letters or holds on clinical trials;
- refusal by the FDA, EMA or comparable foreign regulatory authority to approve pending applications or supplements to approved applications filed by us, or suspension or revocation of product license approvals;
- requirements to conduct additional clinical trials, change our product labeling or submit additional applications or application supplements;

- product seizure or detention, or refusal to permit the import or export of products; and
- injunctions or the imposition of civil or criminal penalties.

The occurrence of any of these events, or any government investigation of alleged violations of law could require us to expend significant time and resources and could generate negative publicity, and our ability to sell such product may be impaired. If we or our collaborators are not able to maintain regulatory compliance, regulatory approval that has been obtained may be lost and we may not achieve or sustain profitability, which may materially adversely affect our business, prospects, financial condition and results of operations.

**We may allocate our limited resources to pursue a particular product candidate or indication and fail to capitalize on product candidates or indications that may later prove to be more profitable or for which there is a greater likelihood of success, which may materially adversely affect our business, financial condition, and results of operations.**

Because we have limited financial and managerial resources, we must limit our licensing, research and development programs to specific product candidates that we identify for specific indications. As a result, we may forego or delay pursuit of opportunities with other product candidates or for other indications that later prove to have greater commercial potential. Our resource allocation decisions may cause us to fail to capitalize on viable commercial product candidates or profitable market opportunities, and our decisions concerning the allocation of research, collaboration, management and financial resources towards particular product candidates may not lead to the development of viable commercial products. In addition, if we do not accurately evaluate the commercial potential or target market for a particular product candidate, we may relinquish valuable rights to that product candidate through collaboration, licensing or other royalty arrangements when it would have been more advantageous for us to retain sole development and commercialization rights to such product candidate. If we make incorrect determinations regarding the market potential of our product candidates or misread trends in the biopharmaceutical industry, in particular for our late stage product candidates, our business, financial condition, and results of operations could be materially adversely affected.

**We currently do not have a sales and marketing organization and we have no history of commercializing our proprietary products.**

The development of our proprietary product candidates has been limited to developing and applying our technology to source such products and undertaking preclinical studies and clinical trials thereof, either independently or with strategic partners. We have not yet demonstrated the ability to successfully complete the development of our proprietary product candidates, obtain marketing approvals, manufacture them at a commercial scale with our CMOs, or conduct sales and regulatory activities necessary for successful product commercialization of our proprietary product candidates. Any predictions about our future success or viability may not be as accurate as they could be if we had a history of successfully developing and commercializing our proprietary pharmaceutical products.

Factors that may affect our ability to commercialize our product candidates on our own include recruiting and retaining adequate numbers of effective sales and marketing personnel, obtaining access to or persuading adequate numbers of physicians to prescribe our product candidates and other unforeseen costs associated with creating an independent sales and marketing organization. In addition, we may seek to acquire a commercialization platform. There is no guarantee that any such acquisition targets will be available.

We do not currently have a sales and marketing organization, and developing or acquiring a sales and marketing organization will be expensive and time consuming and could delay the launch of our product candidates. We may not be able to build an effective sales and marketing organization. If we are unable to build our own distribution and marketing capabilities or to find suitable partners for the commercialization of our product candidates, we may not be able to generate revenues from them or to reach or sustain profitability.

**If any of our product candidates receive regulatory approval, the approved products may not achieve broad market acceptance among physicians, patients, the medical community and third-party payors, in which case revenue generated from their sales would be limited.**

The commercial success of our product candidates will depend upon their acceptance among physicians, patients and the medical community. The degree of market acceptance of our product candidates will depend on a number of factors, including:

- limitations or warnings contained in the approved labeling for a product candidate;
- changes in the standard of care for the targeted indications for any of our product candidates;
- limitations in the approved clinical indications for our product candidates;
- demonstrated clinical safety and efficacy compared to other products;
- lack of significant adverse side effects;
- sales, marketing and distribution support;
- availability of coverage and extent of reimbursement from managed care plans and other third-party payors;
- timing of market introduction and perceived effectiveness of competitive products;
- the degree of cost-effectiveness of our product candidates;
- availability of alternative therapies at similar or lower cost, including generic and over-the-counter products;
- whether the product is designated under physician treatment guidelines as a first-line therapy or as a second or third-line therapy for particular diseases;
- whether the product can be used effectively with other therapies to achieve higher response rates;
- adverse publicity about our product candidates or favorable publicity about competitive products;
- convenience and ease of administration of our products; and
- potential product liability claims.

If any of our product candidates are approved, but do not achieve an adequate level of acceptance by physicians, patients and the medical community, we may not generate sufficient revenue from these products, and we may not become or remain profitable. In addition, efforts to educate the medical community and third-party payors on the benefits of our product candidates may require significant resources and may never be successful.

## RISKS RELATED TO OUR RELIANCE ON COLLABORATORS AND OTHER THIRD PARTIES

**Collaborations on products and product candidates are important to our business, and future collaborations may also be important to us. If we are unable to maintain any of these collaborations or if these collaborations are not successful, our business could be materially adversely affected.**

We have in the past entered into, and intend to continue to enter into, collaborations with other companies that we believe provide us with valuable funding and other benefits. However, we cannot ensure that any such collaboration will continue or be successful. For example, in March 2015, we and Celgene Corporation agreed to end the existing co-development and co-promotion agreement for MOR202, following which we regained the rights to MOR202. Although we have subsequently partnered Chinese regional rights to MOR202, and our partner I-Mab will further develop MOR202 in MM for Greater China, we have announced that we will not pursue further clinical development of MOR202 in MM in the rest of the world without a partner. We cannot ensure that any such partner will be found or that such collaboration will be successful. Our inability to find a partner for any of our product candidates, may result in our termination of that specific product candidate program or evaluation of a product candidate in a particular indication. For MOR202, we are currently

investigating the possibility of further developing MOR202 outside of China in a non-oncology indication. In addition, we have entered into various other collaboration and license arrangements with third parties. In July, together with Galapagos who co-owned MOR106 with us, we signed a license agreement with Novartis, who will be responsible for development and commercialization of the compound in the future. In November 2018, we entered into a collaboration and licensing agreement with I-Mab for an additional proprietary program, MOR210. Our partner I-Mab will perform certain preclinical and clinical development activities, and we will share territorial rights (Greater China and South Korea for I-Mab, rest of world for MorphoSys). We cannot ensure that any such collaboration or license agreement will be successful.

In the future, we may enter into additional collaborations to fund our development programs or to gain access to sales, marketing or distribution capabilities. Under our collaboration agreements, we typically grant our partners an exclusive license to certain therapeutic antibodies for specific targets and receive license fees, research and development funding, milestone payments and/or, if a product is approved for marketing, sales royalties in return. Following the discovery and preclinical testing phase, our partners are typically solely responsible for the further development of the product candidate and therefore exercise full control over its further development and potential commercialization. Our existing collaborations, and any future collaborations we enter into, therefore may pose a number of risks, including the following:

- collaborators may have significant discretion in determining the efforts and resources that they will apply to these collaborations;
- collaborators may not perform their obligations as expected by us or by health authorities, such as the FDA, the EMA or comparable foreign regulatory authorities;
- collaborators may dissolve, merge, be bought, or may otherwise become unwilling to fulfill the initial terms of the collaboration with us;
- collaborators may not pursue development and commercialization of any product candidates that achieve regulatory approval or may elect not to continue or renew development or commercialization programs based on clinical trial results, changes in the collaborators' strategic focus or available funding, or external factors, such as an acquisition, that divert resources or create competing priorities or the actual or perceived competitive situation in a specific indication;
- collaborators may delay clinical trials, provide insufficient funding for a clinical trial program, stop a clinical trial or abandon a product candidate, repeat or conduct new clinical trials or may require a new formulation of a product candidate for clinical testing;
- collaborators could independently develop, or develop with third parties, products that compete directly or indirectly with our products or product candidates if the collaborators believe that competitive products are more likely to be successfully developed or can be commercialized under terms that are more economically attractive than ours;
- product candidates discovered in collaboration with us may be viewed by our collaborators as competitive with their own product candidates or products, which may cause collaborators to cease to devote resources to the commercialization of our product candidates;
- a collaborator with marketing and distribution rights to one or more of our product candidates that achieve regulatory approval may not commit sufficient resources to the marketing and distribution of such product or products;
- disagreements with collaborators or licensors, including disagreements over proprietary rights, contract interpretation and breach of contract claims, payment obligations or the preferred course of development, might cause delays or termination of the research, development or commercialization of products or product candidates, might lead to additional responsibilities, including financial obligations for us with respect to products or product candidates, or delays or withholding of any payments due or might result in litigation or arbitration, any of which would be time consuming and expensive;

- collaborators may not properly maintain or defend our intellectual property rights or may use our proprietary information in such a way that could jeopardize or invalidate our intellectual property or proprietary information or expose us to potential litigation;
- collaborators may infringe the intellectual property rights of third parties, which may expose us to litigation and potential liability; and
- collaborations may be terminated for the convenience of the collaborator and, if terminated, we could be required to raise additional capital to pursue further development or commercialization of the applicable product candidates.

If our collaborations on research and development candidates do not result in the successful development and commercialization of products or if one of our collaborators terminates its agreement with us, we may not receive any future research funding or milestone or royalty payments under the collaboration. If we do not receive the funding we expect under these agreements, our development of our product candidates could be delayed and we may need additional resources to develop our proprietary product candidates. All of the risks relating to product development, regulatory approval and commercialization described in this report also apply to the activities of our program collaborators.

Additionally, subject to its contractual obligations to us, if one of our collaborators is involved in a business combination, the collaborator might deemphasize or terminate the development or commercialization of any product candidate licensed to it by us. If one of our collaborators terminates its agreement with us, we may find it more difficult to attract new collaborators in a timely manner.

**We face significant competition in seeking new partnerships.**

For all our proprietary product candidates we face significant competition. This may negatively impact our ability to enter into potential partnerships or licensing agreements for our compounds. For example, we decided not to pursue MOR202 development in MM outside the collaboration with I-Mab in Greater China without another partner for rest of the world. Instead, we are currently investigating the possibility of further developing MOR202 outside of China in a non-oncology indication. Our ability to reach definitive agreements for partnerships will depend, among other things, upon our assessment of the partner's resources and expertise, the terms and conditions of the proposed partnership and the proposed partner's evaluation of a number of factors. These factors may include the design or results of clinical trials, the likelihood of approval by the FDA, the EMA or comparable foreign regulatory authorities, the potential market for the subject product candidate, market access and pricing considerations in the respective territory, the costs and complexities of manufacturing and delivering such product candidate to patients, the potential of competing products, incidence and prevalence of the respective disease, and industry and market conditions generally. The partner may also consider alternative product candidates for similar indications that may be available to collaborate on and whether such collaboration could be more attractive than the one with us for our product candidate.

Collaborations and commercialization partnerships are complex and time consuming to negotiate and document. If we are unable to reach agreements with suitable partners on a timely basis, on acceptable terms, or at all, we may have to curtail or even stop the development of a product candidate, in one or all indications, in one or all territories in the world, reduce or delay one or more of our other discovery and development programs, delay its potential commercialization, or increase our expenditures and undertake development or commercialization activities at our own expense. If we elect to fund and undertake development or commercialization activities on our own — for instance, as we have done so far for MOR208 — we may need to obtain additional expertise and additional capital, which may not be available to us on acceptable terms or at all. If we fail to enter into collaborations and other partnerships and do not have sufficient funds or expertise to undertake the necessary development and commercialization activities, we may not be able to further develop our product candidates in any or all indications or bring them to market in any or all territories in the world and our business may be materially and adversely affected.

**We rely, and expect to continue to rely, on third parties, including research/medical institutions, clinical investigators, CROs and/or other service providers, to conduct our development activities (preclinical studies, quality testing and clinical trials) and perform data collection, analysis and reporting, which may result in costs and delays in the development of our product candidates. If these third parties do not successfully carry out their contractual duties or meet expected deadlines, we may not be able to obtain regulatory approval for or commercialize our product candidates and our business could be materially adversely affected.**

We currently, and expect to continue to, rely on public and private medical/research institutions, clinical investigators, CROs, service providers and collaboration partners to conduct our early phase and late phase product development activities including the conduct of preclinical studies and clinical trials. Our development activities conducted in reliance on third parties may be delayed, suspended or terminated, including for the following reasons:

- the third parties do not devote a sufficient amount of resource, time or effort to our activities or otherwise fail to successfully carry out their contractual duties or to meet regulatory obligations or expected deadlines;
- we replace a third party; or
- the quality or accuracy of the data obtained by third parties is compromised due to their failure to adhere to the study plans/protocols, GxP, regulatory requirements or for other reasons.

Although we perform sponsor oversight and audits using risk based approaches, we do not have the ability to control every action of third parties in their conduct of development activities. Nevertheless, we are responsible for ensuring that each of our development activities is conducted in accordance with the applicable study plan/protocol, GxP, legal, regulatory and scientific standards, and our reliance on these third parties does not relieve us of our sponsor responsibilities. We and our third-parties are required to comply with GxP standards, which are regulations and guidelines enforced by the FDA, the competent authorities of the member states of the European Economic Area, or EEA, and comparable foreign regulatory authorities for all of our products in clinical development. Regulatory authorities enforce these GxPs through periodic inspections of trial sponsors, principal investigators and trial sites, CROs and/or other involved service providers. If we or any of our third parties fail to comply with applicable GxP standards, the study data generated in our preclinical studies and/or clinical trials may be deemed unreliable and the FDA, the EMA or comparable foreign regulatory authorities may require us to perform additional studies before potentially approving our marketing applications. We cannot ensure that upon inspection by a given regulatory authority, such regulatory authority will determine that all of our development activities comply with GxP regulations. If third parties do not successfully carry out their contractual duties or obligations or meet expected deadlines, if they need to be replaced or if the quality or accuracy of the data they obtain is compromised due to the failure to adhere to our study plans/protocols, GxP and other regulatory requirements or for other reasons, our preclinical studies or clinical trials may be extended, delayed or terminated and we may not be able to obtain regulatory approval for or successfully commercialize our product candidates.

Third-party performance failures may increase our development costs, delay our ability to obtain regulatory approval and delay or prevent the commercialization of our product candidates. While we believe that there are alternative sources to provide these services, in the event that we seek such alternative sources, we may not be able to enter into replacement arrangements without incurring delays or additional costs.

**We currently rely on third-party suppliers and single source third-party CMOs for the manufacturing of our product candidates and our dependence on these third parties may impair the development of our product candidates. Moreover, we intend to rely on third parties to produce commercial supplies of any approved product candidate and our commercialization of any of our product candidates could be stopped, delayed or made less profitable if those third parties fail to provide us with sufficient quantities of product or fail to do so at acceptable quality levels or prices or fail to otherwise complete their duties in compliance with their obligations to us or in compliance with applicable laws. Service or supply failures, or other failures, business interruptions, or other disasters affecting the manufacturing facilities of any party participating in the supply chain, would adversely affect our ability to supply our product candidates and products.**

We do not currently have, nor do we plan to acquire, the infrastructure or capability internally to manufacture our preclinical (with the exclusion of non-GLP testing) and clinical product supplies and we lack the resources and the capability to manufacture any of our product candidates on a clinical or commercial scale under GMP. We therefore rely on and expect to continue to rely on third-party contract manufacturing organizations, or CMOs, for the supply of cGMP-grade, clinical trial materials and commercial quantities of our product candidates and products, if approved. The facilities used by our CMOs or other third-party manufacturers to manufacture our product candidates are subject to the FDA's, the EMA's and other comparable regulatory authorities' preapproval inspections that will be conducted after we submit our BLA to the FDA or the required approval documents to any other relevant regulatory authority. Except for our legally required qualification audit prior to contracting a CMO and subsequent regular audits of such facilities and GMP procedures, we do not control the implementation of the manufacturing process of, and are completely dependent on, our contract manufacturers or other third-party manufacturers for compliance with the regulatory requirements, known as current good manufacturing practices, or cGMPs, for manufacture of both active drug substances and finished drug products. If our contract manufacturers or other third-party manufacturers cannot successfully manufacture material that conforms to applicable specifications and the strict regulatory requirements of the FDA, the EMA or another comparable regulatory authority, we may not be able to secure and/or maintain regulatory approvals for our products manufactured at these facilities. In addition (except for our audit obligations described above), we have no control over the ability of our contract manufacturers or other third-party manufacturers to maintain adequate quality control and quality assurance procedures and qualified personnel. If the FDA, the EMA or another comparable regulatory authority finds deficiencies at these facilities for the manufacture of our product candidates or if it withdraws any approval because of deficiencies at these facilities in the future, we may need to find alternative manufacturing facilities, which would significantly impact our ability to develop, obtain regulatory approval for or market our product candidates, if approved. If, for any reason, we were to experience an unexpected loss of supply of our product candidates, combination drug, or placebo or comparator product used in certain of our clinical trials, whether as a result of manufacturing, supply or storage issues or otherwise, we could experience delays, disruptions, suspensions or terminations of, or be required to restart or repeat, any pending or ongoing clinical trials.

We rely on our manufacturers to purchase from third-party suppliers the materials necessary to produce our product candidates for our clinical trials. For certain items, there are a limited number of suppliers for raw materials that we use to manufacture our products and appropriate lead times for ordering such materials are factored into the manufacturing plans. However, there may be a need to assess alternate suppliers to prevent a possible disruption of the manufacture of the materials necessary to produce our product candidates for our clinical trials, and if approved, for commercial sale. Moreover, we currently do not have any agreements in place for the commercial production of these raw materials. Although we generally do not begin a clinical trial unless we believe we have access to a sufficient supply of a product candidate to complete the clinical trial, any significant delay in the supply of a product candidate, or the raw material components thereof, for an ongoing clinical trial due to the need to implement corrective actions at the supplier, or to replace a contract manufacturer or other third-party manufacturer could considerably delay completion of our clinical trials, product testing and potential regulatory approval of our product candidates. If our manufacturers or we are unable to purchase these raw materials after regulatory approval has been obtained for our product candidates, the commercial launch of

our product candidates would be delayed or there would be a shortage in supply, which would impair our ability to generate revenue from the sale of our product candidates. Additionally, if we receive regulatory approval for our product candidates, we may experience unforeseen difficulties or challenges in the manufacture of our product candidates on a commercial scale compared to the manufacture for clinical purposes. We currently rely on single source CMOs for the manufacturing of each of our proprietary product candidates, including Boehringer Ingelheim, or BI, in respect of MOR208. Thus any regulatory action, service failure, business interruptions, or other disasters affecting BI's facilities or the facilities of our other CMOs for our other proprietary product candidates could result in a significant delay in the production and supply of MOR208 and could, as a result, have a material adverse effect on our business, results of operations, financial condition and prospects.

**The manufacture of our product candidates is complex. Our third-party manufacturers may encounter difficulties in production. If we encounter any such difficulties, our ability to supply our product candidates for clinical trials or, if approved, for commercial sale could be delayed or halted entirely.**

The manufacture of biopharmaceutical products is complex and requires significant expertise and capital investment, including the development of advanced manufacturing techniques and process controls. The process of manufacturing biopharmaceuticals, including our product candidates, is susceptible to product loss due to contamination, equipment failure or improper installation or operation of equipment, vendor or operator error, contamination and inconsistency in yields, variability in product characteristics and difficulties in scaling the production process or product loss during fill and finishing. Even minor deviations from normal manufacturing processes could result in reduced production yields, product defects and other supply disruptions. If microbial, viral or other contaminations are discovered in our product candidates or in the manufacturing facilities in which our product candidates are made, such manufacturing facilities may need to be closed for an extended period of time to investigate and remedy the contamination. Any adverse developments affecting manufacturing operations for our product candidates, if any are approved, may result in shipment delays, inventory shortages, lot failures, product withdrawals or recalls, or other interruptions in the supply of our products. We may also have to take inventory write-offs and incur other charges and expenses for products that fail to meet specifications, undertake costly remediation efforts or seek more costly manufacturing alternatives.

## RISKS RELATED TO OUR INTELLECTUAL PROPERTY RIGHTS

**If we are unable to obtain and maintain sufficient intellectual property protection for our products or product candidates, or if the scope of our intellectual property protection is not sufficiently broad, our ability to commercialize our products or product candidates successfully and to compete effectively may be materially adversely affected.**

Our success depends in large part on our ability to obtain and maintain protection with respect to our intellectual property and proprietary technology. We rely upon a combination of patents, trade secret protection and confidentiality agreements to protect the intellectual property related to our products and product candidates. The patent position of pharmaceutical companies is generally uncertain because it involves complex legal and factual considerations. The standards applied by the United States Patent and Trademark Office, or USPTO, and foreign patent offices in granting patents are not always applied uniformly or predictably, and can change. The patent applications that we own or in-license may fail to result in issued patents, and if they do, such patents may not cover our products or product candidates in the United States or in other countries. Accordingly, we cannot predict whether additional patents protecting our technology or our product candidates will issue in the United States or in non-U.S. jurisdictions, or whether any patents that do issue will have claims of adequate scope to provide us with a competitive advantage. Additionally, the laws of some foreign countries do not protect intellectual property rights to the same extent as the laws of the United States, and many companies have encountered significant problems in protecting and defending such rights in foreign jurisdictions. The legal systems of certain countries, particularly certain developing countries, do not favor the enforcement of patents and other intellectual property rights, particularly those relating to biotechnology, which could make it difficult

for us to stop the infringement of our licensed and owned patents, the reproduction of our manufacturing or other know-how or marketing of competing products in violation of our proprietary rights generally. Any of these outcomes could impair our ability to prevent competition from third parties, which may have a material adverse effect on our business.

Competitors may use our technologies in jurisdictions where we have not obtained or are unable to adequately enforce patent protection to develop their own products and further, may export otherwise infringing products to territories where we have patent protection, but enforcement is not as strong as that in the United States and Europe. These products may compete with our products, and our patents or other intellectual property rights may not be effective or sufficient to prevent them from competing. Proceedings to enforce our patent rights, whether or not successful, could result in substantial costs and divert our efforts and attention from other aspects of our business, could put our patents at risk of being invalidated or interpreted narrowly and our patent applications at risk of not issuing and could provoke third parties to assert claims against us. We may not prevail in any lawsuits that we initiate and the damages or other remedies awarded, if any, may not be commercially meaningful. Accordingly, our efforts to enforce our intellectual property rights around the world may be inadequate to obtain a significant commercial advantage from the intellectual property that we develop or license.

The patent prosecution process is expensive and time consuming, and we may not be able to file and prosecute all necessary or desirable patent applications at a reasonable cost or in a timely manner. It is also possible that we may fail to identify patentable aspects of our research and development output before it is too late to obtain patent protection. In addition, we or our licensors, may only pursue, obtain or maintain patent protection in a limited number of countries. There is no assurance that all potentially relevant prior art relating to our patents and patent applications has been found. We may be unaware of prior art or other documents or experiments that could be used to invalidate an issued patent or prevent our pending patent applications from issuing as patents. Even if patents do successfully issue and even if such patents cover our products or product candidates, third parties (including our licensees) may challenge their validity, enforceability or scope, which may result in such patents being narrowed or invalidated. Further, the existence of issued patents does not guarantee our right to practice the patented technology or commercialize the patented product. Third parties may have or obtain rights to patents which they may use to prevent or attempt to prevent us from commercializing any of our patented product candidates, or which might require us to take license to such patents in order to be able to commercialize the respective product candidates. If these other parties are successful in obtaining valid and enforceable patents, and establishing our infringement of those patents, we could be prevented from selling our products unless we were able to obtain a license under such third-party patents. In addition, third parties may seek approval to market their own products similar to or otherwise competitive with our products. In these circumstances, we may need to defend and/or assert our patents, including by filing lawsuits alleging patent infringement. In any of these types of proceedings, a court or agency of competent jurisdiction may find our patents invalid and/or unenforceable.

Furthermore, even if they are unchallenged, our patents and patent applications may not adequately protect our intellectual property, provide exclusivity for our products or product candidates, prevent others from designing around our claims or otherwise provide us with a competitive advantage. Additionally, our confidentiality agreements and other contractual protections may not be adequate to protect our intellectual property from unauthorized disclosure, third-party infringement or misappropriation. We may not have adequate remedies in the case of a breach of any such agreements, and our trade secrets and other proprietary information could be disclosed to our competitors or others may independently develop substantially equivalent or superior proprietary information and techniques or otherwise gain access to our trade secrets or disclose such technologies. In addition, the research resulting in certain of our licensed patent rights and technology has been, and may in the future be, funded by the government or other institutional organizations that may have certain rights, including march-in rights, to such patent rights and technology.

If the patent applications we own or have in-licensed with respect to our product candidates fail to issue as patents, if their breadth or strength of protection is narrowed or threatened, or if they fail to provide meaningful exclusivity, it could dissuade companies from collaborating with us and adversely affect our competitive

position. We cannot offer any assurances about which, if any, patents will issue, the breadth of any such patents or whether any issued patents will be found invalid or unenforceable or will be threatened by third parties. Any successful challenge to any patents owned by or licensed to us could deprive us of rights necessary for the successful commercialization of any product or product candidate that we may develop and could impair or eliminate our ability to collect future revenues and royalties with respect to such products or product candidates. Since patent applications in the United States and most other countries are confidential for a period of time after filing, and some remain so until issued, we cannot be certain that we were the first to file any patent application related to a product or product candidate. In addition, patents have a limited lifespan. In the United States and most foreign jurisdictions, the natural expiration of a patent is generally 20 years after its effective filing date. Various extensions may be available; however, the life of a patent and the protection it affords is limited. If we encounter delays in obtaining regulatory approvals, the period of time during which we could market a product under patent protection could be reduced. Even if patents covering our product candidates are obtained, once such patents expire, we may be vulnerable to competition from similar or biosimilar products. The launch of a biosimilar version of one of our products in particular would be likely to result in an immediate and substantial reduction in the demand for our product, which could have a material adverse effect on our business, financial condition, results of operations or prospects.

**Obtaining and maintaining our patent protection, including patents licensed from third parties, depends on compliance with various procedural, document submission, fee payment and other requirements imposed by governmental patent agencies, and our patent protection could be reduced or eliminated for non-compliance with these requirements.**

The USPTO, and various foreign governmental patent agencies require compliance with a number of procedural, documentary, fee payment and other provisions during the patent process. There are situations in which noncompliance can result in abandonment or lapse of a patent or patent application, resulting in partial loss, complete loss or unenforceability of patent rights in the relevant jurisdiction. In such an event, competitors might be able to enter the market earlier than would otherwise have been the case.

If we or our licensors fail to maintain the patents and patent applications covering or otherwise protecting our product candidates, it could materially harm our business. In addition, to the extent that we have responsibility for taking any action related to the prosecution or maintenance of patents or patent applications in-licensed from a third party, any failure on our part to maintain the in-licensed intellectual property could jeopardize our rights under the relevant license and may expose us to liability.

Third parties might claim that we have not complied with the provisions of the respective governmental patent agencies. For example, third parties might claim that not all prior art documents, or not all other documents or experiments, were submitted to the respective agencies under appropriate law. Such claims could lead to proceedings that are time consuming and expensive. Such proceedings can result in abandonment or lapse of a patent or patent application, resulting in partial loss, complete loss or unenforceability of patent rights in the relevant jurisdiction. If such third party claims are raised in the context of a pending litigation, then such proceedings can also result in a judgment that would require us to pay the other parties' litigation expenses.

**We may be involved in lawsuits to protect or enforce our patents, which could be expensive, time-consuming and unsuccessful.**

Even if the patent applications we own or license are issued, competitors may infringe these patents. To counter infringement or unauthorized use, we may be required to file infringement claims, which can be expensive and time-consuming. For instance, we were involved in a patent litigation lawsuit as a plaintiff against Janssen Biotech Inc., Genmab A/S and Genmab US, Inc. at the District Court of Delaware seeking redress for alleged infringement in connection with the manufacture, use and sale of Janssen's and Genmab's daratumumab, an antibody targeting CD38, approved for the treatment of certain patients with MM. Defendants asserted that our patents are invalid and also raised a counterclaim of inequitable conduct. The U.S. District Court of Delaware,

based on a hearing held November 27, 2018, has ruled in a Court Order on January 25, 2019, that the asserted claims of the MorphoSys patents are invalid. The Court thus granted a motion for Summary Judgement of invalidity filed by Janssen Biotech and Genmab, A/S against the three patents held by MorphoSys. As a result of this decision, the jury trial scheduled to start February 11, 2019 to consider Janssen's and Genmab's alleged infringement and the validity of the MorphoSys patents did not take place. On January 31, 2019 we announced that we have settled the dispute with Janssen Biotech and Genmab A/S. The parties agreed to drop the mutual claims related to the litigation: MorphoSys dismissed claims for alleged patent infringement against Janssen Biotech and Genmab A/S and will not appeal from the court order dated January 25, 2019. Janssen and Genmab dismissed their counterclaims against MorphoSys. In addition, Janssen, Genmab, Sanofi and Takeda opposed a European counterpart of the litigated U.S. patents, EP2511297. The patent was revoked in opposition proceedings. We appealed and the proceedings are currently pending.

In an infringement proceeding, a court may decide that a patent of ours or our licensors is not valid, is unenforceable and/or is not infringed, or may refuse to stop the other party from using the technology at issue on the grounds that our patents do not cover the technology in question. An adverse result in any litigation or defense proceedings could put our patents or our licensors' patents at risk of being invalidated or interpreted narrowly and could put our patent applications at risk of not issuing.

Interference proceedings, or other similar enforcement and revocation proceedings, provoked by third parties or brought by us may be necessary to determine the priority of inventions with respect to our patents or patent applications or those of our licensors. An unfavorable outcome could require us to cease using the related technology or to attempt to license rights to it from the prevailing party. Our business could be harmed if the prevailing party does not offer us a license on commercially reasonable terms. Our defense of litigation or interference proceedings may fail and, even if successful, may result in substantial costs and distract our management and other employees. We may not be able to prevent, alone or with our licensors, misappropriation of our intellectual property rights, particularly in countries where the laws may not protect those rights as fully as in the United States.

Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation, there is a risk that some of our confidential information could be compromised by disclosure during this type of litigation. There could also be public announcements of the results of hearings, motions or other interim proceedings or developments. If securities analysts or investors perceive these results to be negative, it could have a material adverse effect on the price of our common shares.

Even if resolved in our favor, litigation or other legal proceedings relating to our, our licensor's or other third parties' intellectual property claims may cause us to incur significant expenses and could distract our personnel from their normal responsibilities. In addition, there could be public announcements of the results of hearings, motions, or other interim proceedings or developments, and if securities analysts or investors perceive these results to be negative, it could have a substantial adverse effect on the price of our ordinary shares. If not resolved in our favor, litigation may require us to pay any portion of our opponents' legal fees. Such litigation or proceedings could substantially increase our operating losses and reduce the resources available for development activities or any future sales, marketing, or distribution activities. We may not have sufficient financial or other resources to conduct such litigation or proceedings adequately. Some of our competitors may be able to sustain the costs of such litigation or proceedings more effectively than we can because of their greater financial resources and more mature and developed intellectual property portfolios. Uncertainties resulting from the initiation and continuation of patent litigation or other proceedings could have a material adverse effect on our ability to compete in the marketplace.

## DEVELOPMENTS IN PATENT LAW COULD HAVE A NEGATIVE IMPACT ON OUR BUSINESS.

From time to time, authorities in the United States, the European Union and other government authorities may change the standards of patentability, and any such changes could have a negative impact on our business.

For example, in the United States, the Leahy-Smith America Invents Act, or the America Invents Act, which was signed into law in 2011, includes a number of significant changes to U.S. patent law. These changes include a transition from a "first-to-invent" system to a "first-to-file" system, changes to the way issued patents are challenged, and changes to the way patent applications are disputed during the examination process. As a result of these changes, patent law in the United States may favor larger and more established companies that have greater resources to devote to patent application filing and prosecution. The USPTO has developed new and untested regulations and procedures to govern the full implementation of the America Invents Act, and many of the substantive changes to patent law associated with the America Invents Act, and, in particular, the first-to-file provisions became effective on March 16, 2013. Substantive changes to patent law associated with the America Invents Act may affect our ability to obtain patents, and if obtained, to enforce or defend them. Also case law may have a substantial impact on the way patents are prosecuted, examined and litigated. This also affects the scope of protection that is available is a specific jurisdiction. In the United States, Amgen Inc. v. Sanofi (Fed. Cir. 17-1480) may affect the way antibody claims are examined and litigated.

Developments of patent law in other jurisdictions may impact our business. For example, it is currently not clear what impact the planned introduction of the Unified Patent Court in the European Union will have. Patents that are valid and enforceable under the current system may be considered invalid and/or unenforceable under the new system. Also patents may be invalidated not just in one single jurisdiction, but across all countries of the European Union in one single trial. Also the effect the impending withdrawal of the United Kingdom from the European Union ("Brexit") has on the patent system, in particular in connection with aforementioned Unified Patent Court, bears certain risks and uncertainties.

**Our commercial success depends significantly on our ability to operate without infringing the patents and other proprietary rights of third parties.**

Our success will depend in part on our ability to operate without infringing the proprietary rights of third parties. Other entities may have or obtain patents or proprietary rights that could limit our ability to make, use, sell, offer for sale or import our products and future approved products or impair our competitive position.

Patents could be issued to third parties that we may ultimately be found to infringe. Third parties may have or may obtain valid and enforceable patents or proprietary rights that could block us from developing product candidates using our technology. Our failure to identify or misinterpret third-party patents, to obtain or maintain a license to any technology that we require may materially harm our business, financial condition, results of operations or prospects. Furthermore, we could be exposed to a threat of litigation.

In the pharmaceutical and biotechnology industry, significant litigation and other proceedings regarding patents, patent applications, trademarks and other intellectual property rights have become commonplace. The types of situations in which we may become a party to such litigation or proceedings include:

- we or our collaborators may initiate litigation or other proceedings against third parties seeking to invalidate the patents held by those third parties or to obtain a judgment that our products or processes do not infringe those third parties' patents;
- if our competitors file patent applications that claim technology also claimed by us or our licensors, we or our licensors may be required to participate in interference, derivation, inter partes review or opposition proceedings to determine the priority of invention, inventorship or validity of the applicable patent rights which could jeopardize our patent rights and potentially provide a third party with a dominant patent position;
- if third parties initiate litigation claiming that our processes or the processes of our CMOs or CROs, products or uses thereof infringe their patent or other intellectual property rights, we and our collaborators will need to defend against such proceedings; and

- if a license to necessary technology is terminated, the licensor may initiate litigation claiming that our processes or products infringe or misappropriate their patent or other intellectual property rights and/or that we breached our obligations under the license agreement, and we and our collaborators would need to defend against such proceedings.

Any such lawsuit would be costly and could affect our results of operations and divert the attention of our management and scientific personnel. There is a risk that a court would decide that we or our collaborators are infringing the third party's patents and would order us or our collaborators to stop the activities covered by the patents. In that event, we or our collaborators may not have a viable alternative to the technology protected by the patent and may need to halt work on the affected product candidate or cease commercialization of an approved product. In addition, there is a risk that a court may order us or our collaborators to pay the other party damages. An adverse outcome in any litigation or other proceeding could subject us to significant liabilities to third parties and require us to cease using the technology that is at issue or to license the technology from third parties. We may not be able to obtain any required licenses on commercially acceptable terms or at all. Any of these outcomes could have a material adverse effect on our business, financial condition, results of operations or prospects.

**The pharmaceutical and biotechnology industries have produced a significant number of patents, and it may not always be clear to industry participants, including us, which patents cover various types of products or methods of use.**

The coverage of patents is subject to interpretation by the courts, and the interpretation is not always uniform or predictable. If we are sued for patent infringement, we would need to demonstrate that our products, methods or uses thereof either do not infringe the patent claims of the relevant patent or that the patent claims are invalid or unenforceable, and we may not be able to do this. Proving invalidity is difficult. For example, in the United States, proving invalidity requires a showing of clear and convincing evidence to overcome the presumption of validity enjoyed by issued patents. Even if we are successful in these proceedings, we may incur substantial costs and divert management's time and attention in pursuing these proceedings, which could have a material adverse effect on our business. If we are unable to avoid infringing the patent rights of others, we may be required to seek a license, defend an infringement action or challenge the validity or enforceability of the patents in court. We may not have sufficient resources to bring these actions to a successful conclusion and there is no assurance that such a license would be available or that a court would find in our favor. In addition, if we do not obtain a license, develop or obtain non-infringing technology, fail to defend an infringement action successfully or have infringed patents declared invalid or unenforceable, we may incur substantial monetary damages, encounter significant delays in bringing our product candidates to market and be precluded from manufacturing or selling our product candidates.

The cost of any patent litigation or other proceeding, even if resolved in our favor, could be substantial. Some of our competitors may be able to sustain the cost of such litigation and proceedings more effectively than we can because of their substantially greater resources. Uncertainties resulting from the initiation and continuation of patent litigation or other proceedings could have a material adverse effect on our business, financial condition, results of operations or prospects.

**We are dependent on third parties for the prosecution, protection, and enforcement of intellectual property rights relating to some of our products and product candidates.**

While we normally seek to obtain the right to control the prosecution, maintenance, enforcement and defense of intellectual property rights related to our products and product candidates, there may be times when our licensors or collaborators control, or have a first right to control, the filing, prosecution, enforcement and defense of such rights. For instance, pursuant to the 2nd amended and restated collaboration and license agreement, Novartis has a first right to file, prosecute and enforce all patent rights related to products generated under this agreement. Also, pursuant to the development and license agreement with GlaxoSmithKline, or GSK, GSK has a first right to file,

prosecute and enforce all patent rights related to MOR103 and pursuant to the development and license agreement with Xencor, Xencor has a first right to file, prosecute and enforce patent rights which are in-licensed by us and relate to MOR208. Pursuant to the Exclusive License Agreement among Galapagos NV, MorphoSys AG and Novartis Pharma AG, Novartis has a first right to file, prosecute and enforce patent rights related to MOR106. We cannot be certain that our licensors or collaborators will prosecute, maintain, enforce and defend such intellectual property rights in a manner consistent with the best interests of our business, including by taking reasonable measures to protect the confidentiality of know-how and trade secrets, or the payment of all applicable prosecution and maintenance fees related to our technologies or any of our product candidates. We also cannot be certain that the drafting or prosecution of the licensed patents by our licensors have been conducted accurately and in compliance with applicable laws and regulations, and will result in valid and enforceable patents and other intellectual property rights. If they fail to do so, we could lose our rights to the intellectual property, our ability to develop and commercialize those products or product candidates may be adversely affected and we may not be able to prevent competitors from making, using and selling competing products.

If trademarks and trade names related to our products or product candidates are not adequately protected, then we may not be able to build name recognition in our markets of interest and our business may be materially adversely affected.

Our registered or unregistered trademarks or trade names, as well as the registered or unregistered trademarks or trade names used by our licensees or distributors in relation with our products or product candidates, may be challenged, infringed, circumvented or declared generic or determined to be infringing on other trademarks. We may not be able to protect our rights to these trademarks and trade names, which we need to build name recognition by potential partners or customers. Over the long term, if we are unable to establish name recognition based on our trademarks and trade names, then we may not be able to compete effectively and our business may be materially adversely affected.

**If we are unable to protect the confidentiality of our proprietary information, the value of our technology and products could be materially adversely affected.**

In addition to patent protection, we also rely on other proprietary rights, including protection of trade secrets, and other proprietary information. To maintain the confidentiality of trade secrets and proprietary information, we enter into confidentiality agreements with our employees, consultants, collaborators, CMOs, CROs and others upon the commencement of their relationships with us. These agreements require that all confidential information developed by the individual or made known to the individual by us during the course of the individual's relationship with us be kept confidential and not disclosed to third parties. Our agreements with employees as well as our personnel policies also generally provide that any inventions conceived by the individual in the course of rendering services to us shall be our exclusive property or that we may obtain full rights to such inventions at our election. However, we may not obtain these agreements in all circumstances, and individuals with whom we have these agreements may not comply with their terms. We also face the risk that present or former employees could continue to hold rights to intellectual property used by us, may demand the registration of intellectual property rights in their name and demand damages pursuant to the German Employee Invention Act. In the event of unauthorized use or disclosure of our trade secrets or proprietary information, these agreements, even if obtained, may not provide meaningful protection, particularly for our trade secrets or other confidential information. To the extent that our employees, consultants or contractors use technology or know-how owned by third parties in their work for us, disputes may arise between us and those third parties as to the rights in related inventions. To the extent that an individual who is not obligated to assign rights in intellectual property to us is rightfully an inventor of intellectual property, we may need to obtain an assignment or a license to that intellectual property from that individual, or a third party or from that individual's assignee. Such assignment or license may not be available on commercially reasonable terms or at all.

Adequate remedies may not exist in the event of unauthorized use or disclosure of our proprietary information. The disclosure of our trade secrets would impair our competitive position and may materially harm our business, financial condition and results of operations. Costly and time-consuming litigation could be necessary to enforce and determine the scope of our proprietary rights, and failure to maintain trade secret protection could adversely affect our competitive business position. In addition, others may independently discover or develop our trade secrets and proprietary information, and the existence of our own trade secrets affords no protection against such independent discovery.

As is common in the biotechnology and pharmaceutical industries, we employ individuals who were previously or concurrently employed at research institutions and/or other biotechnology or pharmaceutical companies, including our competitors or potential competitors. We may be subject to claims that these employees, or we, have inadvertently or otherwise used or disclosed trade secrets or other proprietary information of their former employers, or that patents and applications we have filed to protect inventions of these employees, even those related to one or more of our product candidates, are rightfully owned by their former or concurrent employer. Litigation may be necessary to defend against these claims. Even if we are successful in defending against these claims, litigation could result in substantial costs and be a distraction to management.

**We may not be successful in obtaining necessary intellectual property rights to product candidates for our development pipeline through acquisitions and in-licenses.**

Although we intend to develop product candidates through our own internal research, we may also seek to acquire or in-license product candidates to grow our product candidate pipeline. However, we may be unable to acquire or in-license intellectual property rights relating to, or necessary for, any such product candidates from third parties on commercially reasonable terms or at all. In that event, we may be unable to develop or commercialize such product candidates. We may also be unable to identify product candidates that we believe are an appropriate strategic fit for our company and intellectual property relating to, or necessary for, such product candidates.

The in-licensing and acquisition of third-party intellectual property rights for product candidates is a competitive area, and a number of more established companies are also pursuing strategies to in-license or acquire third-party intellectual property rights for product candidates that we may consider attractive or necessary. These established companies may have a competitive advantage over us due to their size, cash resources and greater clinical development and commercialization capabilities. Furthermore, companies that perceive us to be a competitor may be unwilling to assign or license rights to us. If we are unable to successfully obtain rights to suitable product candidates, our business, financial condition, results of operations and prospects for growth could suffer.

In addition, we expect that competition for the in-licensing or acquisition of third-party intellectual property rights for product candidates that are attractive to us may increase in the future, which may mean fewer suitable opportunities for us as well as higher acquisition or licensing costs. We may be unable to in-license or acquire the third-party intellectual property rights for product candidates on terms that would allow us to make an appropriate return on our investment.

**We may not be able to adequately protect our intellectual property rights throughout the world.**

Filing, prosecuting and defending patents on our products in all countries throughout the world would be prohibitively expensive. The requirements for patentability may differ in certain countries, particularly developing countries, and the breadth of patent claims allowed can be inconsistent. In addition, the laws of some foreign countries may not protect our intellectual property rights to the same extent as laws in the U.S. Consequently, we may not be able to prevent third parties from practicing our inventions in all countries outside the U.S. Competitors may use our technologies in jurisdictions where we have not obtained patent protection to develop their own products and, furthermore, may export otherwise infringing products to territories in which we have patent protection that may not be sufficient to terminate infringing activities.

We do not have patent rights in certain foreign countries in which a market may exist. Moreover, in foreign jurisdictions where we do have patent rights, proceedings to enforce such rights could result in substantial costs and divert our efforts and attention from other aspects of our business, could put our patents at risk of being invalidated or interpreted narrowly, and our patent applications at risk of not issuing. Additionally, such proceedings could provoke third parties to assert claims against us. We may not prevail in any lawsuits that we initiate and the damages or other remedies awarded, if any, may not be commercially meaningful. Thus, we may not be able to stop a competitor from marketing and selling in foreign countries products that are the same as or similar to our products, and our competitive position in the international market would be harmed.

**Our intellectual property agreements with third parties may be subject to disagreements over contract interpretation, which could narrow the scope of our rights to the relevant intellectual property or technology or increase our financial or other obligations to our licensors.**

Certain provisions in our intellectual property agreements may be susceptible to multiple interpretations. The resolution of any contract interpretation disagreement that may arise could affect the scope of our rights to the relevant intellectual property or technology, or affect financial or other obligations under the relevant agreement, either of which could have a material adverse effect on our business, financial condition, results of operations and prospects.

In addition, while it is our policy to require our employees and contractors who may be involved in the conception or development of intellectual property to execute agreements assigning such intellectual property to us, we may be unsuccessful in executing such an agreement with each party who in fact conceives or develops intellectual property that we regard as our own. Our assignment agreements may not be self-executing or may be breached, and we may be forced to bring claims against third parties, or defend claims they may bring against us, to determine the ownership of what we regard as our intellectual property.

## RISKS RELATED TO OUR BUSINESS AND INDUSTRY

Our relationships with health care professionals, institutional providers, principal investigators, consultants, customers (actual and potential) and third-party payors are, and will continue to be, subject, directly and indirectly, to health care fraud and abuse, false claims, marketing expenditure tracking and disclosure, government price reporting, and health information privacy and security laws. If we are unable to comply, or have not fully complied, with such laws, we could face penalties, including, without limitation, civil, criminal, and administrative penalties, damages, fines, exclusion from government-funded health care programs, such as Medicare and Medicaid, and the curtailment or restructuring of our operations.

Our business operations and activities may be directly or indirectly subject to various fraud and abuse laws, including, without limitation, the federal Anti-Kickback Statute and the federal False Claims Act. If we obtain FDA approval for any of our proprietary product candidates and begin commercializing those products in the United States, our potential exposure under such laws will increase significantly, and our costs associated with compliance with such laws are also likely to increase. These laws may impact, among other things, our current activities with principal investigators and research subjects, as well as proposed and future sales, marketing and education programs. In addition, we may be subject to patient privacy regulation by the federal government and state governments in which we conduct our business. The laws that may affect our ability to operate include, but are not limited to:

- the federal Anti-Kickback Statute, which prohibits, among other things, persons from knowingly and willfully soliciting, offering, receiving or providing remuneration, directly or indirectly, in cash or in kind, to induce or reward either the referral of an individual for, or the purchase, order or recommendation of, any good or service, for which payment may be made, in whole or in part, under a federal health care program such as Medicare and Medicaid. A person or entity need not have actual knowledge of the federal Anti-Kickback Statute or specific intent to violate it in order to have committed a violation; in addition, the government may assert that a claim that includes items or services resulting from a violation of the federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the False Claims Act;

- the federal civil and criminal false claims laws, including the civil False Claims Act, and civil monetary penalties laws, which prohibit individuals or entities from, among other things, knowingly presenting, or causing to be presented, to the federal government, claims for payment that are false, fictitious or fraudulent; knowingly making a false statement or record material to a false or fraudulent claim or obligation to pay or transmit money or property to the federal government; or knowingly concealing or knowingly and improperly avoiding or decreasing an obligation to pay money to the federal government;
- the federal Health Insurance Portability and Accountability Act of 1996, or HIPAA, which created additional federal criminal laws that prohibit, among other things, knowingly and willfully executing, or attempting to execute, a scheme to defraud any healthcare benefit program or knowingly and willfully falsifying, concealing or covering up a material fact or making any materially false statement in connection with the delivery of or payment for healthcare benefits, items or services; similar to the federal Anti-Kickback Statute, a person or entity does not need to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation;
- HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act of 2009 and their respective implementing regulations, which impose requirements on certain covered health care providers, health plans, and health care clearinghouses as well as their respective business associates that perform services for them that involve the use, or disclosure of, individually identifiable health information, relating to the privacy, security and transmission of individually identifiable health information without appropriate authorization;
- the federal transparency requirements under the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act of 2010, or collectively the ACA will require manufacturers of products, devices, biologics and medical supplies to report to the Department of Health and Human Services information related to payments and other transfers of value to physicians and teaching hospitals and physician ownership and investment interests;
- federal consumer protection and unfair competition laws, which broadly regulate marketplace activities and activities that potentially harm consumers;
- federal government price reporting laws, changed by the ACA to, among other things, increase the minimum Medicaid rebates owed by most manufacturers under the Medicaid Drug Rebate Program and offer such rebates to additional populations, that may require us to calculate and report complex pricing metrics to government programs, where such reported prices may be used in the calculation of reimbursement and/or discounts on our marketed products (participation in these programs and compliance with the applicable requirements may subject us to potentially significant discounts on our products, increased infrastructure costs, and potentially limit our ability to offer certain marketplace discounts);
- the Foreign Corrupt Practices Act, a U.S. law which regulates certain financial relationships with foreign government officials (which could include, for example, certain medical professionals); and
- analogous state laws and regulations, such as state anti-kickback and false claims laws, which may apply to healthcare items or services that are reimbursed by non-governmental third-party payors, including private insurers.

Some state laws require pharmaceutical companies to comply with the pharmaceutical industry's voluntary compliance guidelines and the relevant compliance guidance promulgated by the federal government in addition to requiring manufacturers to report information related to payments to physicians and other healthcare providers or marketing expenditures and pricing information. State and foreign laws also govern the privacy and security of health information in some circumstances, many of which differ from each other in significant ways and often are not preempted by HIPAA, thus complicating compliance efforts.

In addition, the regulatory approval and commercialization of any of our product candidates outside the United States will also likely subject us to foreign equivalents of the health care laws mentioned above, among other foreign laws.

In the European Union, the Data Protection Directive, or DPD, which has been superseded by the General Data Protection Regulation, or GDPR, effective since May 2018, imposes strict regulations and establishes a series of requirements regarding the collection, storage and processing of personally identifiable information on computers or recorded on other electronic media. The GDPR provide for specific regulations requiring all non-European Union countries doing business with European Union member states to provide adequate data privacy protection when receiving personal data from persons in any of the European Union member states. We may incur substantial expense in complying with the new obligations imposed by the GDPR and we may be required to make significant changes in our business operations and development, all of which may adversely affect our revenue and our business overall. We could be adversely affected if we fail to comply fully with all of these requirements. Non-compliance with the GDPR can trigger significant fines of up to €20 million or 4% of total worldwide annual turnover, whichever is higher. In addition, the use and disclosure of personal health and other private information is subject to regulation in other jurisdictions in which we do business or expect to do business in the future. Those jurisdictions may attempt to apply such laws extraterritorially or through treaties or other arrangements with European governmental entities. We cannot assure you that our privacy and security policies and practices will be found sufficient to protect us from liability or adverse publicity relating to the privacy and security of personal information.

Efforts to ensure that our business arrangements will comply with applicable health care laws may involve substantial costs. It is possible that governmental and enforcement authorities will conclude that our business practices may not comply with current or future statutes, regulations or case law interpreting applicable fraud and abuse or other health care laws and regulations. If we are unable to comply, or have not fully complied, with such laws, we could face penalties, including, without limitation, civil, criminal, and administrative penalties, damages, fines, individual imprisonment, exclusion from government funded health care programs, such as Medicare and Medicaid, and the curtailment or restructuring of our operations. Additionally, if our collaborators' operations or relationships with healthcare providers, customers and third-party payors are found to be non-compliant with applicable laws, they may be subject to criminal, civil or administrative sanctions, including exclusions from government funded healthcare programs, which could also have a negative impact on us. Even if successful, defending against any such actions can be costly, time-consuming and may require significant financial and personnel resources. We may become exposed to costly and damaging liability claims, either when testing our product candidates in the clinic or at the commercial stage; and our product liability insurance may not cover all damages from such claims.

**We are exposed to potential product liability and professional indemnity risks that are inherent in the research, development, manufacturing, marketing and use of pharmaceutical products.**

The use of our investigational medicinal products in clinical trials and the sale of any approved products in the future may expose us to liability claims. These claims might be made by patients who use the product, health care providers, pharmaceutical companies or others selling such products. Any claims against us, regardless of their merit, could be difficult and costly to defend and could materially adversely affect the market for our product candidates or any prospects for commercialization of our product candidates.

Although the clinical trial process is designed to identify and assess potential side effects, it is always possible that a product, even after regulatory approval, may exhibit unforeseen side effects. If any of our product candidates were to cause adverse side effects during clinical trials or after approval of the product candidate, we may be exposed to substantial liabilities. Physicians and patients may not comply with any warnings that identify known potential adverse effects and patients who should not use our product candidates.

To cover such liability claims, we purchase clinical trial insurances in the conduct of each of our clinical trials. It is possible that our liabilities could exceed our insurance coverage or that our insurance will not cover all situations in which a claim against us could be made. We also intend to expand our insurance coverage to include the sale of commercial products if we receive marketing approval for any of our proprietary products. However, we may not be able to maintain insurance coverage at a reasonable cost or obtain insurance coverage that will be

adequate to satisfy any liability that may arise. If a successful product liability claim or series of claims is brought against us for uninsured liabilities or in excess of insured liabilities, our assets may not be sufficient to cover such claims and our business operations could be impaired. Should any of the events described above occur, this could have a material adverse effect on our business, financial condition and results of operations, including, but not limited to:

- decreased demand for our future product candidates;
- adverse publicity and injury to our reputation;
- withdrawal of clinical trial participants;
- initiation of investigations by regulators;
- costs to defend the related litigation;
- a diversion of management's time and our resources;
- compensation in response to a liability claim;
- product recalls, withdrawals or labeling, marketing or promotional restrictions;
- loss of revenue;
- exhaustion of any available insurance and our capital resources; and
- the inability to commercialize our products or product candidates.

We could be adversely affected if we are subject to negative publicity. We could also be adversely affected if any of our products or any similar products distributed by other companies prove to be, or are asserted to be, harmful to patients. Any adverse publicity associated with illness or other adverse effects resulting from patients' use or misuse of our products or any similar products distributed by other companies could have a material adverse impact on our business, financial condition, results of operations or prospects.

**Even if we, or any future collaborators, are able to commercialize any product candidate that we, or they, develop, the product may become subject to unfavorable pricing regulations or third-party payor coverage and reimbursement policies, any of which could materially harm our business.**

Patients who are provided medical treatment for their conditions generally rely on third-party payors to reimburse all or part of the costs associated with their treatment. Therefore, our ability, and the ability of any future collaborators to commercialize any of our product candidates will depend in part on the extent to which coverage and reimbursement for these products and related treatments will be available from third-party payors including government health administration authorities and private health coverage insurers. Third-party payors decide which medications they will cover and establish reimbursement levels. We cannot be certain that coverage will be available and reimbursement will be adequate for any of our product candidates. Also, we cannot be certain that reimbursement policies will not reduce the demand for, or the price paid for, our products.

Obtaining coverage and adequate reimbursement for our products may be particularly difficult because of the higher prices often associated with drugs administered under the supervision of a physician. A decision by a third-party payor not to cover our products could reduce physician utilization of our products once approved. Even if coverage is provided, the approved reimbursement amount may not be high enough to allow us, or any future collaborators, to establish or maintain pricing sufficient to realize a sufficient return on our or their investment. In the United States, no uniform policy of coverage and reimbursement for products exists among third-party payors and coverage and reimbursement for products can differ significantly from payor to payor. As a result, the coverage determination process is often a time-consuming and costly process that will require us to provide scientific and clinical support for the use of our products to each payor separately, with no assurance that coverage and adequate reimbursement will be applied consistently or obtained in the first instance.

In addition, increasingly, third-party payors are requiring higher levels of evidence of the benefits and clinical outcomes of new technologies and are challenging prices. We cannot be sure that coverage will be available for any product candidate that we, or any future collaborator, commercialize and, if available, that the reimbursement rates will be adequate. Further, the net reimbursement for products may be subject to additional reductions if there are changes to laws that presently restrict imports of drugs from one country to another. An inability to promptly obtain coverage and adequate payment rates from both government-funded and private payors for any of our product candidates for which we, or any future collaborator, obtain marketing approval could significantly harm our operating results, our ability to raise capital needed to commercialize products and our overall financial condition.

**Price controls may be imposed in certain markets, which may adversely affect our future profitability.**

In some countries, particularly member states of the European Union, the pricing of prescription drugs is subject to governmental control. In these countries, pricing negotiations with governmental authorities can take considerable time after receipt of marketing approval for a product. In addition, there can be considerable pressure by governments and other stakeholders on prices and reimbursement levels, including as part of cost containment measures. Political, economic and regulatory developments may further complicate pricing negotiations, and pricing negotiations may continue after reimbursement has been obtained. Reference pricing used by various countries and parallel distribution, or arbitrage between low-priced and high-priced countries, can further reduce prices. In some countries, in particular in many member states of the European Union, we may be required to conduct a clinical trial or other studies that compare the cost-effectiveness of our product candidates to other available therapies in order to obtain or maintain reimbursement or pricing approval. Publication of discounts by third-party payors or authorities may lead to further pressure on the prices or reimbursement levels within the country of publication and other countries. If reimbursement of our products is unavailable or limited in scope or amount, or if pricing is set at unsatisfactory levels, our business, financial condition, results of operations or prospects could be materially adversely affected.

**Current and future legislation may increase the difficulty and cost for us and any collaborators to obtain marketing approval of and commercialize our product candidates and affect the prices we, or they, may obtain.**

In the United States and foreign jurisdictions, there have been a number of legislative and regulatory changes and proposed changes regarding the healthcare system that could prevent or delay marketing approval of our product candidates, restrict or regulate post-approval activities and affect our ability to profitably sell any product candidates for which we obtain marketing approval. We expect that current laws, as well as other healthcare reform measures that may be adopted in the future, may result in additional reductions in Medicare and other healthcare funding, more rigorous coverage criteria, new payment methodologies and in additional downward pressure on the price that we, or any collaborators, may receive for any approved products.

In March 2010, President Obama signed the ACA into law. Among the provisions of the ACA of potential importance to our business and our product candidates are the following:

- an annual, non-deductible fee on any entity that manufactures or imports specified branded prescription products and biologic products;
- an increase in the statutory minimum rebates a manufacturer must pay under the Medicaid Drug Rebate Program;
- a new methodology by which rebates owed by manufacturers under the Medicaid Drug Rebate Program are calculated for products that are inhaled, infused, instilled, implanted or injected;
- extension of manufacturers' Medicaid rebate liability to individuals enrolled in Medicaid managed care organizations;

- expansion of the entities eligible for discounts under the Public Health Service pharmaceutical pricing program;
- a new Patient-Centered Outcomes Research Institute to oversee, identify priorities in, and conduct comparative clinical effectiveness research, along with funding for such research;
- a new Independent Payment Advisory Board, or IPAB, which has authority to recommend certain changes to the Medicare program to reduce expenditures by the program that could result in reduced payments for prescription products; and
- established the Center for Medicare and Medicaid Innovation within CMS to test innovative payment and service delivery models.

Since its enactment, there have been judicial and Congressional challenges to numerous aspects of the ACA. With the current Presidential administration and U.S. Congress, there have been and will likely continue to be additional administrative or legislative changes, including modification, repeal, or replacement of all, or certain provisions of, the ACA.

In addition, other legislative changes have been proposed and adopted since the ACA was enacted. In August 2011, the Budget Control Act of 2011, among other things, included aggregate reductions to Medicare payments to providers of 2% per fiscal year, which went into effect in April 2013 and will remain in effect through 2025 unless additional Congressional action is taken. The American Taxpayer Relief Act of 2012, among other things, reduced Medicare payments to several providers and increased the statute of limitations period for the government to recover overpayments to providers from three to five years. These new laws may result in additional reductions in Medicare and other healthcare funding and otherwise affect the prices we may obtain for any of our product candidates for which we may obtain regulatory approval or the frequency with which any such product candidate is prescribed or used.

The costs of prescription pharmaceuticals in the United States has also been the subject of considerable discussion in the United States, and members of Congress and the Administration have stated that they will address such costs through new legislative and administrative measures. There have been several U.S. Congressional inquiries and proposed bills designed to, among other things, bring more transparency to drug pricing, reduce the cost of prescription drugs under Medicare, review the relationship between pricing and manufacturer patient programs, and reform government program reimbursement methodologies for drugs.

In addition, individual states have also become increasingly active in passing legislation and implementing regulations designed to control pharmaceutical product pricing, including price or patient reimbursement constraints, discounts, restrictions on certain product access, and to encourage importation from other countries and bulk purchasing.

The policies of the FDA or similar regulatory authorities may change and additional government regulations may be enacted that could prevent, limit or delay regulatory approval of our product candidates. For example, in December 2016, the 21st Century Cures Act, or Cures Act, was signed into law. The Cures Act, among other things, is intended to modernize the regulation of drugs and biologics and spur innovation, but it has not yet been implemented and its ultimate implementation is unclear. If we or our collaborators are slow or unable to adapt to changes in existing requirements or the adoption of new requirements or policies, or if we or our collaborators are not able to maintain regulatory compliance, our product candidates may lose any regulatory approval that may have been obtained and we may not achieve or sustain profitability, which would adversely affect our business.

We cannot predict the likelihood, nature or extent of government regulation that may arise from future legislation or administrative action, either in the United States or abroad. For example, certain policies of the Trump administration may impact our business and industry. Namely, the Trump administration has taken several

executive actions, including the issuance of a number of Executive Orders, that could impose significant burdens on, or otherwise materially delay, FDA's ability to engage in routine regulatory and oversight activities such as implementing statutes through rulemaking, issuance of guidance, and review and approval of marketing applications. If these executive actions impose constraints on FDA's ability to engage in oversight and implementation activities in the normal course, our business may be negatively impacted.

We cannot predict whether future healthcare legislative or policy changes will be implemented at the federal or state level or in countries outside of the United States in which we may do business, or the effect any future legislation or regulation will have on us.

**We and our contract manufacturers and our suppliers could be subject to liabilities, fines, penalties or other sanctions under environmental, health and safety laws and regulations if we or they fail to comply with such laws or regulations or otherwise incur costs that could have a material adverse effect on our business.**

We currently rely on and expect to continue to rely on third parties for the manufacturing and supply of active pharmaceutical ingredients, or API, and drug products of our product candidates. These third parties are subject to numerous environmental, health and safety laws and regulations, including those governing laboratory procedures and the handling, transportation, use, storage, treatment and disposal of hazardous materials and wastes. Although we have auditing rights and obligations (according to cGMP regulations for sponsors of clinical trials) with all our CMOs for production of API and drug products, we do not have control over a manufacturer's or supplier's compliance with environmental, health and safety laws and regulations. Liabilities they incur pursuant to these laws and regulations could result in significant costs or in certain circumstances, an interruption in operations, any of which could adversely affect our business and financial condition if delayed manufacturing activities impact our clinical development activities.

With respect to any hazardous materials or waste which we are currently, or in the future will be, handling, using, storing or disposing of, we cannot eliminate the risk of contamination or injury from these materials or waste, including at third-party disposal sites. In the event of such contamination or injury, we could be held liable for any resulting damages and liability. We also could incur significant costs associated with civil or criminal fines and penalties for failure to comply with applicable environmental, health and safety laws. In addition, we may incur substantial costs in order to comply with current or future environmental, health and safety laws and regulations. These current or future laws and regulations may impair our research, development or production efforts. Failure to comply with these laws and regulations may also result in substantial fines, penalties or other sanctions.

**We may not be successful in our efforts to use and expand our lanthipeptide technology platform.**

We are using our proprietary lanthipeptide technology platform to generate peptide product candidates that exhibit enhanced stability and selectivity. Our lanthipeptide technology platform has led to one clinical stage product candidate MOR107. We are at a very early stage of development and the lanthipeptide technology platform has not yet, and may never lead to, approved or marketable peptide products, including with respect to MOR107. Even if we are successful in continuing to build our lanthipeptide pipeline, the potential product candidates that we identify may not be suitable for clinical development, including as a result of harmful side effects, limited efficacy, short half-life or other characteristics that indicate that such products are unlikely to receive marketing approval and achieve market acceptance. If we are not able to successfully develop and commercialize peptide product candidates based upon our lanthipeptide platform, our business, prospects, financial condition and results of operations may be materially adversely affected.

**Our internal computer systems, or those of our collaborators or other contractors or consultants, may fail or suffer security breaches, which could result in a material disruption of our product development programs.**

Our computer systems and those of our current and any future collaborators and other contractors or consultants are vulnerable to damage from cyber-attacks, computer viruses, natural disasters, terrorism, war and telecommunication and electrical failures. While we have not experienced any such computer system failure, accident or security breach to date, if such an event were to occur and cause interruptions in our operations, it could result in a material disruption of our development programs and our business operations, whether due to a loss of our trade secrets or other proprietary information or other disruptions. For example, the loss of clinical trial data from completed or future clinical trials could result in delays in our regulatory approval efforts and significantly increase our costs to recover or reproduce the data. To the extent that any disruption or security breach were to result in a loss of, or damage to, our data or applications, or inappropriate disclosure of confidential or proprietary information, we could incur liability, our competitive position could be harmed and the further development and commercialization of our product candidates could be delayed.

**Our product candidates for which we intend to seek approval as biologic products may face competition sooner than anticipated.**

The ACA includes a subtitle called the Biologics Price Competition and Innovation Act of 2009, or BPCIA, which created an abbreviated approval pathway for biological products that are biosimilar to or interchangeable with an FDA-licensed reference biological product. Under the BPCIA, an application for a biosimilar product may not be submitted to the FDA until four years following the date that the reference product was first licensed by the FDA. In addition, the approval of a biosimilar product may not be made effective by the FDA until 12 years from the date on which the reference product was first licensed. During this 12-year period of exclusivity, another company may still market a competing version of the reference product if the FDA approves a full BLA for the competing product containing the sponsor's own preclinical data and data from adequate and well-controlled clinical trials to demonstrate the safety, purity and potency of their product. The law is complex and is still being interpreted and implemented by the FDA. As a result, its ultimate impact, implementation, and meaning are subject to uncertainty. While it is uncertain when such processes intended to implement BPCIA may be fully adopted by the FDA, any such processes could have a material adverse effect on the future commercial prospects for our biological products.

One or more of our product candidates approved as a biological product under a BLA may qualify for the 12-year period of exclusivity. However, there is a risk that this exclusivity could be shortened due to congressional action or otherwise, or that the FDA will not consider our product candidates to be reference products for competing products, potentially creating the opportunity for generic competition sooner than anticipated. Other aspects of the BPCIA, some of which may impact the BPCIA exclusivity provisions, have also been the subject of recent litigation. Moreover, the extent to which a biosimilar, once approved, will be substituted for any one of our reference products in a way that is similar to traditional generic substitution for non-biological products is not yet clear, and will depend on a number of marketplace and regulatory factors that are still developing.

**We face substantial competition from companies with considerably more resources and experience than we have, which may result in others discovering, developing, receiving approval for or commercializing products before or more successfully than us.**

The pharmaceutical and biotechnology industries are characterized by intense competition and significant and rapid technological change as researchers learn more about diseases and develop new technologies and treatments. Any product candidates that we successfully develop and commercialize will compete with existing products and new products that may become available in the future. We have competitors in each of the disease fields in which we research and develop our product candidates, many of which have substantially greater name recognition, commercial infrastructure and financial, technical and personnel resources than we have. Smaller or

early-stage companies may also prove to be significant competitors, particularly through partnerships with larger and established companies. Significant competitive factors in our industry include product efficacy and safety, quality and breadth of an organization's technology, skill of an organization's employees and its ability to recruit and retain key employees, timing and scope of regulatory approvals, government reimbursement rates for, and the average selling price of, products, the availability of raw materials and qualified manufacturing capacity, manufacturing costs, intellectual property and patent rights and their protection and sales and marketing capabilities. While we believe that our product candidate platform, antibody discovery and development expertise and scientific knowledge provide us with competitive advantages, we face potential competition from many different sources, including major pharmaceutical, specialty pharmaceutical and biotechnology companies, academic institutions and governmental agencies and public and private research institutions. In particular for MOR208, we compete with all companies that have products on the market or are developing product candidates for r/r DLBCL. With regard to our other proprietary or partnered product candidates, we are, alone or in partnerships, for example, developing products to combat diseases such as multiple myeloma, other cancers, atopic dermatitis, psoriasis, Alzheimer's, where our competitors primarily are comprised of large pharmaceutical companies, including Roche, Celgene, Novartis, Janssen, Gilead, Abbvie and many others. This competition includes a number of alternative therapies to combat such diseases that are being researched and are in various stages of development. Should these therapies prove effective, it could reduce the potential size of the market for our products. Given the intense competition in our industry, we cannot assure you that any of the products that we develop will be clinically superior or scientifically or commercially preferable to products developed or introduced by our competitors.

In addition, significant delays in the development of our product candidates could allow our competitors to succeed in obtaining the FDA, the EMA or other regulatory approvals for their product candidates more rapidly than us, which could place us at a significant competitive disadvantage or deny us marketing exclusivity rights.

Competitors may develop novel products or other technologies that could make our product candidates obsolete or uneconomical. Any of our product candidates that competes with an approved product may need to demonstrate compelling advantages, such as increased efficacy, convenience, pricing, tolerability and/or safety in order to be commercially successful. Any of our product candidates that are approved could also face other competitive factors in the future, including biosimilar competition, which could force us to lower prices or could result in reduced sales. If we fail to respond to this environment by improving our products, by licensing new third-party products or by developing new product candidates in a timely fashion, or if such new or improved products do not achieve adequate market acceptance, our business, financial condition, results of operations and prospects could be materially and adversely effected.

In addition, many of our competitors have significantly greater financial resources and expertise in R&D, including manufacturing, conducting preclinical studies and clinical trials, as well as in obtaining regulatory and reimbursement approvals and marketing and selling products. Mergers and acquisitions in the pharmaceutical and biotechnology industries may result in even more resources being concentrated among a smaller number of competitors, particularly through partnership arrangements with large established companies. These companies also compete with us in recruiting and retaining qualified scientific and management personnel and establishing clinical trial sites and patient recruitment for clinical trials, as well as in acquiring technologies complementary to, or necessary for, our programs.

**Our future success depends on our ability to retain key executives and to attract and motivate qualified personnel.**

We are highly dependent on the expertise of the members of our research and development team, as well as the other principal members of our management, including Simon Moroney, our Chief Executive Officer, Jens Holstein, our Chief Financial Officer, Malte Peters, our Chief Development Officer, and Markus Enzelberger, our Chief Scientific Officer. Our Management Board members have fixed-term contracts typically of three years.

Recruiting and retaining qualified management, scientific, clinical, manufacturing, sales and marketing personnel is also critical to our success. The loss of the services of our executive officers or other key employees could impede the achievement of our research, development and commercialization objectives and seriously harm our ability to successfully implement our business strategy. Furthermore, replacing executive officers and key employees may be difficult and may take an extended period of time because of the limited number of individuals in our industry with the breadth of skills and experience required to successfully develop, gain regulatory approval of and commercialize drugs. Competition to hire from this limited pool is intense, and we may be unable to hire, train, retain or motivate these key personnel on acceptable terms given the competition among numerous pharmaceutical and biotechnology companies for similar personnel. We also experience competition for the hiring of scientific and clinical personnel. Failure to succeed in clinical trials may make it more challenging to recruit and retain qualified scientific personnel.

**We may acquire businesses or products, or form strategic alliances, in the future, and we may not realize the benefits of such acquisitions.**

We may acquire additional businesses or products, form strategic alliances or create joint ventures with third parties that we believe will complement or augment our existing business. We may encounter numerous difficulties in developing, manufacturing and marketing any new products resulting from a strategic alliance or acquisition that delay or prevent us from realizing their expected benefits or enhancing our business. If we acquire businesses with promising products or technologies, we may not be able to realize the benefit of acquiring such businesses if, for instance, we are unable to successfully integrate them with our existing operations and company culture. We cannot assure you that, following any such acquisition, we will achieve the expected synergies to justify the transaction. If we are unsuccessful in realizing any of the benefits following an acquisition, we may incur impairment charges in respect of the assets acquired, which could adversely affect our results of operations.

**We may be subject to tax audits or disputes or changes in tax laws.**

Pending and future tax audits within our group, disputes with tax authorities and changes in tax law or fiscal regulations could lead to additional tax liabilities. We are subject to routine tax audits by the respective local tax authorities. Any additional tax liability could have an adverse effect on our business, financial condition, results of operations or prospects.

We are subject to currency exchange rate fluctuations.

Due to the international scope of our operations, our assets, earnings and cash flows are influenced by movements in exchange rates of several currencies, particularly the U.S. dollar and the euro. Our functional currency is the euro and the majority of our operating expenses are paid in euro, but we also receive payments from our collaboration partners in U.S. dollars and we regularly acquire services, consumables and materials in U.S. dollars. Further, future revenue will be derived from abroad, particularly from the United States. As a result, our business may be affected by fluctuations in foreign exchange rates between the euro and the U.S. dollar, which may also have a significant impact on our reported results of operations and cash flows from period to period.

**We do not currently intend to pay dividends on our securities, and, consequently, your ability to achieve a return on your investment will depend on appreciation in the price of our shares.**

We have never declared or paid any dividends on our ordinary shares and do not intend to do so in the foreseeable future, and any share repurchases will likely occur on the Frankfurt Stock Exchange. You are not likely to receive any dividends on our shares, and the success of an investment in our shares will depend upon any future appreciation in its value. Investors may need to sell all or part of their holdings of our shares after price appreciation, which may never occur, to realize any future gains on their investment. There is no guarantee that our shares will appreciate in value or even maintain the price at which our shareholders have purchased our shares.

**Holders of our ADSs may not be able to participate in any future preemptive subscription rights issues or to elect to receive dividends in shares, which may cause dilution to their holdings.**

Under German law, the existing shareholders have a preemptive right to subscribe for shares offered in proportion to the amount of shares they hold in connection with any offering of shares. However, a shareholders' meeting may vote, by a majority, which represents at least three quarters of the share capital represented at the meeting, to waive this preemptive right provided that, from the company's perspective, there exists good and objective cause for such waiver.

Certain non-German shareholders may not be able to exercise their preemptive subscription rights in our future offerings due to the legislation and regulations of their home country. For example, ADS holders in the United States will not be entitled to exercise or sell such rights unless we register the rights and the securities to which the rights relate under the Securities Act or an exemption from the registration requirements is available. In addition, the deposit agreement provides that the depositary need not make rights available to you unless the distribution to ADS holders of both the rights and any related securities are either registered under the Securities Act or exempted from registration under the Securities Act. We are under no obligation to file a registration statement with respect to any such rights or securities or to endeavor to cause such a registration statement to be declared effective. Moreover, we may not be able to establish an exemption from registration under the Securities Act. Accordingly, ADS holders may be unable to participate in our rights offerings and may experience dilution in their holdings. In addition, if the depositary is unable to sell rights that are not exercised or not distributed or if the sale is not lawful or reasonably practicable, it will allow the rights to lapse, in which case you will receive no value for these rights.

**As a foreign private issuer, we are permitted to adopt certain home country practices in relation to corporate governance matters that differ significantly from Nasdaq corporate governance listing standards. These practices may afford less protection to shareholders than they would enjoy if we complied fully with corporate governance listing standards.**

We are a "foreign private issuer", as defined in the SEC's rules and regulations. The Nasdaq Listing Rules include certain accommodations in the corporate governance requirements that allow foreign private issuers to follow "home country" corporate governance practices in lieu of the otherwise applicable corporate governance standards of Nasdaq. The application of such exceptions requires that we disclose the Nasdaq Listing Rules that we do not follow and describe the German corporate governance practices we do follow in lieu of the relevant Nasdaq corporate governance standard. We continue to follow German corporate governance practices in lieu of the corporate governance requirements of Nasdaq in certain respects. In particular, we follow German corporate governance practices in connection with the distribution of annual and interim reports to shareholders, the application of our code of conduct to our Supervisory Board, proxy solicitation in connection with shareholders' meetings, and obtaining shareholder approval in connection with the issuance of shares in connection with an acquisition, change of control transactions, the establishment or material amendment to any equity-based compensation plans and the issuance of shares in a private placement in excess of 20% of the outstanding share capital at less than the greater of book or market value. To this extent, our practice varies from the requirements of Nasdaq.

**U.S. holders of ADSs may suffer adverse tax consequences if we are characterized as a passive foreign investment company.**

A non-U.S. corporation will be classified as a passive foreign investment company, or PFIC, for U.S. federal income tax purposes for any taxable year, if either (i) 75% or more of its gross income for such year consists of certain types of "passive" income or (ii) 50% or more of the value of its assets (determined on the basis of a quarterly average) during such year produce or are held for the production of passive income. Passive income generally includes dividends, interest, royalties, rents, annuities, net gains from the sale or exchange of property producing such income and net foreign currency gains. In addition, a non-U.S. corporation will be treated as

owning its proportionate share of the assets and earning its proportionate share of the income of any other corporation in which it owns, directly or indirectly, more than 25% (by value) of the stock.

Based on certain estimates of our gross income and gross assets, the latter determined by reference to the expected value of the ADSs and shares, we believe that we will not be classified as a PFIC for the taxable year ending December 31, 2018 and we do not expect to be treated as a PFIC in any future taxable year. However, because PFIC status is based on our income, assets and activities for the entire taxable year, which we expect may vary substantially over time, it is not possible to determine whether we will be characterized as a PFIC for any taxable year until after the close of the taxable year. Moreover, we must determine our PFIC status annually based on tests that are factual in nature, and our status in future years will depend on our income, assets and activities in each of those years. There can be no assurance that we will not be considered a PFIC for any taxable year.

If we were to be or become a PFIC for any taxable year during which a U.S. holder (defined below in "Taxation—U.S. Taxation") holds ADSs, certain adverse U.S. federal income tax consequences could apply to such U.S. holder. See "Taxation—U.S. Taxation—PFIC Rules".

**The interpretation of the treatment of ADSs by the German tax authorities is subject to change.**

The specific treatment of ADSs under German tax law is based on administrative provisions by the fiscal authorities, which are not codified law and are subject to change. Tax authorities may modify their interpretation and the current treatment of ADSs may change, as the circular issued by the German Federal Ministry of Finance (*BMF-Schreiben*), dated November 8, 2017, reference number IV C 1 – S 1980-1/16/10010 :10, shows. According to this new circular, ADSs are not treated as capital participation (*Kapitalbeteiligung*) within the meaning of Section 2 Para. 8 of the Investment Tax Code (*Investmentsteuergesetz*). Such changes in the interpretation by the fiscal authorities may have adverse effects on the taxation of investors.

**We may lose our foreign private issuer status in the future, which could result in significant additional cost and expense.**

While we currently qualify as a foreign private issuer, the determination of foreign private issuer status is made annually on the last business day of an issuer's most recently completed second fiscal quarter.

In the future, we would lose our foreign private issuer status if we fail to meet the requirements necessary to maintain our foreign private issuer status as of the relevant determination date. Our foreign private issuer status will be tested on June 30 of each year. We expect that we will maintain our status on June 30, 2019, but in the future we may lose that status. This could occur if, for instance, a majority of our shareholders of record were U.S. citizens or residents and a majority of the executive officers or directors were U.S. citizens or residents or if a majority of our assets were located in the U.S.

The regulatory and compliance costs to us under U.S. securities laws as a U.S. domestic issuer may be significantly higher than the costs we incur as a foreign private issuer. If we are not a foreign private issuer, we will be required to file periodic reports and registration statements on U.S. domestic issuer forms with the SEC, which are more detailed and extensive in certain respects than the forms available to a foreign private issuer. We would be required under current SEC rules to prepare our financial statements in accordance with U.S. GAAP rather than IFRS. Such conversion of our financial statements to U.S. GAAP would involve significant time and cost, and we would still be required to prepare financial statements in accordance with IFRS under the rules of the Frankfurt Stock Exchange. In addition, we may lose our ability to rely upon exemptions from certain corporate governance requirements on United States stock exchanges that are available to foreign private issuers such as the ones described above and exemptions from procedural requirements related to the solicitation of proxies.

**We are eligible to be treated as an "emerging growth company", as defined in the JOBS Act, and we cannot be certain if the reduced disclosure requirements applicable to emerging growth companies will make the ADSs less attractive to investors.**

We are an emerging growth company, as defined in the JOBS Act. For as long as we continue to be an emerging growth company, we may take advantage of exemptions from various reporting requirements that are applicable to other public companies that are not emerging growth companies, including (1) an exemption from the auditor attestation requirement in the assessment of our internal control over financial reporting pursuant to the Sarbanes-Oxley Act; (2) to the extent that we no longer qualify as a foreign private issuer, (a) reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements; and (b) exemptions from the requirements of holding a nonbinding advisory vote on executive compensation, including golden parachute compensation; and (3) an exemption from compliance with the requirement that the PCAOB has adopted regarding a supplement to the auditor's report providing additional information about the audit and the financial statements.

We may take advantage of these provisions for up to five years or such earlier time that we are no longer an emerging growth company. We would cease to be an emerging growth company if we have more than $1.07 billion in annual revenue, have more than $700 million in market value of our shares held by non-affiliates(to be first tested on June 30, 2019), or issue more than $1.0 billion of nonconvertible debt over a three-year period. We may choose to take advantage of some but not all of these reduced burdens. For example, Section 107 of the JOBS Act provides that an emerging growth company that uses U.S. GAAP for financial reporting can use the extended transition period provided in Section 7(a)(2)(B) of the Securities Act for complying with new or revised accounting standards. Given that we currently report and expect to continue to report under IFRS we have irrevocably elected not to avail ourselves of this extended transition period and, as a result, we will adopt new or revised accounting standards on the relevant dates on which adoption of such standards is required by the IASB. We have taken advantage of reduced reporting requirements in this report. Accordingly, the information contained herein may be different than the information you receive from other public companies in which you hold equity securities.

**U.S. investors may have difficulty enforcing civil liabilities against our company and members of our Supervisory Board and Management Board and the experts named in this report.**

We are incorporated under the laws of Germany. The majority of our assets are located outside the United States and all of the members of our Management Board and three out of six Supervisory Board members reside outside of the United States. As a result, it may not be possible for investors to effect service of process within the United States upon such persons or to enforce against them or us in U.S. courts' judgments predicated upon the civil liability provisions of the federal securities laws of the United States. Foreign courts may refuse to hear a United States securities law claim because foreign courts may not be the most appropriate forums in which to bring such a claim. Even if a foreign court agrees to hear a claim, it may determine that the law of the jurisdiction in which the foreign court resides, and not U.S. law, is applicable to the claim.

Further, if U.S. law is found to be applicable, the content of applicable U.S. law must be proved as a fact, which can be a time-consuming and costly process, and certain matters of procedure would still be governed by the law of the jurisdiction in which the foreign court resides. We have been advised by Skadden, Arps, Slate, Meagher & Flom LLP, our German counsel, that there is currently no treaty between the United States and Germany providing for reciprocal recognition and enforceability of judgments rendered in connection with civil and commercial disputes and, accordingly, a final judgment rendered by a U.S. court based on civil liability would not be enforceable in Germany as such. However, a U.S. court's judgment may carry evidentiary value in any proceedings for civil liability brought in the German courts.

**The rights of shareholders in a stock corporation subject to German law differ in material respects from the rights of shareholders of corporations incorporated in the United States.**

We are a German stock corporation with our registered office in Germany. Our corporate affairs are governed by the laws governing stock corporations incorporated in Germany and our articles of association. The rights of shareholders and the responsibilities of members of our Management Board (*Vorstand*) and Supervisory Board (*Aufsichtsrat*) may be different from the rights and obligations of shareholders in companies governed by the laws of U.S. jurisdictions. In the performance of their duties, our Management Board and Supervisory Board may take into account a broad range of considerations, including our interests, the interests of our shareholders, employees, creditors and, to a limited extent, the general public. It is possible that some of these parties will have interests that are different from, or in addition to, your interests as a holder of ADSs. See "Description of Share Capital—Differences in Corporate Law".

**If we fail to maintain an effective system of internal control over financial reporting, we may not be able to accurately report our financial results or prevent fraud. As a result, shareholders could lose confidence in our financial and other public reporting, which would harm our business and the trading price of our shares.**

Effective internal controls over financial reporting are necessary for us to provide reliable financial reports and, together with adequate disclosure controls and procedures, are designed to prevent fraud. Any failure to implement required new or improved controls, or difficulties encountered in their implementation could cause us to fail to meet our reporting obligations. In addition, any testing conducted by us in connection with Section 404 of the Sarbanes-Oxley Act of 2002, or any subsequent testing conducted by our independent registered public accounting firm, may reveal deficiencies in our internal controls over financial reporting that are deemed to be material weaknesses or that may require prospective or retroactive changes to our financial statements, or identify other areas for further attention or improvement. Inferior internal controls could also cause investors to lose confidence in our reported financial information, which could have a negative effect on the trading price of our shares.

For as long as we are an "emerging growth company" under the JOBS Act, our independent registered public accounting firm will not be required to attest to the effectiveness of our internal controls over financial reporting pursuant to Section 404. We could be an "emerging growth company" for up to five years. An independent assessment of the effectiveness of our internal controls could detect problems that our management's assessment might not. Undetected material weaknesses in our internal controls could lead to financial statement restatements and require us to incur the expense of remediation.

## 4. GROUP MANAGEMENT REPORT

The year 2018 was a successful one for MorphoSys. Our goal is to discover, develop and commercialize outstanding, innovative therapies for critically ill patients. The focus of our business activities is on cancer. Working toward this goal, we made good progress in advancing product candidates at various stages of development during the year under review. In 2018, we announced positive data from two ongoing clinical studies on MOR208, our antibody for the treatment of blood cancer. We have established a wholly-owned subsidiary to build a strong U.S. presence to prepare for the planned commercialization of MOR208 pending FDA approval. Furthermore, we entered into or expanded several important partnerships. We and our partner Galapagos entered into a worldwide, exclusive agreement with Novartis Pharma AG covering the development and commercialization of our joint program MOR106. This collaboration will enable us to accelerate and broaden the development of MOR106 beyond the current focus on atopic dermatitis and to fully exploit the potential of this drug candidate. Building on our existing collaboration with I-Mab Biopharma for MOR202 in Greater China, we entered into an exclusive strategic collaboration and regional licensing agreement for MOR210, a preclinical-stage antibody directed against C5aR, which has potential to be developed as an immuno-oncology agent.

We were also pleased to report successes of our partners. Tremfya®, developed by our partner Janssen and the first approved and marketed therapeutic antibody based on MorphoSys's proprietary technology, was granted marketing authorization in several countries during 2018, including Japan. Janssen continued to explore the use of Tremfya® in additional indications and reported positive long-term data in plaque psoriasis. Royalty payments showed strong year-on-year growth in 2018 which we reinvested in the development of our proprietary drug programs and in building a commercial organization.

We aim to become a fully integrated biopharmaceutical company, developing and commercializing our own drugs, and during 2018 we were able to take important steps towards achieving that goal.

### a) Operations and Business Environment

## STRATEGY AND GROUP MANAGEMENT

## STRATEGY AND OBJECTIVES

MorphoSys intends to discover, develop and commercialize innovative therapies for patients suffering from serious diseases, with a focus on oncology. Having successfully transitioned from a technology provider to a drug development organization over the past years, we now, as the next step of our corporate development path, aim to transform into an integrated commercial biopharmaceutical company. Based on our leading expertise in antibody, protein and peptide technologies, we have created, together with our partners, more than 100 therapeutic product candidates, of which 29 are currently in clinical development. Our main value drivers are our proprietary drug candidates, led by our investigational antibody MOR208, which is being developed for the treatment of blood cancers. Guselkumab (Tremfya®), marketed by Janssen, is the first commercial product based on MorphoSys's proprietary technology and is approved in the United States, Canada, European Union, Japan and a number of other countries worldwide. This antibody, like the majority of our development programs, is the result of a partnership with a pharmaceutical company. MorphoSys intends to use the revenues generated from these partnerships to advance its proprietary development portfolio which currently comprises 12 programs, one of which is in pivotal development.

The Proprietary Development segment focuses on the development of therapeutic agents based on our proprietary technology platforms, candidates in-licensed from other companies and programs co-developed with partners. During clinical development, we determine whether and at which point to pursue a partnership for later development and commercialization. The drug candidate can then be either completely out-licensed or developed further in cooperation with a pharmaceutical or biotechnology company (co-development). Alternatively, individual projects may be developed on a proprietary basis until they reach the market, with MorphoSys commercializing a product in selected regions.

In the Partnered Discovery segment, MorphoSys generates antibody candidates for partners in the pharmaceutical and biotechnology industries. We receive contractual payments, which include license fees for technologies and funded research, as well as success-based milestone payments and royalties on product sales. The funds generated from these partnerships support our long-term business model and help fund our proprietary development activities.

Both segments are almost exclusively based on MorphoSys's innovative technologies, which include HuCAL, our antibody library which is the basis for more than 20 product candidates currently in clinical development, and the next-generation antibody platform Ylanthia. In addition, over recent years we have established two types of stabilized peptides: our lanthipeptide platform, which we gained access to with the acquisition of Lanthio Pharma B.V. in May 2015, and our HTH peptide platform, which we developed ourselves. We continue to apply our resources and expertise to expand and deepen our technologies. In addition, we added the compounds MOR208 and MOR107 to our portfolio which have been in-licensed and acquired, respectively.

Our goal is to maximize the portfolio's value by investing in the development and, if appropriate, the commercialization of our proprietary drug candidates while maintaining financial discipline and strict cost control.

## GROUP MANAGEMENT AND PERFORMANCE INDICATORS

MorphoSys pays equal attention to financial and non-financial indicators to steer the Group. These indicators help to monitor the success of strategic decisions and give the Company the opportunity to take quick corrective action when necessary. The Company's management also follows and evaluates selected early indicators so that it can thoroughly assess a project's progress and act promptly should a problem occur.

### FINANCIAL PERFORMANCE INDICATORS

Our financial performance indicators are described in detail in the section entitled "Operating and Financial Review and Prospects." Earnings before interest and taxes (EBIT – defined as earnings before finance income, finance expenses, impairment losses on financial assets and income taxes), revenues, operating expenses, segment results and liquidity (liquidity is presented in the following balance sheet items: as of December 31, 2018 "cash and cash equivalents", "financial assets at fair value, with changes recognized in profit or loss" as well as "financial assets at amortized cost"; as of December 31, 2017 "cash and cash equivalents", "available-for-sale financial assets" as well as "financial assets classified as loans and receivables") are the key financial indicators we use to measure our operating performance. Segment indicators are reviewed monthly, and the budget for the current financial year is revised and updated on a quarterly basis. Each year, the Company prepares a mid-term plan for the subsequent three years. Once a year, the company prepares a comprehensive business plan based on its long-term strategy. This plan is regularly updated and discussed with the Supervisory Board. A thorough cost analysis is prepared regularly and used to monitor the Company's adherence to financial targets and make comparisons to previous periods.

MorphoSys's business performance is influenced by factors such as royalty, milestone and license payments, research and development expenses, other operating cash flows, existing liquidity resources, expected cash inflows and working capital. These indicators are also routinely analyzed and evaluated with special attention given to the statement of profit or loss, existing and future liquidity and available investment opportunities. The net present value of investments is calculated using discounted cash flow models.

### TAB. 1: DEVELOPMENT OF FINANCIAL PERFORMANCE INDICATORS [1]

| in million € | 2018 | 2017 | 2016 | 2015 | 2014 |
|---|---|---|---|---|---|
| **MorphoSys Group** | | | | | |
| Revenues | 76.4 | 66.8 | 49.7 | 106.2 | 64.0 |
| Operating expenses | (136.5) | (133.8) | (109.8) | (93.7) | (70.1) |
| EBIT [2] | (59.1) | (67.6) | (59.9) | 17.2 | (5.9) |
| Liquidity [3] | 454.7 | 312.2 | 359.5 | 298.4 | 352.8 |
| **Proprietary Development** | | | | | |
| Segment revenues | 53.6 | 17.6 | 0.6 | 59.9 | 15.0 |
| Segment EBIT | (53.3) | (81.3) | (77.6) | 10.7 | (18.4) |
| **Partnered Discovery** | | | | | |
| Segment revenues | 22.8 | 49.2 | 49.1 | 46.3 | 49.0 |
| Segment EBIT | 13.3 | 30.2 | 31.0 | 20.4 | 25.9 |

1 Differences may occur due to rounding.

2 Contains unallocated expenses (see also Item 3.3 of the Notes): 2018: € 19.2 million, 2017: € 16.5 million, 2016: € 13.4 million, 2015: € 13.9 million, 2014: € 13.4 million).

3 Liquidity presented in the following balance sheet items: as of December 31, 2018 "cash and cash equivalents", "financial assets at fair value, with changes recognized in profit or loss" as well as "other financial assets at amortized cost"; as of December 31, 2017, 2016, 2015, 2014 "cash and cash equivalents", "available-for-sale financial assets and bonds" as well as "financial assets classified as loans and receivables".

## NON-FINANCIAL PERFORMANCE INDICATORS

To secure and expand its position in the therapeutics market, MorphoSys relies on the steady progress of its product pipeline, not only in terms of the number of therapeutic product candidates (115 at the end of the reporting year) but also based on the progress of its development pipeline and prospective market potential. Innovative technologies, when applied appropriately, can be used to generate superior product candidates and therefore a further key performance indicator is the progress of the Company's technology development. In addition to the quality of our research and development, our professional management of partnerships is also a core element of our success, as demonstrated by new contracts and the ongoing progress made within existing alliances. Details on these performance indicators can be found in the section entitled "Research and Development and Business Performance" (page 50).

The non-financial performance indicators described in the section "Sustainable Business Development" (page 97) are also used to manage the MorphoSys Group successfully.

For reporting purposes, MorphoSys uses the Sustainable Development Key Performance Indicators (SD KPIs) recommended by the SD KPI standard. These indicators are used as benchmarks for the commercialization rate (SD KPI 2) and include the success of proprietary research and development (SD KPI 1) and partnered programs. In the past five years, there have been no product recalls, fines or settlements as the result of product safety or product liability disputes (SD KPI 3).

**TAB. 2: SUSTAINABLE DEVELOPMENT KEY PERFORMANCE INDICATORS (SD KPIS) AT MORPHOSYS (DECEMBER 31)**

| | 2018 | 2017 | 2016 | 2015 | 2014 |
|---|---|---|---|---|---|
| **Proprietary Development** | (number of individual antibodies) | | | | |
| Programs in Discovery | 6 | 7 | 8 | 8 | 5 |
| Programs in Preclinic | 1 | 1 | 1 | 2 | 2 |
| Programs in Phase 1[1] | 1 | 2 | 2 | 1 | 1 |
| Programs in Phase 2[2] | 3 | 2 | 3 | 3 | 2 |
| Programs in Phase 3 | 1 | 1 | 0 | 0 | 0 |
| **Total**[1] | **12** | **13** | **14** | **14** | **10** |
| **Partnered Discovery** | (number of individual antibodies) | | | | |
| Programs in Discovery | 55 | 54 | 54 | 43 | 40 |
| Programs in Preclinic | 24 | 24 | 22 | 25 | 25 |
| Programs in Phase 1 | 11 | 11 | 10 | 9 | 8 |
| Programs in Phase 2 | 11 | 10 | 12 | 9 | 8 |
| Programs in Phase 3[3] | 2 | 2 | 2 | 3 | 3 |
| Programs Launched[3] | 1 | 1 | 0 | 0 | 0 |
| **Total** | **103** | **101** | **100** | **89** | **84** |

1 Including MOR107, for which a phase 1 study in healthy volunteers was completed; the compound is currently in preclinical investigation.

2 Thereof two fully out-licensed programs: MOR103/GSK3196165, out-licensed to GSK; MOR106, out-licensed to Novartis; MOR202 is out-licensed to I-Mab Biopharma for the development in China, Hong Kong, Macao and Taiwan.

[3] We still consider Tremfya® as a phase 3 compound due to ongoing studies in various indications. Therefore the number of "Programs in Phase 3" as well as the "Programs Launched" both include Tremfya®. Regarding the total number of programs in the pipeline, however, we only count it as one program.

## LEADING INDICATORS

MorphoSys follows a variety of leading indicators to monitor the macroeconomic environment, the industry and the Company itself on a monthly basis. At the Company level, economic data is gathered on the progress of the segments' individual programs. MorphoSys uses general market data and external financial reports to acquire information on leading macroeconomic indicators such as industry transactions, changes in the legal environment and the availability of research funds and reviews these data carefully.

For active collaborations, there are joint steering committees that meet regularly to update and monitor the programs' progress. These ongoing reviews give the Company a chance to intervene at an early stage if there are any negative developments and provide it with information about expected interim goals and related milestone payments well in advance. Partners in non-active collaborations regularly provide MorphoSys with written reports so that it can follow the progress of therapeutic programs.

The business development area uses market analyses to get an early indication of the market's demand for new technologies. By continuously monitoring the market, MorphoSys can quickly respond to trends and requirements and initiate its own activities or partnerships.

## ORGANIZATIONAL STRUCTURE

### ORGANIZATION OF THE MORPHOSYS GROUP

The MorphoSys Group, consisting of MorphoSys AG and its subsidiaries, develops and commercializes antibodies and peptides for therapeutic applications. The activities of the Group's two business segments are based on its proprietary technologies. The Proprietary Development segment combines all of the Company's proprietary research and development of therapeutic compounds. MorphoSys, alone or with partners, develops its proprietary and in-licensed compounds with the option to bring them into partnerships, out-license them or market them in selected regions and therapeutic settings. The development of proprietary technologies is also conducted in this segment. The second business segment, Partnered Discovery, uses MorphoSys's technologies to make human antibody-based therapeutics on behalf of partners in the pharmaceutical industry. All business activities within the scope of these collaborations are reflected in this segment.

MorphoSys AG is located at its registered office in Planegg near Munich. MorphoSys AG's subsidiary Lanthio Pharma B.V. and its subsidiary LanthioPep B.V. are located in Groningen, the Netherlands. In order to provide the organizational framework for a potential future commercialization of our lead compound MOR208 in the United States, MorphoSys US Inc. was founded in July 2018. The wholly owned subsidiary of MorphoSys AG was established in Princeton, New Jersey, USA. In the future, it is planned to locate the subsidiary in Boston, Massachusetts, USA. MorphoSys AG's central corporate functions such as accounting, controlling, human resources, legal, patent, purchasing, corporate communications and investor relations, as well as the two segments Proprietary Development and Partnered Discovery, are all located in Planegg. The subsidiaries MorphoSys US Inc., Lanthio Pharma B.V. and its subsidiary LanthioPep B.V., are largely autonomous and independently managed. These subsidiaries generally have their own management and administration, as well as human resources, accounting and business development departments. The subsidiaries Lanthio Pharma B.V. and LanthioPep B.V. have their own research and development laboratories as well. In June 2018, the subsidiary Sloning BioTechnology GmbH, located in Planegg, Germany, was merged into MorphoSys AG.

Additional information about the Group's structure can be found in the Notes (Item 2.2.1).

## LEGAL STRUCTURE OF THE MORPHOSYS GROUP: GROUP MANAGEMENT AND SUPERVISION

MorphoSys AG, a German stock corporation listed in the Prime Standard segment of the Frankfurt Stock Exchange as well as on the Nasdaq Global Market, is the parent company of the MorphoSys Group. In accordance with the German Stock Corporation Act, the Company has a dual management structure with the Management Board as the governing body with its four members appointed and overseen by the Supervisory Board. The Supervisory Board is elected by the Annual General Meeting and currently consists of six members. Detailed information concerning the Group's management and control and its corporate governance principles can be found in the Corporate Governance Report. The Senior Management Group supports the Management Board of the Company. At the end of the reporting year, the Senior Management Group consisted of 24 managers from various departments.

## BUSINESS ACTIVITIES

### DRUG DEVELOPMENT

MorphoSys develops drugs using its own research and development (R&D) and by collaborating with partners from the pharmaceutical and biotechnology industry or with academic institutions. Our core business activity is developing new treatments for patients suffering from serious diseases. We have a very broad pipeline, which comprised a total of 115 therapeutic programs at the end of 2018, 29 of which are in clinical development. The first therapeutic agent based on MorphoSys's proprietary technology, which was developed by one of our licensees, is approved in the United States, Canada, European Union, Japan and a number of other countries worldwide. Figure 1 shows the revenue development of the MorphoSys Group divided into our two business segments Proprietary Development and Partnered Discovery, which are described in more detail in the Strategy and Group Management and Organizational Structure sections above.

Our Proprietary Development programs are critical to our goal of becoming a fully integrated biopharmaceutical company that develops and commercializes its own drugs. We are focusing our development activities on cancer treatments, but also have selected programs in inflammatory diseases.

The ability of monoclonal antibodies to bind to specific antigens on tumors or activate the immune system against cancer to unleash a therapeutic effect in patients has led to their dominant role in targeted cancer therapies. According to a report from the IQVIA Institute, global spending on cancer medicines rose to approximately US$ 133 billion in 2017. Overall, the global market for oncology medicines is predicted to reach as much as US$ 200 billion by 2022. Chronic inflammatory and autoimmune diseases affect millions of patients worldwide and impose an enormous social and economic burden. The QuintilesIMS Institute estimates the global market for the treatment of autoimmune diseases will be in the range of US$ 75 billion to US$ 90 billion in the year 2021.

MorphoSys's most advanced Proprietary Development programs are highlighted below in the Research and Development and Business Performance section on page 51.

Our clinical stage Partnered Discovery programs are developed entirely under the control of our partners. They comprise not only programs in our core area of oncology, but also in indications where we have not established proprietary expertise. The most advanced Partnered Discovery programs are highlighted below in the Research and Development and Business Performance section on page 59.

## TECHNOLOGIES

MorphoSys has developed a number of technologies that provide direct access to human antibodies for treating diseases, which we utilize for both our Proprietary Development and Partnered Discovery programs. One of the most widely known MorphoSys technologies is HuCAL, which is a collection of billions of fully human antibodies and a system for their optimization. Another fundamental platform is Ylanthia, a large antibody library representing the next generation of antibody technology. Ylanthia is based on an innovative concept for

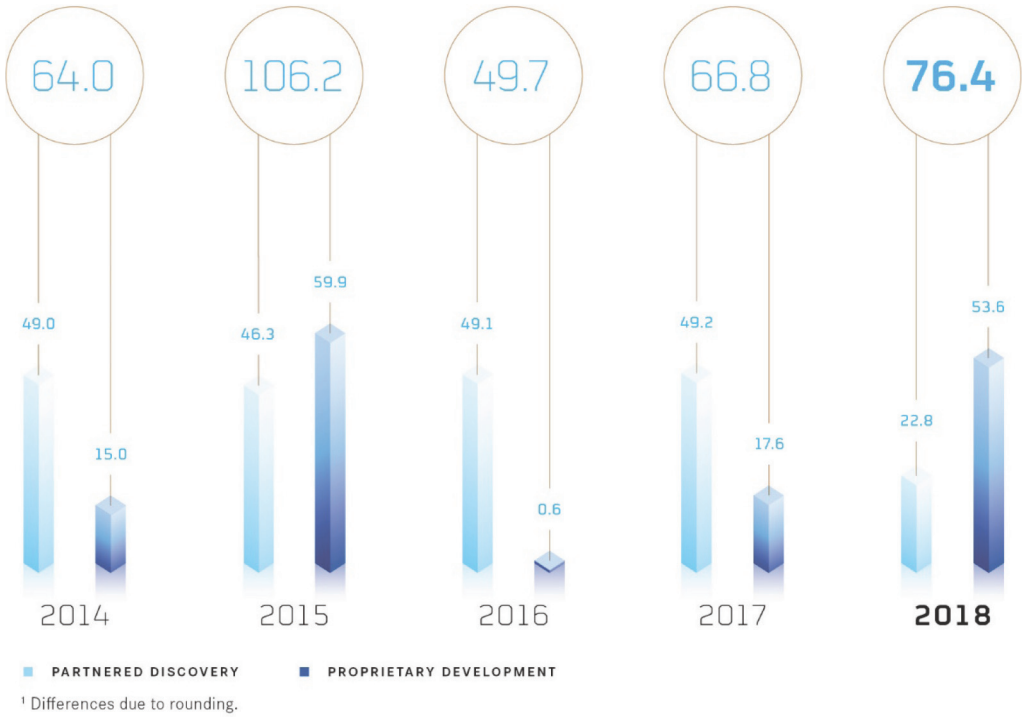
generating highly specific and fully human antibodies. We expect Ylanthia to set a new standard for the pharmaceutical industry's development of therapeutic antibodies in this decade and beyond. Slonomics is the Company's patented, fully automated technology for gene synthesis and modification, which is used to generate highly diverse gene libraries in a controlled process to be used, for example, for the improvement of antibody properties. The lanthipeptide technology developed by Lanthio Pharma B.V., a wholly owned MorphoSys subsidiary, is a valuable addition to our existing library of antibodies and opens up new possibilities for discovering potential drugs based on stabilized peptides. The newest addition to the technology portfolio is our proprietary Helix-Turn-Helix (HTH) peptide technology. In contrast to the lanthipeptides that are stabilized by a specific amino acid modification, the HTH peptides are endowed with an inherent stability by their structure.

More details on our technologies can be found in Our Technology Platforms, on page 176.

## COMMERCIAL

In July 2018, we established a wholly owned subsidiary, MorphoSys US Inc. The subsidiary focuses on building a strong U.S. presence to prepare for the planned commercialization of MOR208 subject to FDA approval.

**FIG. 01: REVENUES OF THE MORPHOSYS GROUP BY SEGMENT (IN MILLION €)[1]**




[1] Differences due to rounding.

## FIG. 02: MORPHOSYS'S PRODUCT PIPELINE (DECEMBER 31, 2018)

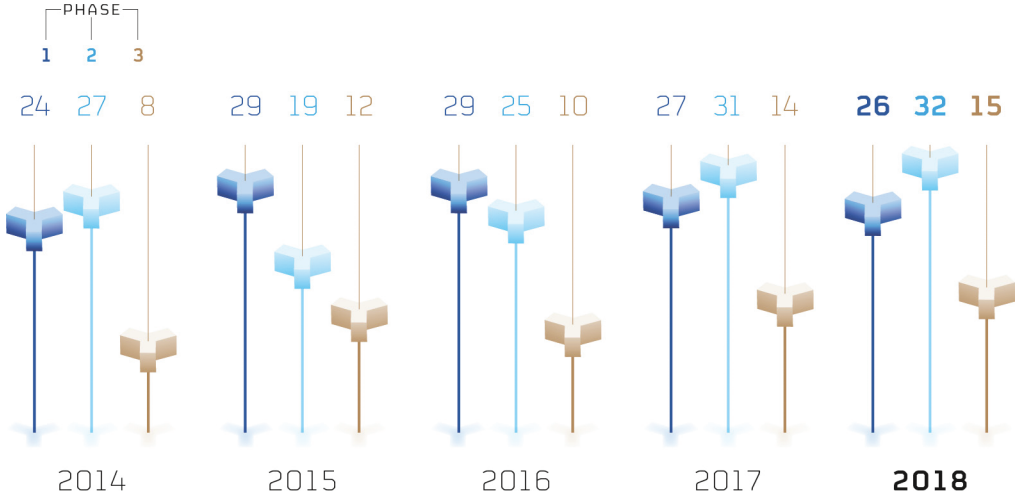
| PROGRAM / PARTNER<br>INDICATION | PHASE | 1 | 2 | 3 | M[1] |
|---|---|---|---|---|---|
| **Tremfya® (guselkumab)** / Janssen/J&J<br>Psoriasis | | ● | ● | ● | ● |
| **Gantenerumab** / Roche<br>Alzheimer's disease | | ● | ● | ● | ○ |
| **MOR208** / not partnered<br>Hematological malignancies | | ● | ● | ● | ○ |
| **Anetumab ravtansine (BAY94-9343)** / Bayer<br>Solid tumors | | ● | ● | ○ | ○ |
| **BAY1093884** / Bayer<br>Hemophilia | | ● | ● | ○ | ○ |
| **BHQ880** / Novartis<br>Multiple myeloma | | ● | ● | ○ | ○ |
| **Bimagrumab (BYM338)** / Novartis<br>Metabolic diseases | | ● | ● | ○ | ○ |
| **CNTO6785** / Janssen/J&J<br>Inflammation | | ● | ● | ○ | ○ |
| **Ianalumab (VAY736)** / Novartis<br>Inflammation | | ● | ● | ○ | ○ |
| **MOR103 (GSK3196165)** / GlaxoSmithKline<br>Inflammation | | ● | ● | ○ | ○ |
| **MOR106** / Novartis/Galapagos<br>Inflammation | | ● | ● | ○ | ○ |
| **MOR202** / I-Mab Biopharma[2]<br>Multiple myeloma | | ● | ● | ○ | ○ |
| **Nov-12 (MAA868)** / Novartis<br>Prevention of thrombosis | | ● | ● | ○ | ○ |
| **Setrusumab (BPS804)** / Mereo/Novartis<br>Brittle bone syndrome | | ● | ● | ○ | ○ |
| **Tesidolumab (LFG316)** / Novartis<br>Eye diseases | | ● | ● | ○ | ○ |

| PROGRAM / PARTNER<br>INDICATION | PHASE | 1 | 2 | 3 | M[1] |
|---|---|---|---|---|---|
| **Utomilumab (PF-05082566)** / Pfizer<br>Cancer | | ● | ● | ○ | ○ |
| **Xentuzumab (BI-836845)** / BI<br>Solid tumors | | ● | ● | ○ | ○ |
| **BAY2287411** / Bayer<br>Cancer | | ● | ○ | ○ | ○ |
| **Elgemtumab (LJM716)** / Novartis<br>Cancer | | ● | ○ | ○ | ○ |
| **MOR107[3] (LP2-3)** / nicht in Partnerschaft<br>Not disclosed | | ● | ○ | ○ | ○ |
| **NOV-7 (CLG561)** / Novartis<br>Eye diseases | | ● | ○ | ○ | ○ |
| **NOV-8** / Novartis<br>Inflammation | | ● | ○ | ○ | ○ |
| **NOV-9 (LKA651)** / Novartis<br>Diabetic eye diseases | | ● | ○ | ○ | ○ |
| **NOV-10 (PCA062)** / Novartis<br>Cancer | | ● | ○ | ○ | ○ |
| **NOV-11** / Novartis<br>Blood disorders | | ● | ○ | ○ | ○ |
| **NOV-13 (HKT288)** / Novartis<br>Cancer | | ● | ○ | ○ | ○ |
| **NOV-14** / Novartis<br>Asthma | | ● | ○ | ○ | ○ |
| **PRV-300 (CNTO3157)** / ProventionBio<br>Inflammation | | ● | ○ | ○ | ○ |
| **Vantictumab (OMP-18R5)** / OncoMed<br>Solid tumors | | ● | ○ | ○ | ○ |

LEGEND :
- MOR PROGRAM
- OUT-LICENSED MOR PROGRAM
- PARTNERED DISCOVERY PROGRAM

[1] Market
[2] For development in China, Hongkong, Taiwan, Macao
[3] A phase 1 study in healthy volunteers was completed. MOR107 is currently in preclinical investigation with a focus on oncology indications.

**FIG. 03: ACTIVE CLINICAL STUDIES WITH MORPHOSYS ANTIBODIES (DECEMBER 31)**




## INFLUENCING FACTORS

A political goal of many countries is to provide cost-effective medical care for its citizens as demographic change drives the need for new forms of therapy. Cost-cutting could slow the industry's development. As part of their austerity measures, governments in Europe, the United States and Asia have tightened their healthcare restrictions and are closely monitoring drug pricing and reimbursement.

The regulatory approval processes in the U.S., Europe and elsewhere are lengthy, time-consuming and unpredictable. It typically takes many years from the start of human clinical testing to obtain marketing approval of a drug, which depends upon numerous factors, including the substantial discretion of the regulatory authorities. Approval laws, regulations, policies or the type and amount of information necessary to gain approval may change during the course of a product candidate's clinical development and may vary among jurisdictions.

Generic competition, which is already common in the field of small molecule drugs, now poses an increasing challenge to the biotechnology industry due to drug patent expiries. The technological barriers for generic biopharmaceuticals, or biosimilars, are expected to remain high. Nevertheless, many drug manufacturers, particularly those from Europe and Asia, are now entering this market and placing more competitive pressure on established biotechnology companies. In the U.S., the approval of biosimilars as an alternative form of treatment has been very slow; they are, however, gaining more attention because of increasing pressure in the healthcare sector to reduce costs. According to the Allied Market Research information service, the global market for biosimilars will reach US$ 27 billion in 2020.

## RESEARCH AND DEVELOPMENT AND BUSINESS PERFORMANCE

### 2018 BUSINESS PERFORMANCE

MorphoSys's business is strongly focused on advancing our therapeutic programs in research and development to benefit patients suffering from serious diseases and to increase MorphoSys's value. The clinical development of proprietary programs with the goal of advancing them toward regulatory approval and commercialization is our focal point. We strive to gain access to novel disease-specific target molecules, product candidates and innovative technology platforms to advance our Proprietary Development portfolio. MorphoSys also continues to participate in the advancements of our partners' therapeutic programs through success-based milestone payments and royalties. The first antibody based on MorphoSys's technology has been on the market in the U.S. since mid-2017.

The key measures of success of MorphoSys's research and development include:

- the initiation of projects and the progress of individual development programs,
- collaborations and partnerships with other companies to broaden our technology base and pipeline of compounds and to commercialize our therapeutic programs,
- clinical and preclinical research results,
- regulatory guidance of health authorities to pursue approval of individual therapeutic programs,
- robust patent protection to secure MorphoSys's market position.

## PROPRIETARY DEVELOPMENT

On December 31, 2018, the number of Proprietary Development programs totaled 12, three of which were out-licensed, either fully or for certain regions only. Five of these programs are in clinical development, one is in preclinical development, and six are in the discovery stage. Our Proprietary Development activities are currently focused on the five clinical candidates:

- MOR208 – an antibody for the treatment of hematological (blood) cancers for which MorphoSys holds exclusive worldwide commercial rights
- MOR202 – an antibody for the treatment of multiple myeloma and other cancers as well as certain autoimmune diseases for which we have signed a regional licensing agreement with I-Mab Biopharma for development and commercialization in China, Hong Kong, Taiwan and Macao
- MOR106 – an antibody for the treatment of inflammatory diseases for which MorphoSys and Galapagos entered into an exclusive license agreement with Novartis in July 2018
- MOR103/GSK3196165 – an antibody that we have fully out-licensed to GlaxoSmithKline (GSK) and which is currently in clinical development at GSK for the treatment of rheumatoid arthritis
- MOR107 – a lanthipeptide developed by our subsidiary Lanthio Pharma which is currently in preclinical testing in oncology settings.

In addition to the programs listed above, we are pursuing several proprietary programs in earlier-stage research and development, including MOR210, a preclinical antibody that was licensed to I-Mab in November 2018 for China and certain other territories in Asia.

### MOR208

***Overview***

MOR208 is an investigational monoclonal antibody directed against the target molecule CD19. CD19 is broadly expressed on the surface of B cells, a type of white blood cell. CD19 enhances B cell receptor signaling, an important factor in B cell survival, making CD19 a potential target for the treatment of B cell malignancies, including DLBCL (diffuse large B cell lymphoma) and CLL (chronic lymphocytic leukemia), indications for which MOR208 is being developed. The market research firm Global Data expects the therapeutic market for non-Hodgkin's lymphoma (NHL), a type of B cell malignancy that includes DLBCL and CLL, to reach approximately US$ 5.5 billion in 2024.

Collectively, lymphomas represent approximately 4% of all cancers diagnosed in the United States. NHL is the most prevalent of all lymphoproliferative diseases, with the National Cancer Institute estimating that 74,680 new cases occurred in the United States in 2018. Worldwide, 385,741 new cases per year were estimated in 2012. DLBCL is the most frequent type of malignant lymphoma worldwide and accounts for approximately one-third of all NHLs globally. First-line treatment of B cell malignancies, including DLBCL, most commonly consists of

a combination chemotherapy regimen plus the antibody rituximab (Rituxan®), also referred to commonly as R-CHOP (R, rituximab; CHOP, cyclophosphamide, doxorubicin, vincristine and the corticosteroid prednisone). Yet, despite the therapeutic success of first-line R-CHOP in DLBCL, up to 40% of patients become refractory to or relapse after initial treatment with fast progression of disease.

We are developing MOR208 pursuant to a collaboration and license agreement that we entered into in June 2010 with Xencor, Inc. (Xencor), under which Xencor granted us an exclusive worldwide license to MOR208 for all indications. Pursuant to this agreement, except for the phase 1 clinical trial of MOR208 in CLL, which was completed in January 2013, we are responsible for all development and commercialization activities in connection with MOR208.

***Ongoing clinical trials and clinical data presented***

There are currently three clinical trials ongoing with MOR208 – L-MIND (phase 2 trial in relapsed/refractory DLBCL (r/r DLBCL)), B-MIND (phase 2/3 trial in r/r DLBCL) and COSMOS (phase 2 trial in r/r CLL and small lymphocytic lymphoma (SLL). The main focus of the current MOR208 development program is on r/r DLBCL. Two of the three ongoing MOR208 clinical studies, namely the L-MIND and B-MIND trials, are being conducted in this indication. Both trials are focusing on r/r DLBCL patients who are not eligible for high-dose chemotherapy (HDCT) and autologous stem cell transplantation (ASCT). The available therapy options for this group of patients are currently very limited, thus we see a high unmet medical need for new treatment alternatives.

Important new data from two of our three current studies with MOR208 were presented during 2018.

**L-MIND** is a phase 2 open-label, single-arm trial evaluating MOR208 plus lenalidomide (LEN) in patients with r/r DLBCL who are ineligible for HDCT and ASCT. The study enrolled patients after up to three prior lines of therapy, with at least one prior therapy including an anti-CD20 targeting therapy, such as rituximab (Rituxan®).

Updated interim data from the study were presented in December 2018 at the American Society of Hematology (ASH) Annual Meeting. These interim data (cut-off date June 5, 2018) had a median observation time of 12 months, and efficacy results were based on assessment by the investigators for all 81 patients enrolled in the study. Patients enrolled had a median age of 72 years and had received a median of two prior lines of treatment.

The data showed a response in 47 out of 81 patients (overall response rate, or ORR, 58%) with complete responses (CR) in 27 (33%) and partial responses (PR) in 20 (25%) patients. The median progression-free survival (mPFS) was 16.2 months (95% confidence interval (CI) 6.3 months – not reached). Responses were durable with a median duration of response (DoR) not reached (95% CI: NR – NR), and 70% of responding patients were without progression at 12 months (12-month DoR rate: 70%, Kaplan-Meier estimate). A significant proportion of patients (37/81; 46%) were still on study treatment at data cut-off, with 19 treated for over 12 months. Median overall survival (OS) was not reached (95% CI: 18.6 months – NR); the 12-month OS rate was 73% (95% CI: 63% – 85%).

Response rates and median PFS similar to those seen overall were observed in most patient subgroups of interest, including by Ann Arbor stage, or those patients who were primary refractory, refractory to last prior therapy, or refractory to rituximab (Rituxan®).

No unexpected toxicities were observed for the treatment combination and no infusion-related reactions (IRRs) were reported for MOR208. The most frequent treatment-emergent adverse events (TEAEs) with a toxicity grading of 3 or higher were neutropenia in 35 (43%), thrombocytopenia in 14 (17%), and anemia in 7 (9%) patients. Treatment-related serious adverse events (SAEs) occurred in 16 (20%) patients, the majority of which were infections or neutropenic fever. Forty-one (51%) patients required dose reduction of LEN; 58 patients (72%) could stay on a daily LEN dose of 20 mg or higher.

We are continuing our discussions with the U.S. Food and Drug Administration (FDA) to evaluate possible paths to market, including the possibility of an expedited regulatory submission and potential approval based primarily on the L-MIND study. In October 2017, MOR208, in combination with LEN, was granted U.S. FDA breakthrough therapy designation (BTD) for the treatment of r/r DLBCL patients ineligible for HDCT or ASCT based on preliminary data from the L-MIND study. BTD is intended to expedite development and review of drug candidates, alone or in combination with other drugs. It is granted if preliminary clinical evidence indicates that the drug candidate may provide substantial improvement over existing therapies in the treatment of a serious or life-threatening disease.

A key goal of the Company is to work towards the submission of a regulatory filing for MOR208 in r/r DLBCL to the FDA for the U.S. and possibly to EMA for submission of a regulatory filing in Europe, primarily based on data from the L-MIND study.

In parallel, the process is underway to conduct and complete data collection for the CMC (chemistry, manufacturing and controls) package required for the regulatory filing and potential market supply thereafter. The purpose of the CMC package is to prove a safe and stable commercial-scale production and manufacturing process of the drug.

**B-MIND** is a phase 2/3 randomized, multi-center trial evaluating MOR208 plus bendamustine compared to rituximab (Rituxan®) plus bendamustine in patients with r/r DLBCL who are ineligible for HDCT and ASCT. This ongoing trial is scheduled to enroll patients in centers across Europe, the Asia/Pacific region and the United States. The study is currently in its phase 3 part. In 2018, recruitment and treatment of patients continued as planned.

**COSMOS** is a phase 2, two-cohort open-label, multi-center study evaluating the preliminary safety and efficacy of MOR208 combined with idelalisib (cohort A) or venetoclax (cohort B) in patients with r/r CLL or SLL previously treated with Bruton's tyrosine kinase inhibitor (BTKi) ibrutinib.

Preliminary safety and efficacy data on all 11 patients enrolled in cohort A (cut-off date: January 29, 2018) were presented at the European Hematological Association (EHA) Annual Congress in June 2018. Patients enrolled had received a median of five prior treatment lines (range: 2-9). Nine out of the 11 patients enrolled (82%) had discontinued prior ibrutinib treatment due to progressive disease and two patients (18%) due to toxicity.

The most common TEAEs of grade 3 or higher were hematologic, with neutropenia observed for four patients (36%) and anemia for three patients (27%) being the most common reported events. Eleven treatment-emergent SAEs were reported in five patients (45%), none of them being fatal. All five patients recovered. Six treatment-related SAEs were reported in three patients (27%). All except one were suspected to be related to idelalisib; the other was assessed as being attributable to both study drugs.

According to the preliminary efficacy analysis conducted by the investigators, the ORR was 82%, including one CR (9%) confirmed by bone marrow biopsy and eight PRs (73%). In addition, two patients (18%) showed stable disease (SD). The median observation time at cut-off was 4.2 months. At the time of data cut-off, six patients were still on treatment. One patient with a very good partial response (VGPR) according to response criteria was taken off the study to receive stem cell transplantation. Two previously responding patients had to discontinue the study due to progressive disease. Two patients (one PR, one SD) discontinued due to adverse events.

At the ASH Annual Meeting in December 2018, preliminary safety and efficacy data on all 13 patients enrolled into cohort B (cut-off date: October 15, 2018) were presented. Patients enrolled had received a median of three prior treatment lines (range: 1-4). Nine out of the 13 patients enrolled (69%) had discontinued prior ibrutinib treatment due to progressive disease, three patients (23%) due to toxicity and for one patient the reason was unknown (8%).

The most common hematological TEAE was neutropenia, observed for six patients (46%). Twelve treatment-emergent SAEs were reported in nine patients (69%), none of them fatal, and all were resolved.

According to the preliminary efficacy analysis conducted by the investigators, ten out of 13 patients enrolled showed an objective response (ORR 77%), including three CRs (23%) confirmed by bone marrow biopsy and seven PRs (54%). Three patients discontinued study participation in the first cycle without undergoing a response assessment, two patients thereof due to IRRs and one patient due to withdrawal of informed consent. No patients had progressive disease. Five patients showed minimal residual disease (MRD) negativity, which means that no tumor cells were detectable in the peripheral blood. The median observation time was 8.3 months. At the time of data cut-off, all ten patients who had initially shown a response continued treatment, and one CR confirmation was pending from bone marrow for one patient.

**MOR202**

***Overview***

MOR202 is a recombinant human IgG1 HuCAL monoclonal antibody directed against the target molecule CD38. CD38 is a highly expressed and clinically validated target in multiple myeloma (MM). Scientific research suggests that an anti-CD38 antibody also may have therapeutic activity in solid tumors or autoimmune and other diseases driven by autoantibodies, such as light chain amyloidosis or systemic lupus erythematosus.

MM is a hematological (blood) cancer that develops in the mature plasma cells in the bone marrow. MM is the second most common blood cancer worldwide. Development of MOR202 in MM is currently focused on China, where the patient number has gradually increased in recent years due to an aging population. Yet there are no effective biologics approved in China for this indication, and current therapies have been associated with serious side effects and limited treatment efficacy.

We are currently conducting a phase 1/2a trial in MM. During 2018, we announced our decision not to continue development of MOR202 in MM beyond completion of the currently ongoing trial. This is in line with previous announcements that we would not continue to develop MOR202 in MM without having a suitable partner. However, we continue to support our partner I-Mab in the development of MOR202 with the aim to gain approval in MM for the greater Chinese market as planned.

Also during 2018, we made the decision not to start clinical development of MOR202 in NSCLC as we had originally planned. This was due to Genmab and Janssen discontinuing a clinical study of the anti-CD38 antibody daratumumab in combination with a checkpoint inhibitor for the treatment of NSCLC based on an analysis of interim clinical data and serious safety findings.

We are continuing to evaluate the development of MOR202 in other indications outside of cancer, including certain autoimmune diseases.

***Regional agreement with I-Mab Biopharma***

We have an exclusive regional licensing agreement for MOR202 with I-Mab Biopharma. Under the terms of the agreement signed in November 2017, I-Mab has the exclusive rights to develop and commercialize MOR202 in China, Taiwan, Hong Kong and Macao. At the signing, MorphoSys received an immediate upfront payment of US$ 20 million. We are also entitled to receive additional success-based clinical and commercial milestone payments from I-Mab of up to US$ 100 million, as well as tiered double-digit royalties on net sales of MOR202 in the agreed regions. In August 2018, we announced that I-Mab had submitted an investigational new drug (IND) application to the Chinese authorities for MOR202 (called TJ202 by I-Mab) for the treatment of MM.

***Clinical data presented***

Data from our phase 1/2a study in MM were presented in December 2018 at the ASH Annual Meeting. The data were based on the most recent data cut-off after the primary analysis of the study in r/r MM. The dose escalation

trial comprises three arms: MOR202, MOR202 in combination with the immunomodulatory drug (IMiD) lenalidomide (LEN), and MOR202 in combination with the IMiD pomalidomide (POM), in each case with low-dose dexamethasone (DEX).

In total, 56 patients were evaluable for safety and efficacy analysis in the clinically relevant dose cohorts of MOR202 (4 mg/kg, 8 mg/kg, 16 mg/kg) by the time of the data cut-off on October 16, 2018. At data cut-off, 10 patients remained in the study. Of the 56 evaluable patients, 18 received MOR202 plus DEX, 21 received the combination of MOR202 and POM/DEX, and 17 received MOR202 plus LEN/DEX.

MOR202 was given as a two-hour infusion up to the highest dose of 16 mg/kg. IRRs occurred in 7% of patients in the clinically relevant dose cohorts of MOR202 and were limited to grades 1 or 2. Further, the infusion time could be shortened to 30 minutes in the majority of patients still on study treatment at the data cut-off date.

The most frequent adverse events of grade 3 or higher were neutropenia, lymphopenia and leukopenia in 52%, 52% and 39% of patients, respectively. No unexpected safety signals were observed.

Patients treated with MOR202 in combination with LEN/DEX had a median of two prior treatment lines, 59% being refractory to at least one prior therapy. Median PFS was not yet reached. With five of the 17 patients in this cohort still on study at data cut-off, the median time on study was 11.8 months. An objective response was observed in 11 out of 17 patients (65%), with two CRs, two VGPRs and seven PRs.

Patients receiving MOR202 with POM/DEX, had a median of three prior treatment lines, and all were refractory to prior LEN therapy. Median PFS was 15.9 months. With five out of 21 patients in this cohort still on study at data cut-off, the median time on study was 13.4 months. An objective response was observed in ten out of 21 patients (48%), with two patients achieving a CR, six patients with a VGPR and two PRs.

Patients treated with MOR202 plus DEX had a median of three prior treatment regimens, with 67% being refractory to any prior therapy. Median PFS in this cohort was 8.4 months. All patients had discontinued the study before data cut-off; follow-up for this cohort is therefore completed. An objective response was observed in five out of 18 patients (28%); median time on study was 3.8 months.

**MOR106**

MOR106 is an investigational fully human IgG1 monoclonal antibody derived from our Ylanthia library and designed to selectively target IL-17C. MOR106 came from the strategic discovery and co-development alliance between Galapagos and MorphoSys, in which both companies contributed their core technologies and expertise. It is the first publicly disclosed monoclonal antibody targeting IL-17C in clinical development worldwide. In preclinical studies, MOR106 has been shown to inhibit the binding of IL-17C to its receptor, thus abolishing its biological activity. Results from rodent inflammatory skin models of atopic dermatitis (AD) and psoriasis support clinical development of MOR106 for the treatment of inflammatory diseases. In July 2018, we announced with Galapagos that we had entered into a worldwide exclusive development and commercialization agreement with Novartis Pharma AG (Novartis) for MOR106.

AD, the most severe and common type of eczema, is a chronic relapsing inflammatory skin disease that causes severe itch, dry skin and rashes, predominantly on the face, inner side of the elbows and knees, and on hands and feet. Scratching of the affected skin leads to a vicious cycle causing redness, swelling, cracking, scaling of the skin and an increased risk of bacterial infections. Lichenification, thickening of the skin, is characteristic in older children and adults. The National Eczema Association estimates that AD affects over 30 million Americans, and up to 25% of children and 2-3% of adults. As many as 50% of AD patients are diagnosed in the first year of life, and 85% of patients have a disease onset before age five. Symptoms commonly fade during childhood; however, up to 30% of the patients will suffer from AD for life. A smaller percentage first develops symptoms as adults.

***Worldwide exclusive development and commercialization agreement with Novartis***

Our agreement with Novartis was announced in July 2018, and received U.S. anti-trust clearance in September 2018. Under the terms of the agreement, the parties (Galapagos, MorphoSys, Novartis) will cooperate to execute and broaden the existing development plan for MOR106 in AD. Novartis holds exclusive rights for commercialization of any products resulting from the agreement. All current and future research, development, manufacturing and commercialization costs for MOR106 will be covered by Novartis. This includes the ongoing phase 2 IGUANA trial in AD patients, as well as the phase 1 bridging study to evaluate the safety and efficacy of a subcutaneous formulation of MOR106 in healthy volunteers and AD patients. MorphoSys and Galapagos will conduct additional trials to support development of MOR106 in AD. Under the terms of the agreement, Novartis will also explore the potential of MOR106 in indications beyond AD.

In addition to the funding of the current and future MOR106 program by Novartis, MorphoSys and Galapagos jointly received an upfront payment of € 95 million. Pending achievement of certain developmental, regulatory, commercial and sales-based milestones, MorphoSys and Galapagos are jointly eligible to receive significant milestone payments, potentially amounting to up to approximately € 850 million, in addition to tiered royalties on net commercial sales in the low-teens to low-twenties percent. Under the terms of their agreement from 2008, Galapagos and MorphoSys share all payments equally (50/50).

***Clinical data presented***

In February 2018, more detailed clinical results from a phase 1 trial with MOR106 in patients with moderate to severe AD were presented at the American Academy of Dermatology (AAD) conference after initial study data were reported in September 2017. MOR106 showed first signs of activity as well as durable responses and was generally well tolerated in patients with AD.

This randomized, double-blind, placebo-controlled phase 1 trial evaluated single ascending doses (SAD) of MOR106 in healthy volunteers and multiple ascending doses (MAD) in patients with moderate-to-severe AD. In the MAD part, 25 patients received four infusions once-weekly of either MOR106 (at the doses of 1, 3 and 10 mg/kg body weight) or placebo in a 3:1 ratio. Patients were followed for 10 weeks after the end of the treatment period. In the MAD part of the study, all adverse drug reactions observed were mild to moderate and transient in nature. No SAEs and no IRRs were recorded. MOR106 exhibited a favorable pharmacokinetic (PK) profile with dose-dependent exposure.

At the highest dose level of MOR106 (10 mg/kg body weight), in 83% of patients (5/6) an improvement of at least 50% in signs and extent of AD, as measured by the Eczema Area and Severity Index (EASI)-50, was recorded at week 4. The onset of activity occurred within two to four weeks, depending on the dose administered. Pooled data across all dose cohorts showed that patients treated with MOR106 achieved an EASI improvement compared to baseline of 58%, 62%, 72% and 64% at week 4, 8, 12 and 14, respectively. For patients receiving placebo, the EASI improvement was 32%, 40%, 38% and 50%, respectively.

***Clinical trials initiated***

**IGUANA phase 2 study in AD:** In May 2018, we announced with Galapagos that the first patient had been enrolled in IGUANA, a phase 2 study of MOR106 in patients with AD. The placebo-controlled, double-blind study will evaluate the efficacy, safety and PK of MOR106.

At least 180 patients with moderate-to-severe AD are planned to be treated over a 12-week period with one of three different doses of intravenously (iv) administered MOR106 (1, 3 or 10 mg/kg) or placebo using two different dosing regimens in multiple centers across Europe. Dosing at two- or four-week intervals will be evaluated over the 12-week treatment period, followed by a 16-week observation period. The primary objective will be assessed by the percentage change from baseline in EASI score at week 12.

**Phase 1 bridging study.** In September 2018, we announced with Galapagos the initiation of a phase 1 bridging study testing a subcutaneous (sc) formulation of MOR106. This bridging study is a parallel-design phase 1 clinical trial being conducted in two parts. Part 1 is a single center, randomized, open-label study in healthy volunteers who will be treated with different single-dose levels of MOR106 administered subcutaneously or intravenously. Part 2 is a multiple-center, randomized, placebo-controlled, multiple-dose study in patients with moderate to severe AD who will be treated subcutaneously for 12 weeks. Safety and tolerability, PK and occurrence of anti-drug-antibodies after administration of MOR106 will be assessed as endpoints. In addition, the efficacy of MOR106 will be explored in subjects with moderate-to-severe AD.

**MOR103/GSK3196165**

***Overview***

MOR103/GSK3196165 is a fully human HuCAL antibody directed against the granulocyte-macrophage colony-stimulating factor (GM-CSF). Due to its diverse functions in the immune system, GM-CSF can be considered a target for a broad spectrum of anti-inflammatory therapies, such as rheumatoid arthritis (RA), a chronic inflammatory disorder that affects the lining of joints, causing a painful swelling that can eventually result in bone erosion and joint deformity.

The overall market for RA drugs is growing steadily, and GBI Research expects it will reach US$ 19 billion in the year 2020. MorphoSys estimates that MOR103/GSK3196165 has the potential to be the first marketed anti-GM-CSF antibody in RA.

We discovered and advanced MOR103/GSK3196165 into clinical development, before out-licensing it to GlaxoSmithKline (GSK) in 2013. GSK is now developing the antibody independently for RA and bears all of the related costs. MorphoSys participates in the program's development and commercialization through milestone payments up to a total of € 423 million and through tiered, double-digit royalties on net sales. In 2013, MorphoSys received an upfront payment of € 22.5 million.

***Clinical data presented***

GSK conducted a phase 2b study in patients with RA and a phase 2a study in patients with inflammatory hand osteoarthritis (OA). The corresponding study data were presented at the 2018 American College of Rheumatology (ACR) Annual Meeting in October 2018. GSK has announced that it does not intend to pursue further development in hand osteoarthritis.

Furthermore, results from the phase 2 dose-ranging study of MOR103/GSK3196165 in patients with moderate-to-severe RA who have an inadequate response to methotrexate (MTX) were presented at the ACR Annual Meeting in October 2018.

The primary objective of this double-blind, placebo-controlled, dose-ranging study was to assess the efficacy of MOR103/GSK3196165 in adult patients with active, moderate-to-severe RA. A total of 222 patients were randomized equally to receive placebo or MOR103/GSK3196165 (37 patients per arm) at doses of 22.5 mg, 45 mg, 90 mg, 135 mg or 180 mg, starting with an induction regimen of five weekly subcutaneous injections followed by every other week (EOW) injections until week 50.

Study results from the 180 mg dose arm of MOR103/GSK3196165 were as follows:

Efficacy was shown in the majority of patients, as measured by a Disease Activity Score taking into account the C-reactive protein, (DAS28(CRP)) of less than 2.6 at week 24 (the primary endpoint of the study), although this did not reach statistical significance (week 24: 16% for MOR103/GSK3196165 180 mg vs 3% for placebo, p=0.134).

For DAS28(CRP) change from baseline, there was a rapid onset of efficacy, as early as week 1, for all doses of MOR103/GSK3196165 above 22.5 mg. This improvement continued throughout the weekly dosing phase and was statistically significant at week 12 (-1.27 difference for MOR103/GSK3196165 180 mg from placebo, 95% CI: -1.91, -0.63; p<0.001).

An improvement in efficacy was maintained through the EOW dosing phase and was statistically significant at week 24 (DAS28(CRP): -1.82 difference for MOR103/GSK3196165 180mg from placebo, 95% CI: -2.05, -0.23; p<0.001).

Major secondary endpoints including a number of traditional measures to assess the efficacy of MOR103/GSK3196165 were also improved in line with the DAS28(CRP) reduction. The magnitude of improvement in patient-based measures (swollen and tender joint counts, pain and clinical disease activity index (CDAI)) was particularly marked.

The safety profile of MOR103/GSK3196165 was similar to that reported in previous studies. All doses of MOR103/GSK3196165 were well tolerated, and adverse events (AEs), including SAEs, were reported similarly across treatment groups. The percentage of patients experiencing any AE or SAE respectively, was 49% and 0% for placebo, 51% and 5% for 22.5 mg MOR103/GSK3196165, 65% and 3% for 45 mg MOR103/GSK3196165, 59% and 5% for 90 mg MOR103/GSK3196165, 51% and 3% for 135 mg MOR103/GSK3196165, and 65% and 0% for 180 mg MOR103/GSK3196165. There were no treatment-limiting safety findings including serious infections, injection site reactions, or laboratory abnormalities, all of which were closely monitored throughout the study. No pulmonary toxicity, including pulmonary alveolar proteinosis, was observed.

In another phase 2a mechanistic 12-week study with 180 mg MOR103/GSK3196165 presented at the same meeting, a similar clinical efficacy profile with, in addition, synovitis reduction, was observed in patients with RA.

**MOR107**

Lanthipeptides are a class of modified peptides that have been engineered for improved stability and selectivity. MOR107 is based on the proprietary technology platform of our Dutch subsidiary Lanthio Pharma B.V. This compound has demonstrated angiotensin II type 2 (AT2) receptor-dependent activity in preclinical *in vivo* studies and may have the potential to treat a variety of diseases. After we had successfully completed a first-in-human phase 1 study in healthy volunteers in 2017, we continued our preclinical investigations with MOR107 during 2018, focusing on oncology indications. In the fourth quarter of 2018, updated study data led to the need for further studies, and the existing development plan was adjusted accordingly. This resulted in the expectation of a delayed market entry and a delay in the occurrence of future cash flows compared to previous assumptions, which led to an impairment. Further details can be found in the Notes (Item 5.7.5).

**MOR210**

***Overview***

MOR210 is a human antibody directed against C5aR derived from our HuCAL technology. C5aR, the receptor of the complement factor C5a, is being investigated as a potential new drug target in the field of immuno-oncology and autoimmune diseases. Tumors have been shown to produce high amounts of C5a which, by recruiting and activating myeloid-derived suppressor cells (MDSCs), is assumed to contribute to an immune-suppressive pro-tumorigenic microenvironment. MOR210 is intended to block the interaction between C5a and its receptor, thereby being expected to neutralize the immune-suppressive function of the MDSCs and to enable immune cells to attack the tumor. MOR210 is currently in preclinical development.

***Regional agreement with I-Mab Biopharma***

In November 2018, we announced that we had entered into an exclusive strategic collaboration and regional licensing agreement for MOR210 with I-Mab Biopharma. Under the agreement, I-Mab has exclusive rights to

develop and commercialize MOR210 in China, Hong Kong, Macao, Taiwan and South Korea, while we retain rights in the rest of the world. The agreement deepens our existing partnership with I-Mab, building upon the ongoing collaboration for MOR202.

Under the terms of the agreement, I-Mab will exercise its exclusive license rights for development and commercialization of MOR210 in its territories. With our support, I-Mab will perform and fund all global development activities for MOR210, including clinical trials in China and the U.S., towards clinical proof-of-concept (PoC) in oncology.

We received an upfront payment of US$ 3.5 million from I-Mab and are eligible to receive development and commercial milestone payments of up to US$ 101.5 million, as well as tiered, mid-single-digit royalties on net sales of MOR210 in I-Mab's territories. In return for the execution of a successful clinical PoC study, I-Mab is eligible to receive low-single-digit royalties on net sales generated with MOR210 outside its territories and a tiered percentage of sub-licensing revenue.

## PARTNERED DISCOVERY

At the end of 2018, we had one Partnered Discovery program on the market, 24 in clinical development, 24 partnered product candidates in preclinical development and 55 in discovery. Below, we highlight our most advanced programs and a recently expanded strategic alliance.

Guselkumab (Tremfya®) – a HuCAL antibody targeting IL-23 that is being developed and commercialized by our partner Janssen in plaque psoriasis and other indications. Guselkumab (Tremfya®) is approved in the United States, Canada, European Union, Japan and a number of other countries worldwide.

Gantenerumab – a HuCAL antibody targeting amyloid beta that is in phase 3 clinical testing by our partner Roche for the treatment of Alzheimer's disease.

Other programs – in addition to the two programs above, we have a large number of programs in various stages of research and development from our partnerships with major pharmaceutical companies.

LEO Pharma – we have a strategic alliance with LEO Pharma for the discovery and development of therapeutic antibodies for the treatment of skin diseases. This agreement was expanded in 2018 to include peptides.

### GUSELKUMAB (TREMFYA®)

***Overview***

Guselkumab (Tremfya®) is a human HuCAL antibody targeting IL-23 that is being developed and commercialized by Janssen. It is the first commercial product based on our proprietary technology. It is approved in the United States, Canada, the European Union and several other countries for the treatment of moderate-to-severe plaque psoriasis and in Japan for the treatment of various forms of psoriasis, psoriatic arthritis and palmoplantar pustulosis. IL-23 is a pro-inflammatory protein which has been identified as a cytokine in autoimmune diseases and is found in the skin of patients with psoriasis and other inflammatory diseases. It is therefore considered to be a potential treatment target for inflammatory diseases. The antibody binds to the so-called p19 subunit unique to IL-23. Antibodies that bind to IL-23's p40 subunit will also neutralize IL-12 and are therefore less specific. Guselkumab (Tremfya®) is the first approved antibody binding the p19 subunit of IL-23.

Psoriasis is a chronic, autoimmune inflammatory disorder of the skin characterized by abnormal itching and physically painful skin areas. It is estimated that about 125 million people worldwide have psoriasis, with approximately 25% suffering from cases that are considered moderate to severe. The independent market experts Transparency Market Research forecast the market for psoriasis to grow from € 7.5 billion in 2014 to € 12 billion in the year 2024.

In addition to plaque psoriasis, Janssen is developing guselkumab (Tremfya®) for the treatment of Crohn's disease, pediatric psoriasis, psoriatic arthritis, palmar/plantar pustulosis and a few other indications.

MorphoSys receives royalties on net sales of guselkumab (Tremfya®) and is eligible to receive milestone payments for selected future development activities.

***Additional marketing approvals received***

Building on the first approvals for guselkumab (Tremfya®), which occurred in 2017 in the U.S., Europe and Canada, during 2018 Janssen received marketing approvals in several additional countries as follows:

**Australia:** In April 2018, Janssen's country subsidiary reported that guselkumab (Tremfya®) had been approved for the treatment of adults living with moderate-to-severe plaque psoriasis in Australia.

**Brazil:** In April 2018, Janssen's country subsidiary reported that guselkumab (Tremfya®) had been approved for the treatment of adults living with moderate-to-severe plaque psoriasis in Brazil.

**Japan:** In April 2018, we announced that Janssen had reported that guselkumab (Tremfya®) had received marketing approval in Japan for the treatment of three forms of psoriasis (plaque, pustular and erythrodermic psoriasis) and psoriatic arthritis in patients with moderate-to-severe disease for whom other existing treatments have failed.

Additionally, in November 2018, Janssen reported that guselkumab (Tremfya®) had been approved in Japan for the treatment of patients with palmoplantar pustulosis who are not responding to, or are refractory to, existing treatments. Palmoplantar pustulosis is a debilitating, chronic skin disease that causes pustules and inflammation to appear mainly on the palms of the hands and soles of the feet, greatly affecting patients' quality of life. According to a press release issued by Janssen on November 21, 2018, guselkumab (Tremfya®) was the first and only biologic treatment available for the estimated 130,000 patients living with palmoplantar pustulosis in Japan.

**South Korea:** In April 2018, we announced that an affiliate of Janssen reported that guselkumab (Tremfya®) had been approved for the treatment of moderate-to-severe adult plaque psoriasis requiring phototherapy or systemic therapies in South Korea.

***New clinical trials initiated***

**Crohn's disease pivotal clinical program:** In July 2018, we announced that Janssen had initiated a pivotal phase 2/3 clinical program to evaluate the efficacy and safety of guselkumab (Tremfya®) in the treatment of patients with moderate to severely active Crohn's disease, a type of inflammatory bowel disease affecting any part of the gastrointestinal tract. Expected to enroll approximately 2,000 patients, the program, which is named GALAXI, consists of three separate studies: a phase 2 study (GALAXI 1), followed by two phase 3 studies (GALAXI 2 and GALAXI 3). In connection with the start of the GALAXI program, we received two milestone payments from Janssen; the financial details were not disclosed.

**Phase 3 trial in pediatric plaque psoriasis patients:** In September 2018, we announced that Janssen had initiated a phase 3 clinical trial of guselkumab (Tremfya®) in pediatric patients suffering from chronic plaque psoriasis, the most common form of psoriasis. According to clinicaltrials.gov, the trial, PROTOSTAR, is expected to enroll approximately 125 children between 6 and 18 years of age with plaque psoriasis, and will evaluate the safety, efficacy, and pharmacokinetics of guselkumab (Tremfya®) against etanercept and placebo.

**Phase 2 trial in hidradenitis suppurativa (HS):** In October 2018, we announced that Janssen had initiated a phase 2 clinical study of guselkumab (Tremfya®) in patients with moderate-to-severe HS, a chronic skin disease also known as acne inversa. According to clinicaltrials.gov, the randomized, double-blind study, NOVA, is expected to enroll approximately 180 adult patients with moderate-to-severe HS and will evaluate the efficacy, safety and tolerability of guselkumab (Tremfya®) against placebo.

**Phase 2a trial in ulcerative colitis (UC):** In January 2019, we announced that Janssen had initiated a proof-of-concept phase 2a clinical trial in patients with moderately to severely active UC, a chronic inflammatory bowel disease. According to clinicaltrials.gov, this randomized, double-blind study will evaluate the efficacy and safety of guselkumab (Tremfya®) in combination with golimumab compared to guselkumab (Tremfya®) or golimumab monotherapy in approximately 210 patients with moderately to severely active UC.

***New long-term data presented in plaque psoriasis***

During 2018, our partner Janssen announced the presentation of new long-term data in patients with plaque psoriasis.

In October 2018, Janssen announced new long-term data from the open-label period of the phase 3 VOYAGE 1 clinical trial that demonstrated stably maintained rates of skin clearance with guselkumab (Tremfya®) treatment at week 52 and week 156 among adult patients with moderate-to-severe plaque psoriasis.

According to a press release issued by Janssen, the findings, presented at the 37th Fall Clinical Dermatology Conference in Las Vegas, Nevada/USA, showed that nearly 83% of patients receiving guselkumab (Tremfya®) in the VOYAGE 1 study maintained at least a 90% improvement in the Psoriasis Area Severity Index (PASI 90) response, or near-complete skin clearance, and an Investigator's Global Assessment (IGA) score of cleared (0) or minimal disease (1) at week 156. According to Janssen, 96.4% of patients treated with guselkumab (Tremfya®) achieved a PASI 75 score at week 156. Furthermore, 53.1 % of patients achieved an IGA score of 0 and 50.8% of patients achieved a PASI 100 response. This measure represents skin completely cleared of psoriasis plaques (except for residual discoloration).

According to Janssen, of the 494 patients in the treatment groups receiving guselkumab (Tremfya®) in the study, the percentage of patients reporting AEs, SAEs, infections and serious infections through week 156 were 86.2%, 13.4%, 67.8% and 2.2%, respectively, consistent with data from earlier read-outs from the study. No cases of active tuberculosis, opportunistic infections or serious hypersensitivity reactions were reported among guselkumab (Tremfya®)-treated subjects.

In September 2018, Janssen announced new data that showed clinically relevant improvements in long-term patient-reported outcomes (PRO) in patients with plaque psoriasis switched to guselkumab (Tremfya®) after an initial inadequate response to adalimumab (Humira®). These long-term findings from Janssen's phase 3 clinical trial programs – VOYAGE 1 and 2 – in patients with moderate-to-severe plaque psoriasis were part of six abstracts presented at the European Academy of Dermatology and Venereology (EADV) 2018 Congress.

According to Janssen's press release, study findings showed that a switch to guselkumab (Tremfya®) at week 28, after an inadequate response to adalimumab (Humira®), led to a sustained improvement in PROs in both PSSD and DLQI (Dermatology Life Quality Index) scores at week 100. The proportions of patients with PSSD symptom and signs scores of 0 (i.e. no patient-reported symptoms or signs of psoriasis) increased from 4.2% and 1.1%, respectively, at week 28, to 32.6% and 18.0% at week 100. The proportion of patients with a DLQI score of 0 or 1 (i.e. no impact on patient quality of life) increased from 14.4% at week 28 to 65.3% at week 100, showing consistent improvement and impact on patient well-being after switching to guselkumab (Tremfya®).

In February 2018, Janssen announced the presentation of data from the phase 3 VOYAGE 2 trial at the 2018 American Academy of Dermatology (AAD) Annual Meeting. The data showed that a vast majority of patients with moderate to severe plaque psoriasis receiving guselkumab (Tremfya®) who achieved at least 90 percent improvement in the Psoriasis Area and Severity Index (PASI 90) at week 28, maintained a PASI 90 response with continuous treatment through week 72. Findings from the study also demonstrated that a vast majority of patients originally randomized to guselkumab (Tremfya®), but withdrawn from treatment at week 28, regained a PASI 90 response within six months of initiating guselkumab (Tremfya®) re-treatment.

Results from the trial demonstrated that among patients who achieved PASI 90 response at week 28 with guselkumab (Tremfya®), 86% who continued receiving guselkumab (Tremfya®) maintained a PASI 90 response through week 72, while only 11.5% of patients who were withdrawn from treatment maintained PASI 90 response. Of 173 patients who lost PASI 90 response after withdrawal from guselkumab (Tremfya®), 87.6% recaptured PASI 90 response six months following re-treatment. No new safety signals were observed with continuous treatment or re-treatment therapy with guselkumab (Tremfya®) through week 100.

Guselkumab (Tremfya®) data from eight additional abstracts were also presented at the AAD Annual Meeting, including an oral presentation of a pooled analysis from the phase 3 VOYAGE 1 and 2 trials evaluating consistency of response by weight across subgroups of patients through week 24.

The phase 3 VOYAGE 2 trial was a randomized, double-blind, placebo- and active-comparator-controlled study designed to evaluate the safety and efficacy of guselkumab (Tremfya®) compared with placebo and adalimumab (Humira®) and of guselkumab (Tremfya®) maintenance therapy compared with withdrawal of therapy in adult patients with moderate to severe plaque psoriasis. Patients (n=992) were randomized to receive subcutaneous (SC) injections of guselkumab (Tremfya®) 100 mg at weeks 0, 4, 12 and 20; placebo at weeks 0, 4, and 12 with crossover to guselkumab (Tremfya®) at weeks 16 and 20 or adalimumab (Humira®) 80 mg at week 0, followed by 40 mg at week 1 and every two weeks through week 23. Patients initially randomized to receive guselkumab (Tremfya®) who achieved a PASI 90 response (n=375) at week 28 were re-randomized to either continued treatment with guselkumab (Tremfya®) (n=193) or withdrawal to placebo (n=182) with re-treatment upon a 50% or greater loss of PASI improvement at week 28 or week 72 if re-treatment criteria were not met.

In December 2018, Janssen announced results from the ECLIPSE study demonstrating that guselkumab (Tremfya®) was superior to secukinumab (Cosentyx®) in treating adults with moderate to severe plaque psoriasis for the primary endpoint assessed at week 48. The data were presented at the 3rd Inflammatory Skin Disease Summit. The phase 3, multicenter, randomized, double-blind, active comparator trial was designed to evaluate the efficacy and safety of guselkumab (Tremfya®) compared with secukinumab (Cosentyx®) in adult patients with moderate to severe plaque psoriasis. Patients (n=1,048) were randomized to receive 100 mg of guselkumab (Tremfya®) administered by subcutaneous injection at weeks 0, 4 and 12, followed by eight-week dosing; or 300 mg of secukinumab (Cosentyx®) administered by two subcutaneous injections of 150 mg at weeks 0, 1, 2, 3 and 4, followed by 4-week dosing. The primary endpoint of the study was the proportion of patients achieving a PASI 90 response at week 48. Secondary endpoints were assessed at weeks 12 and 48, with safety monitoring through week 56. Data from the study demonstrated that 84.5% of patients treated with guselkumab (Tremfya®) achieved at least 90% improvement in their baseline PASI score at week 48, compared with 70.0% of patients treated with secukinumab (Cosentyx®) ($p<0.001$). These data, according to Janssen, marked the first-ever results from a head-to-head study comparing an interleukin (IL)-23-targeted biologic therapy (guselkumab (Tremfya®)) with an IL-17 inhibitor (secukinumab (Cosentyx®)).

ECLIPSE incorporated six major secondary endpoints that used a fixed statistical sequence procedure to control for multiple comparisons and included both shorter and longer-term analyses. Guselkumab (Tremfya®) demonstrated non-inferiority to secukinumab (Cosentyx®) in the first major secondary endpoint, with 84.6% of patients on guselkumab (Tremfya®) achieving a PASI 75 response at both weeks 12 and 48 vs. 80.2% of those on secukinumab (Cosentyx®) ($p<0.001$). However, it did not demonstrate superiority ($p=0.062$). Because superiority was not demonstrated for the first major secondary endpoint, p-values for all the subsequent major secondary endpoints were considered nominal.

Three of the remaining major secondary endpoints evaluated efficacy at week 48, including achievement of a PASI 100 response and Investigator's Global Assessment (IGA) scores of 0 (cleared), or 0 or 1 (cleared or minimal disease). At week 48, 58.2% of patients receiving guselkumab (Tremfya®) achieved a PASI 100 response, compared with 48.4% of patients receiving secukinumab (Cosentyx®); 62.2% of patients receiving guselkumab (Tremfya®) achieved an IGA score of 0 compared to 50.4% of patients receiving secukinumab (Cosentyx®); and 85.0% of patients receiving guselkumab (Tremfya®) achieved an IGA score of 0 or 1 compared to 74.9% of patients receiving secukinumab (Cosentyx®) (all comparisons with nominal $p\leq 0.001$).

The remaining major secondary endpoints assessed non-inferiority of guselkumab (Tremfya®) versus secukinumab (Cosentyx®) at week 12. The percentage of patients achieving a PASI 75 response at week 12 was 89.3% for guselkumab (Tremfya®) and 91.6% for secukinumab (Cosentyx®) ($p<0.001$ for non-inferiority); the percentage of patients achieving a PASI 90 response at week 12 was 69.1% for guselkumab (Tremfya®) and 76.1% for secukinumab (Cosentyx®) ($p=0.127$ for non-inferiority).

Through week 44, 27 patients (5.1%) randomized to the guselkumab (Tremfya®) arm discontinued treatment compared with 48 patients (9.3%) randomized to the secukinumab (Cosentyx®) arm.

The safety profiles observed for guselkumab (Tremfya®) and secukinumab (Cosentyx®) in ECLIPSE were consistent with the known safety profiles seen in the respective registration trials and current prescribing information. Similar percentages of patients receiving guselkumab (Tremfya®) (77.9%), and secukinumab (Cosentyx®) (81.6%) reported at least one adverse event (AE). Serious AEs were reported in 6.2% of patients receiving guselkumab (Tremfya®) and 7.2% of patients receiving secukinumab (Cosentyx®). Serious infections occurred in six patients receiving guselkumab (Tremfya®) and five patients receiving secukinumab (Cosentyx®).

## GANTENERUMAB

### *Overview*

Gantenerumab is a HuCAL antibody targeting amyloid beta that is being developed by our partner Roche as a potential treatment for Alzheimer's disease. Amyloid beta denotes a group of peptides that are centrally involved in Alzheimer's disease as the main component of the amyloid plaques found in the brains of Alzheimer patients. Gantenerumab binds to the N-terminus and a section in the middle of the amyloid beta peptide. On binding, the antibody seems to neutralize and disrupt the formation of amyloid plaque and amyloid oligomers and may also lead to its clearance by recruitment of microglial cells. In phase 1 clinical trials, gantenerumab has been shown to reduce brain amyloid in mild-to-moderate Alzheimer's disease patients. Gantenerumab is being investigated in several clinical studies to see if there is a positive effect from intervening at an early stage in the disease's progression. There are currently no drugs available that fundamentally improve the course of Alzheimer's disease. However, the anti-amyloid beta antibody aducanumab from Biogen Inc., that has been tested in a first-in-human phase 1 study in 2015, showed a substantial clearance of amyloid beta deposition in the brain as determined by Positron Emission Photograpy (PET) and a slowing of the cognitive decline of the patients. Aducanumab is currently in a phase 1 trial, a phase 2 trial and two phase 3 studies to evaluate its efficacy in slowing cognitive and functional impairment in patients with prodromal, mild or early Alzheimer's disease, respectively. The market research and consulting firm GlobalData has indicated that the global market for Alzheimer's disease treatment is expected to grow at double-digit rates each year from US$2.9 billion in 2016 to an estimated US$14.8 billion by 2026.

According to the Alzheimer's Association, 5.7 million Americans are living with Alzheimer's disease, and that figure is projected to increase to nearly 14 million by 2050. Alzheimer's disease is the sixth leading cause of death in the U.S.

### *New clinical data presented*

In March 2018, data were presented in which gantenerumab was evaluated at considerably higher doses in an open label extension (OLE) study than previously tested. The data were presented at the Alzheimer's and Parkinson's disease conference AAT-AD/PD™ Focus Meeting 2018.

The data assessed the clinical effects of higher doses of gantenerumab measured by amyloid beta reduction in the brain. Eighty-one patients with prodromal to mild Alzheimer's disease were enrolled in the OLE study parts and received higher doses of up to 1,200 mg of gantenerumab subcutaneously every 4 weeks. The dose increase, from starting levels of 105 mg or 225 mg of gantenerumab to up to 1,200 mg, was administered using different

titration schemes with the goal of controlling potential safety findings due to the increased doses. Fifty-one patients had a brain positron emission tomography (PET) scan to determine amyloid plaques at week 52. According to the data presented, patients who received higher doses of gantenerumab showed a greater and consistent amyloid reduction compared to patients who received lower dosing (105 mg or 225 mg). At week 52, approximately one-third of the high-dose patients had amyloid levels below the threshold that classifies a patient as amyloid beta positive.

A review of the data in the OLE studies did not reveal any new or unexpected safety findings of the higher doses for this patient population. As reported previously (Klein et al., 2017, CTAD presentation), increased doses of gantenerumab led to an increase of amyloid-related imaging abnormalities (ARIA), which, however, remained manageable with the implemented dosing titration scheme. In the higher doses of up to 1,200 mg, severity and seriousness of adverse events were comparable to the lower doses (105 mg or 225 mg) applied in the previous studies.

***New phase 3 program initiated in Alzheimer's disease***

In June 2018, we announced that our partner Roche had initiated a new phase 3 development program in patients with Alzheimer's disease. The program consists of two phase 3 trials – GRADUATE-1 and GRADUATE-2 – which are expected to enroll approximately 1,520 patients in up to 350 study centers in 31 countries worldwide. The two multicenter, randomized, double-blind, placebo-controlled trials will assess the efficacy and safety of gantenerumab in patients with early (prodromal to mild) Alzheimer's disease. The primary endpoint for both trials is the assessment of signs and symptoms of dementia, measured as the clinical dementia rating-sum of boxes (CDR-SOB) score, determined as the change of status from baseline to week 104. Patients are to receive a significantly higher dose of gantenerumab than in Roche's previous trials as a subcutaneous injection with titration up to the target dose.

**OTHER PROGRAMS**

In June 2018, our partner Bayer brought a new compound based on MorphoSys's HuCAL technology into clinical development. BAY2287411 is a thorium-227 radiolabeled antibody conjugate directed against the target molecule mesothelin. In a phase 1 clinical trial, BAY2287411 is being tested for the first time in patients with solid tumors known to express mesothelin in order to evaluate the safety, tolerability, pharmacokinetics and anti-tumor activity of this compound.

According to clinicaltrials.gov, in 2018 clinical trials with bimagrumab in patients with sarcopenia or after hip surgery by our partner Novartis reached primary completion. At the end of January 2019, Novartis announced that it would discontinue development in these indications.

Other programs developed by our partners continued to make progress during 2018.

**COLLABORATION WITH LEO PHARMA**

We have an ongoing strategic alliance with LEO Pharma for the discovery and development of therapeutic antibodies for the treatment of skin diseases. The initial alliance was signed in November 2016 to jointly discover and develop antibody-based therapies in dermatology. Under the terms of this agreement, we are applying our Ylanthia technology platform to generate antibody candidates against targets selected by LEO Pharma and will conduct all development activities up to the start of clinical testing. LEO Pharma is responsible for clinical development and commercialization of resulting drugs in all indications except cancer.

***Collaboration expanded***

In September 2018, we announced with LEO Pharma an expansion of our existing strategic alliance to include peptide-derived therapeutics. The objective of the expansion is to identify novel, peptide-derived therapeutics for unmet medical needs that will be valuable additions to both companies' pipelines.

Under the terms of the agreement, LEO Pharma will select targets against which we will identify lead molecules using our proprietary HTH peptide technology platform. LEO Pharma will either develop these lead molecules or use them to aid the design of other drug candidates. LEO Pharma will have exclusive, worldwide rights and be responsible for development and commercialization of resulting drugs in the area of dermatology. MorphoSys will have an exclusive option to secure worldwide rights to any drugs arising from the collaboration in the field of oncology.

We will receive R&D funding as well as success-based development, regulatory and commercial milestone payments, plus royalties on net sales of peptide drugs commercialized by LEO Pharma. Further financial details were not disclosed.

## PATENTS

During the 2018 financial year, we continued to consolidate and expand our patent protection of our development programs and our growing technology portfolio, which are our most important value drivers.

In April 2016, we filed a lawsuit in the United States at the District Court of Delaware against Janssen Biotech and Genmab A/S for patent infringement of U.S. Patent Number 8,263,746. U.S. Patents 9,200,061 and 9,758,590 were added to the case in 2017. In filing the lawsuit, we sought redress for alleged infringement of these patents by Janssen's and Genmab's daratumumab, a CD38-directed monoclonal antibody indicated for the treatment of certain patients with multiple myeloma. The U.S. District Court of Delaware, based on a hearing held November 27, 2018, has ruled in a Court Order on January 25, 2019, that the asserted claims of the MorphoSys patents are invalid. The Court thus granted a motion for Summary Judgement of invalidity filed by Janssen Biotech and Genmab, A/S against the three patents held by MorphoSys. As a result of this decision, the jury trial scheduled to start February 11, 2019 to consider Janssen's and Genmab's alleged infringement and the validity of the MorphoSys patents did not take place. On January 31, 2019 we announced that we have settled the dispute with Janssen Biotech and Genmab A/S. The parties agreed to drop the mutual claims related to the litigation: MorphoSys dismissed claims for alleged patent infringement against Janssen Biotech and Genmab A/S and will not appeal from the court order dated January 25, 2019. Janssen and Genmab dismissed their counterclaims against MorphoSys.

At the end of the financial year, we maintained over 60 different proprietary patent families worldwide in addition to the numerous patent families we pursue with our partners.

## GROUP DEVELOPMENT

In April 2018, we successfully closed an initial public offering on the Nasdaq U.S. stock exchange. The transaction produced total gross proceeds of US$ 239.0 million from the sale of 2,075,000 new ordinary shares in the form of 8,300,000 American Depositary Shares ("ADSs") and from the exercise in full of the underwriters' option to purchase 311,250 additional new ordinary shares in the form of 1,245,000 additional ADSs, at a price of US$ 25.04 per ADS, respectively. Each ADS represents 1/4 of a MorphoSys ordinary share.

At the Annual General Meeting (AGM) of MorphoSys AG on May 17, 2018, our shareholders approved all resolutions of the Company's management with the required majority of votes. Dr. George Golumbeski and Michael Brosnan were newly elected to the Supervisory Board, replacing Dr. Gerald Möller, who retired from the board, and Klaus Kühn, who resigned for personal reasons. Dr. Möller's retirement and Mr. Kühn's resignation became effective at the conclusion of the 2018 AGM. Dr. Golumbeski most recently served as Executive Vice President and Executive Advisor for Innovation at Celgene Corporation, a position from which he retired in April 2018. Over the last 27 years, he held leadership roles in business and corporate development, partnering and M&A with global pharmaceutical and life science companies, including Celgene, Novartis, Elan Corporation (today: Perrigo) and Schwarz Pharma (today: UCB). Mr. Brosnan has over 40 years of experience in

finance, controlling and auditing. Since 2010, he has served as Chief Financial Officer of Fresenius Medical Care Management AG, a company with a dual listing in Germany and the U.S. For over 20 years, he has worked in various leadership and executive positions for Fresenius Medical Care in the U.S. and Germany. Additionally, Dr. Marc Cluzel was re-elected to the Supervisory Board following the expiry of his term of office.

Following the AGM, the Supervisory Board in its inaugural meeting elected Dr. Marc Cluzel as its new Chairman and Dr. Frank Morich as Deputy Chairman.

On May 24, 2018, MorphoSys AG published a notification to our shareholders in the German Federal Gazette pursuant to Sec. 62 Para. 2 Sent. 1, Para. 3 Sent. 3 (German Transformation Act) indicating its intention to merge Sloning BioTechnology GmbH as the transferring legal entity into MorphoSys AG, as the acquiring legal entity. Upon entry into the commercial register on June 28, 2018 and based on the merger agreement date May 17, 2018, Sloning BioTechnology GmbH, as the transferring legal entity, was merged into MorphoSys AG, as the acquiring legal entity, with the effective date of January 1, 2018.

In July 2018, we announced the establishment of a U.S. subsidiary, MorphoSys US Inc. We also announced the appointment of Jennifer Herron as President of MorphoSys US Inc. and Executive Vice President, Global Commercial. In November 2018 we reported that Ms. Herron had resigned and James Hussey was appointed Acting President of the U.S. subsidiary. Mr. Hussey joined MorphoSys US Inc. in 2018. He has more than 30 years of experience in leading positions in the biotech and pharmaceutical industries. Over the last 25 years, he served in senior management positions of various pharmaceutical, biotech, and health care companies. He started his career with Bristol Myers Squibb (BMS) in 1984, where he served for 11 years holding positions of increasing responsibility within the US business. The focus of our U.S. subsidiary will be on building a strong presence in the U.S. to prepare for the planned commercialization of MOR208.

In July 2018, MorphoSys AG acquired a minority shareholding position of 19.9% in adivo GmbH, Martinsried, in the context of a seed financing. MorphoSys paid a cash contribution and a contribution in kind. Adivo is dedicated to the research and development of veterinary therapeutics. In addition to the two founding shareholders, who are former employees of MorphoSys, the only other strategic investors in adivo other than MorphoSys are two financial investors. Under a licensing agreement, MorphoSys granted adivo rights to a fully synthetic canine antibody library based on our proven modular combinatorial approach.

Effective September 24, 2018, MorphoSys's shares were included in the MDAX. MorphoSys remains a member of the TecDAX segment, which it has been since 2004. The simultaneous inclusion in both the MDAX and TecDAX indices is based on a revision in rules of the Deutsche Börse for indices, which came into force on September 24, 2018. The TecDAX now includes the 30 largest stocks in terms of market capitalization and trading volume that are focused on technology. The MDAX now tracks the 60 largest listed companies with the highest trading volume after the DAX index, which continues to contain the 30 largest stocks in Germany.

At the beginning of December, the Company held an Investor and Analyst Event in New York City dedicated to MOR208. During this event, the latest L-MIND data, which had been presented at the 60th ASH (American Society of Hematology) conference in San Diego, were discussed and the Company gave an outlook on the planned filing strategy. Moreover, further development plans with MOR208 in first-line DLBCL and also other indolent lymphomas were revealed. To give an overview about the indication and treatment options in DLBCL in more detail, the event also included a discussion of current treatment options. The event was attended by investors and analysts and could also be followed via webcast.

## GROUP HEADCOUNT DEVELOPMENT

On December 31, 2018, the MorphoSys Group had 329 employees (December 31, 2017: 326), 134 of whom hold PhD degrees (December 31, 2017: 132). The MorphoSys Group employed an average of 327 employees in 2018 (2017: 344).

Of these 329 active employees, 246 were involved in research and development activities, 62 were involved in general administration and 21 were involved in selling. All of these employees are located in our offices in Munich, Germany, in Groningen, the Netherlands and in Princeton, USA. We have no collective bargaining agreements with our employees and we have not experienced any labor strikes.

At the end of the reporting year, we had employees representing 34 different nationalities (2017: 34) employed for an average of 7.2 years (2017: 7.6 years).

**FIG. 04: TOTAL HEADCOUNT OF THE MORPHOSYS GROUP (DECEMBER 31) (NUMBER)**

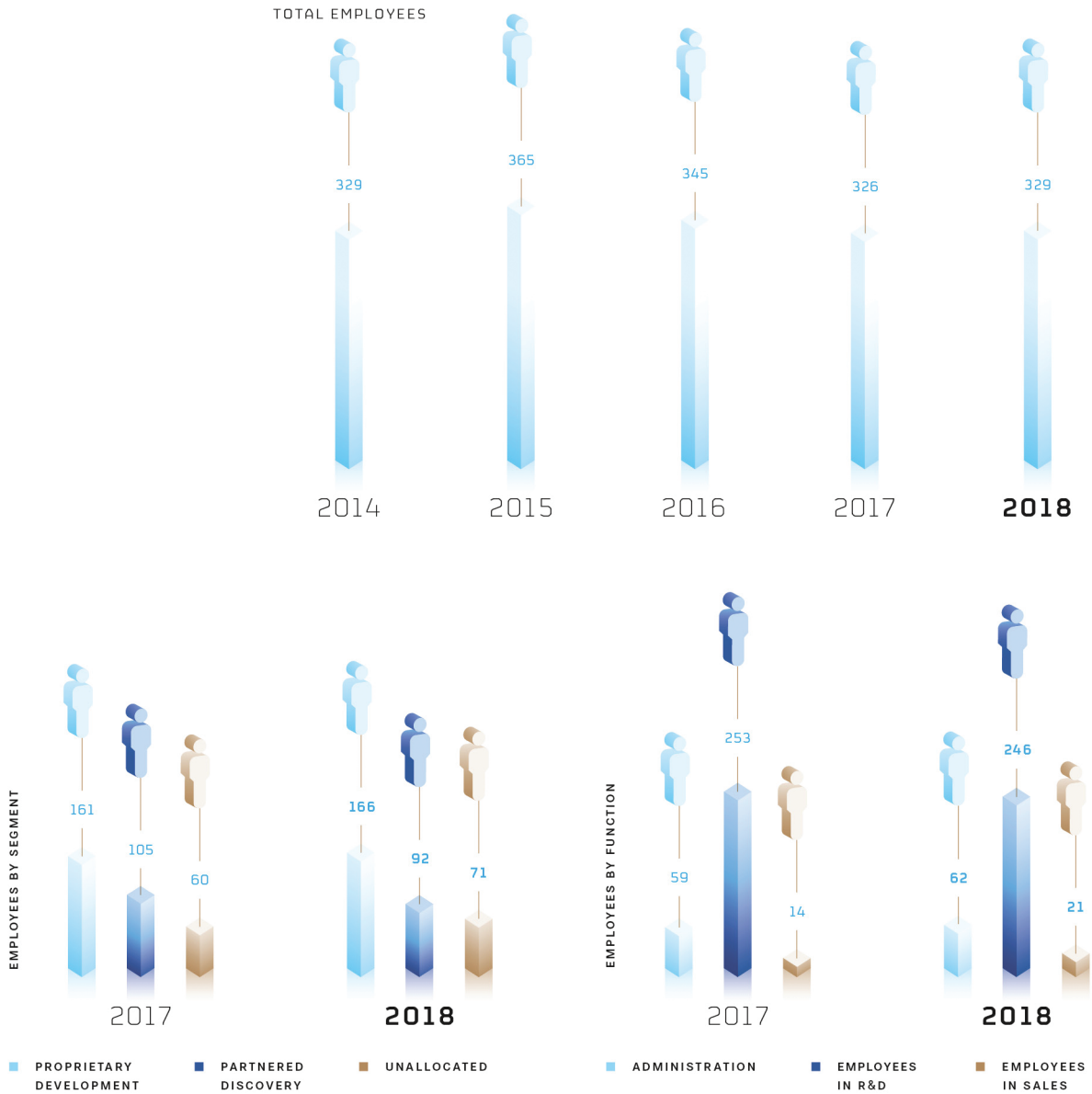


**FIG. 05: EMPLOYEES BY GENDER (DECEMBER 31)**

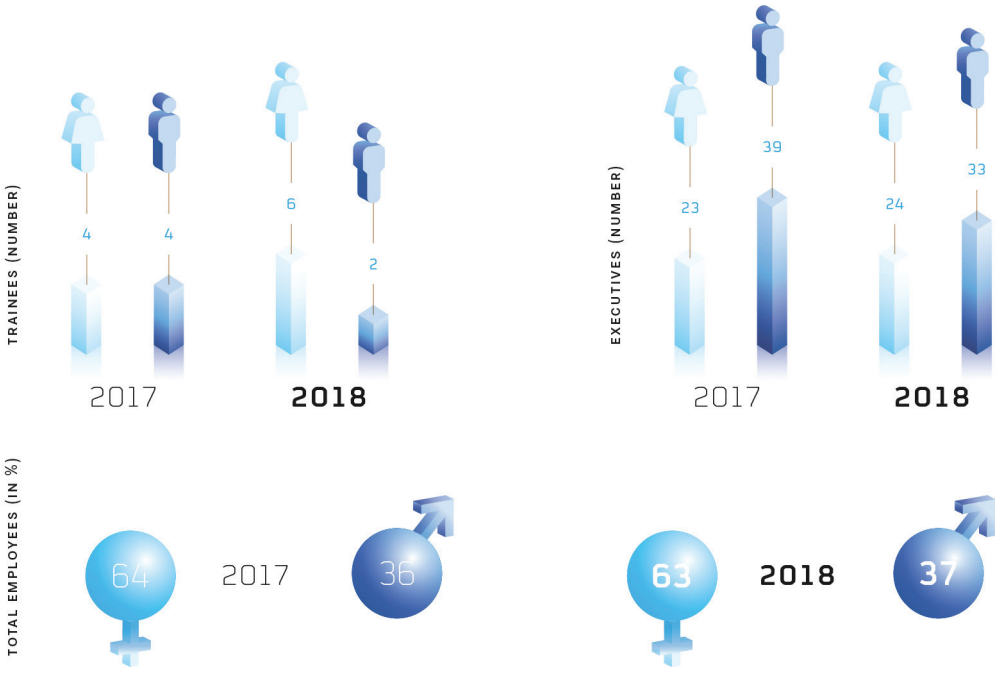



**FIG. 06: SENIORITY**

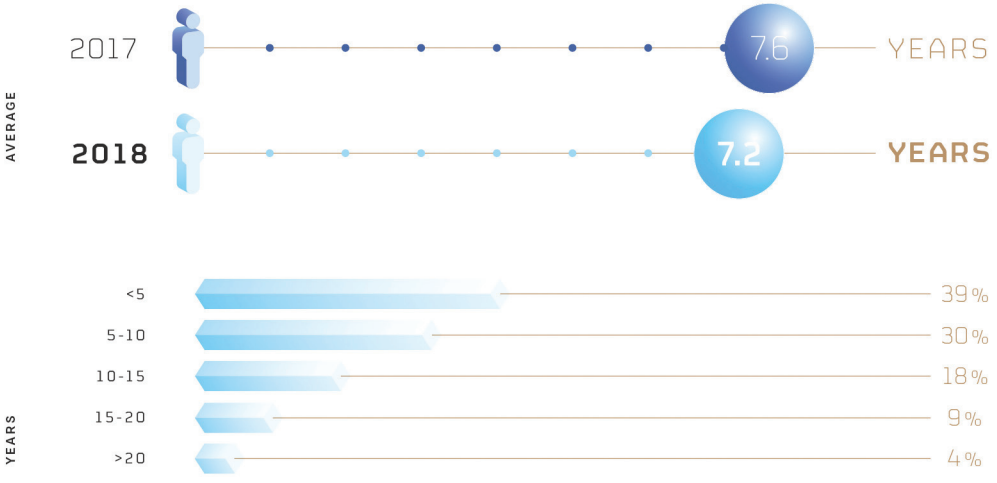
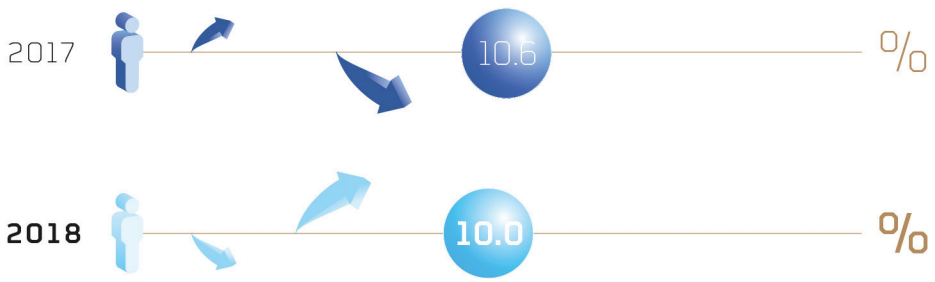



**FIG. 07: WORKFORCE TURNOVER RATE (IN %)**



In order to successfully compete for the best employees, MorphoSys conducts an annual comparison of the Company's compensation with that paid by other companies in the biotech industry and similar sectors and makes adjustments when necessary. The remuneration system at MorphoSys includes fixed compensation and a variable annual bonus that is linked to the achievement of corporate goals. Individual goals promote both the employees' personal development and the achievement of key corporate goals. In addition, a "spot bonus" (given "on the spot") is promptly awarded to employees for exceptional accomplishments. We again made significant use of this instrument during the reporting year.

A detailed description of our activities to promote successful long-term human resource development can be found in the section "Sustainable Business Development."

## CHANGES IN THE BUSINESS ENVIRONMENT

According to forecasts by the International Monetary Fund (IMF) in January 2019, global economic growth for 2018 was projected to remain stable at 3.7%. However, with softer momentum seen in the second half of 2018, the IMF has made downward revisions from earlier forecasts for certain areas including in Germany. Earlier downward revisions reflected surprises that suppressed activity in early 2018 in some major advanced economies, the negative effects of trade measures implemented or approved between April and mid-September, as well as a weaker outlook for some key emerging market and developing economies arising from country-specific factors, tighter financial conditions, geopolitical tensions and higher oil import bills.

The 2018 growth forecast for the advanced economies was projected to be 2.3% (2017: 2.4%). The emerging and developing economies were expected to experience growth of 4.6% in 2018 (2017: 4.7%). The IMF forecast growth in the Euro area of 1.8% in 2018 (2017: 2.4%). The 2018 forecast for Germany was 1.5% (2017: 2.5%). The United States was projected to grow by 2.9% in 2018 (2017: 2.2%). China's economy was expected to grow 6.6% (2017: 6.9%), and the economies of Russia and Brazil were expected to grow by 1.7% (2017: 1.5%) and 1.3% (2017: 1.1%), respectively.

MorphoSys takes into account a wide range of potential macroeconomic risks and opportunities when conducting business activities. Political uncertainty in the global markets did not cause us to refrain from or change any key activities in 2018, nor were our operations affected by fluctuations within individual countries.

## CURRENCY DEVELOPMENTS

At the end of December 2018, the exchange rate of the euro to U.S. dollar was approximately 1.14-1.15. A number of analysts expect the euro to remain saddled by soft economic data (partly a result of the moderation in global trade volumes) and political uncertainty (including Brexit and Italy). The European Central Bank, which is still confronted with slow GDP growth, low inflation and a fragile banking sector, is unlikely to tighten monetary policy soon. But at some point investors will expect the central bank to start the process of policy normalization. That, coupled with other macro-economic and geopolitical factors, could allow the common currency to bounce back in 2019.

Most of our business is transacted in euros and US dollars. Therefore, changes in these currencies could have an effect on our future costs and revenues. Any weakness in the euro versus the US dollar would have a direct positive influence on our operating results as our commercial and launch activities are conducted in the United States. Conversely, a strong euro reduces the royalty payments from guselkumab (Tremfya®) sales incurred in US dollars that are converted into euros. We manage this risk as far as possible with appropriate currency hedging tools.

## REGULATORY ENVIRONMENT

The healthcare industry's regulatory environment is dominated by stringent product quality, safety and efficacy requirements, which place ever-higher demands on the companies involved. Novel drugs are required to demonstrate a benefit over existing therapies in order to be approved, gain market acceptance and be reimbursed.

The current trend in the United States is toward faster approvals by the Food and Drug Administration (FDA). The FDA's actions are partly due to legislation adopted in 2012 and the mechanisms created to reduce review times, such as breakthrough therapy designation and the extension of accelerated approvals. These mechanisms are meant to facilitate a faster review process for drug candidates that demonstrate a substantial improvement for patients in urgent need of safer, more effective treatments, such as cancer patients. Indeed, in 2018, the FDA approved 59 new medicines, surpassing the previous year's record-breaking 46. Biopharmaceutical companies such as MorphoSys, who are focused on the development of therapies for indications with high unmet medical need, could potentially benefit from the mechanisms described above. We have received FDA breakthrough therapy designation for our drug candidate MOR208.

## DEVELOPMENT OF THE PHARMACEUTICAL AND BIOTECHNOLOGY SECTORS

Worldwide prescription drug sales were projected to be approximately US$ 830 billion, according to a June 2018 report by EvaluatePharma. This number is projected to increase to US$ 1.2 trillion in 2024, a compound average growth rate (CAGR) of 6.4 %. The report indicated that the pharmaceutical sector seemed to have become a more stable place. While the political uncertainty that characterized much of 2017 may not have settled down, the industry appeared less anxious compared to earlier in the year. Much of the expansion of the market is expected to be driven by continuing unmet need in a number of disorders, as demonstrated by sales forecasts for the orphan drug market reaching US$262 billion in 2024, accounting for 20% of the total prescription drug market. However, the ever-present danger of product failure remains an intrinsic risk of drug development. Companies also remain under pricing pressure from payers, even if the threat of price control from politicians goes away. The demand for real world evidence before insurers and governments will consider reimbursing drugs is expected to continue to intensify, no matter how innovative developers claim their products are.

The market for cancer drugs – the primary market for most of MorphoSys's proprietary compounds – remains one of the most attractive and fastest-growing segments of the pharmaceutical industry. EvaluatePharma stated that worldwide oncology sales were approximately US$104 billion in 2017, projected to grow to US$233 billion in 2024, at a CAGR of 12%. In 2024, five of the top ten companies in oncology are expected to maintain their 2017 leadership positions. Outside the top ten, the rest of the industry is expected to have a CAGR of 22%, bringing their market share in 2024 up to nearly 40% from nearly 22% in 2017. Oncology is the leading therapy area in terms of sales and is projected to continue to be the dominant therapy segment in 2024, with sales reaching US$ 233 billion in 2024 (2017: US$ 104 billion) and an expected CAGR of 12.2% per year.

Looking at mergers and acquisitions (M&A) activity, according to BioCentury, the number of biotech takeouts closed in 2018 was 55 compared to 60 in 2017, a decline of 8%. The total value of those deals, though, was up 8% to US$65.2 billion. Not included in this figure is Takeda's $62 billion acquisition of Shire, which was announced in 2018 but closed in early January 2019.

According to BioCentury, the top tier of companies have raised enough capital to weather nearly any storm. The year 2018 saw the biotech sector setting records in the total amount of money raised in venture and IPOs, while the amount raised through follow-ons was second behind 2015. But most of the sector didn't participate in the cash grab; BioCentury's analysis of public biotech balance sheets shows that about 40% of loss-making companies have one year of cash or less. For those who did not refinance, the window closed with no IPOs or follow-ons having been completed since the start of the U.S. government shutdown on December 22nd as of January 14th. Information on the development of the stock market environment can be found in the section "Shares and the Capital Market."

## DEVELOPMENT OF THE ANTIBODY SECTOR

The year 2018 was another highly successful year for the clinical development and marketing approval of therapeutic antibodies. By the end of 2018, marketing approval by the FDA or European Medicines Agency (EMA) had been granted to 13 new antibodies, a new record. According to "Antibodies to Watch in 2019,"

published in *mAbs Journal*, 62 monoclonal antibodies (mAbs) are currently in late-stage clinical studies, representing the largest number to date at this stage of advanced development. Thirty-three of the 62 mAbs are being developed as cancer treatments. Our lead proprietary development product candidate, MOR208, is listed as one of the "antibodies to watch" in this report.

We regard the successful development and commercialization of the antibody segment as a generally positive signal and a validation of our development focus on this drug class. However, no conclusions can be drawn regarding the likelihood of clinical or market success of individual drug candidates.

**FIG. 08: REVENUES BY REGION (DECEMBER 31) (IN %)**

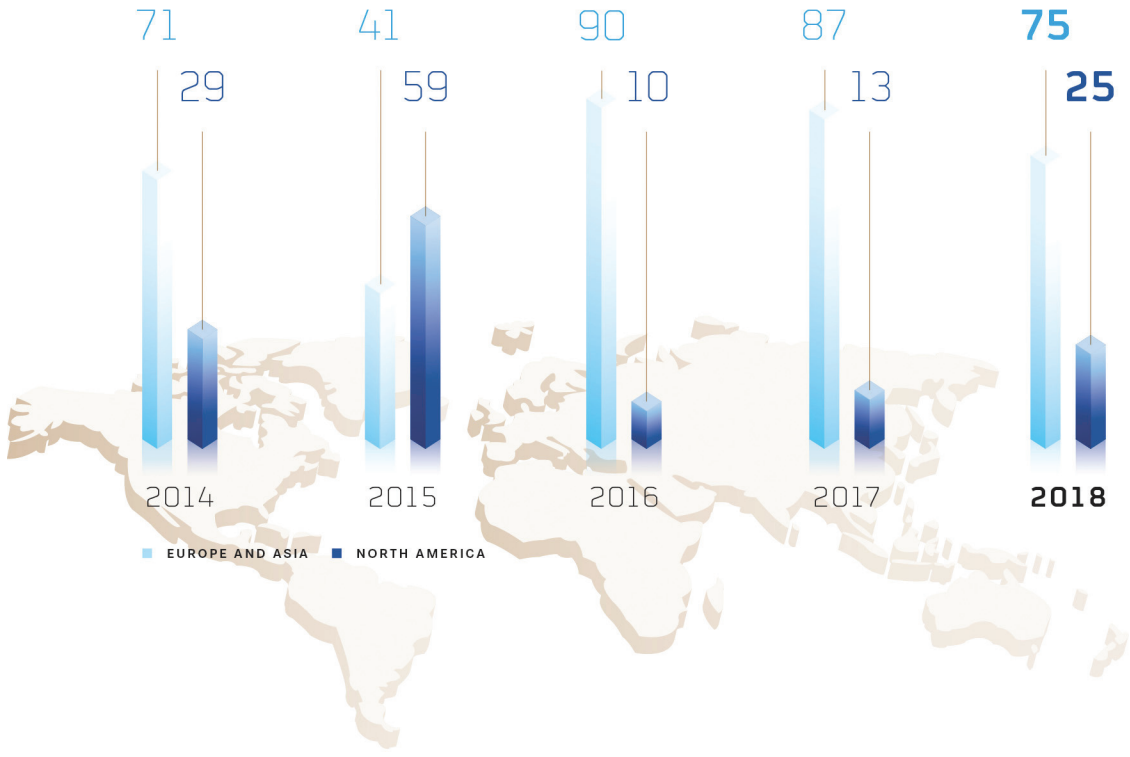
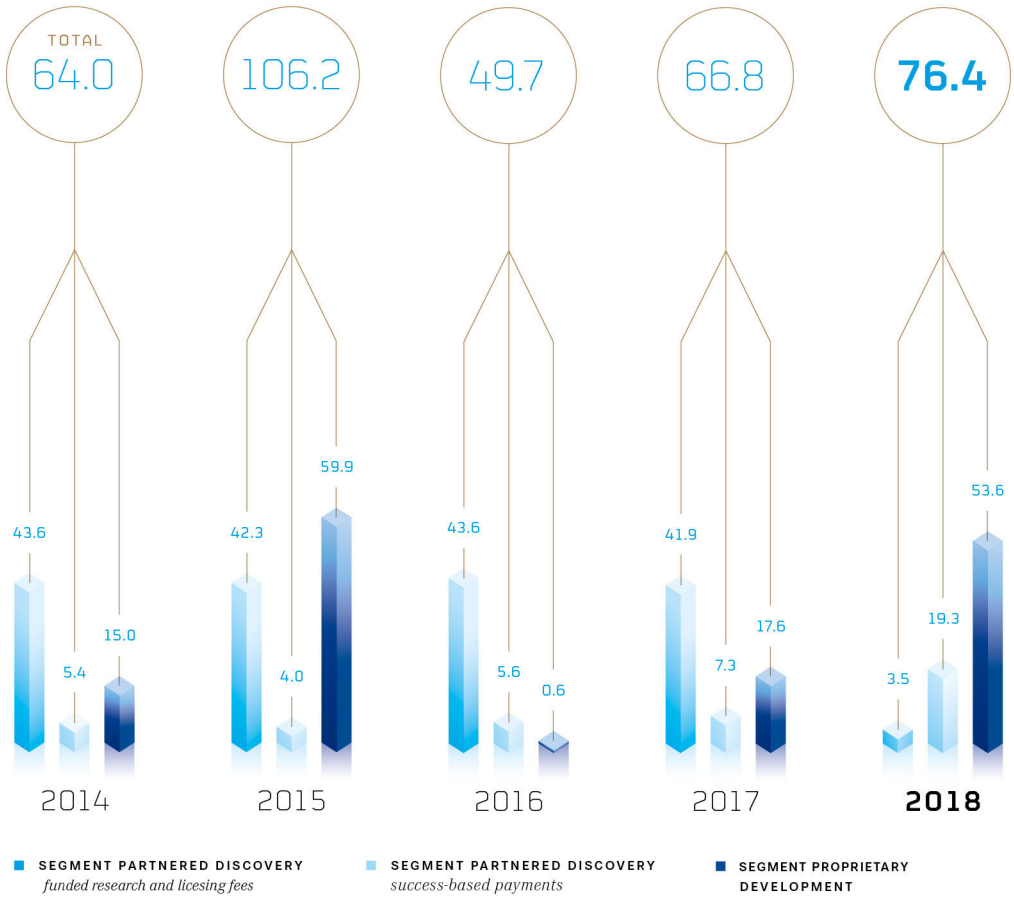


**FIG. 09 REVENUES PROPRIETARY DEVELOPMENT AND PARTNERED DISCOVERY (DECEMBER 31) (IN MILLION €)**




## b) Operating and Financial Review and Prospects

You should read the following discussion and analysis of the financial condition and results of operations of the Company in conjunction with the consolidated financial statements and the related notes thereto included elsewhere in this report. In addition to historical financial information, the following discussion contains forward-looking statements that reflect our plans, estimates and opinions. Our actual results could differ materially from those discussed in these forward-looking statements. Factors that could cause or contribute to these differences or cause our actual results or the timing of selected events to differ materially from those anticipated in these forward-looking statements include those set forth under "Risk Factors," "Special Note Regarding Forward-Looking Statements" and elsewhere in this report.

Our consolidated financial statements comply with both the IFRSs published by the International Accounting Standards Board (IASB) and those adopted by the EU. The consolidated financial statements also take into account the supplementary provisions under commercial law, which must be applied in accordance with Section 315e (1) of the German Commercial Code (Handelsgesetzbuch – HGB).

## RESULTS OF OPERATIONS

### REVENUES

Revenues increased by 14% or € 9.6 million, from € 66.8 million in 2017 to € 76.4 million in 2018. The increase in revenues was primarily a result of a € 47.5 million upfront payment received and fully recognized in 2018 following the signing of an exclusive global license agreement with Novartis Pharma AG for the development

and commercialization of MOR106. Had revenues in the 2018 financial year continued to be recognized in accordance with IAS 18, revenues would have been € 1.1 million higher than under the application of IFRS 15, the new accounting standard governing revenue recognition. In 2017, revenues were significantly and positively affected by funded research and license fees from a collaboration agreement with Novartis that concluded at the end of 2017 as well as by the signing of an exclusive regional license agreement with I-Mab Biopharma for the development and commercialization of MOR202 in China, Taiwan, Hong Kong and Macao. On a regional basis, revenues with biotechnology and pharmaceutical companies in the United States and Canada increased by more than 100%, or € 10.7 million, from € 8.7 million in 2017 to € 19.4 million in 2018 primarily due to higher success-based payments received mainly from Janssen. Revenues with customers in Europe or Asia decreased by 2%, or € 1.0 million, from € 58.1 million in 2017 to € 57.1 million in 2018.

In 2018, 95% of our revenues were attributable to activities with our partners Novartis, Janssen and I-Mab Biopharma, whereas 90% of our revenues in 2017 were attributable to activities with the same partners. This change was due to the MOR106 agreement with Novartis in 2018 and receipt of the related upfront payment.

In 2017, revenues increased by 34%, or € 17.1 million, from € 49.7 million in 2016 to € 66.8 million in 2017. The increase in revenues was primarily a result of a $20.0 million (equal to € 16.8 million at the then-prevailing exchange rate) upfront payment received and fully recognized in 2017 following the signing of an exclusive regional license agreement with I-Mab Biopharma for the development and commercialization of MOR202 in China, Taiwan, Hong Kong and Macao. In 2016 and 2017, revenues were significantly and positively affected by funded research and license fees from a collaboration agreement with Novartis that concluded at the end of 2017. On a regional basis, revenues with biotechnology and pharmaceutical companies in the United States and Canada increased by 71%, or € 3.6 million, from € 5.1 million in 2016 to € 8.7 million in 2017, primarily due to higher success-based payments received mainly from Janssen. Revenues with customers in Europe or Asia increased by 30%, or € 13.4 million, from € 44.7 million in 2016 to € 58.1 million in 2017 primarily due to the upfront payment received from I-Mab Biopharma, which was partially offset by lower revenues received from Novartis in 2017.

In 2017, 90% of our revenues were attributable to activities with our partners Novartis, I-Mab Biopharma and Janssen, whereas 95% of our revenues in 2016 were attributable to activities with our partners Novartis, Pfizer and Janssen. This change is due to entry into the agreement with I-Mab Biopharma in 2017 and receipt of the related upfront payment.

**PROPRIETARY DEVELOPMENT**

In 2018, revenues in our Proprietary Development segment increased by € 36.0 million, from € 17.6 million in 2017 to € 53.6 million in 2018. This increase was due to the revenues recognized from the upfront payment received under our MOR106 agreement with Novartis.

In 2017, revenues in our Proprietary Development segment increased by € 17.0 million, from € 0.6 million in 2016 to € 17.6 million in 2017. This increase was due to the revenues recognized from the upfront payment received under our 2017 agreement with I-Mab Biopharma.

**PARTNERED DISCOVERY**

In 2018, revenues in our Partnered Discovery segment decreased by € 26.4 million, from € 49.2 million in 2017 to € 22.8 million in 2018. These amounts included € 41.9 million in 2017 and € 3.5 million in 2018 in funded research and license fees. The decrease was primarily driven by the terminated collaboration arrangement with Novartis in 2017. The Partnered Discovery segment also included € 7.3 million in 2017 and € 19.3 million in 2018 in success-based payments received primarily from Janssen. Revenue in our Partnered Discovery segment included royalties on net sales of Tremfya® in the amount of € 1.9 million in 2017 and € 15.4 million in 2018.

In 2017, revenues in our Partnered Discovery segment increased by € 0.1 million, from € 49.1 million in 2016 to € 49.2 million in 2017. These amounts included € 43.6 million in 2016 and € 41.9 million in 2017 in funded research and license fees, received primarily in connection with the collaboration with Novartis as well as € 5.6 million in 2016 and € 7.3 million in 2017 in success-based payments received primarily from Janssen and

Novartis. Revenues in our Partnered Discovery segment included € 1.9 million of royalties on net sales of Tremfya in 2017. As a result of the conclusion of our collaboration arrangement with Novartis, we no longer expect to receive significant recurring research and license fees from Novartis, and further revenue received from Novartis, if any, will consist of milestone payments and royalties from sales of approved products.

## OPERATING EXPENSES

In 2018, operating expenses increased by 2%, or € 2.7 million, from € 133.8 million in 2017 to € 136.5 million in 2018. This increase was driven by higher cost of sales and selling expenses as well as higher administrative expenses. The line item "cost of sales" was presented for the first time in the third quarter of 2018 and consisted of expenses in connection with services being rendered while transferring projects to customers such as I-Mab Biopharma. In 2018, cost of sales amounted to € 1.8 million. The Group started presenting "selling expenses" as a separate line item since January 1, 2018. In 2018, selling expenses amounted to € 6.4 million compared to € 4.8 million. The presentation of selling expenses led to a change in the presentation of research and development expenses and general and administrative expenses for 2017. These items were reduced by € 3.5 million and € 1.3 million, respectively, and the corresponding amounts are now included in "selling expenses." Research and development expenses decreased by 6%, or € 6.9 million, from € 113.3 million in 2017 to € 106.4 million in 2018 mainly as a result of decreased expenses for external services related to development activities in our Proprietary Development segment as well as decreased expenses in our Partnered Discovery Segment. General and administrative expenses increased by 39%, or € 6.2 million, from € 15.7 million in 2017 to € 21.9 million in 2018 mainly due to higher personnel expenses and costs for external services.

In 2018, operating expenses in our Proprietary Development segment increased by 8%, or € 7.9 million, from € 99.1 million in 2017 to € 107.0 million in 2018, primarily due to an increase in research and development expenses and selling expenses. Research and development expenses in our Proprietary Development segment, including technology development, increased by 2%, or € 2.0 million, from € 96.3 million in 2017 to € 98.3 million in 2018 mainly due to an increase in research and development expenses for MOR208.

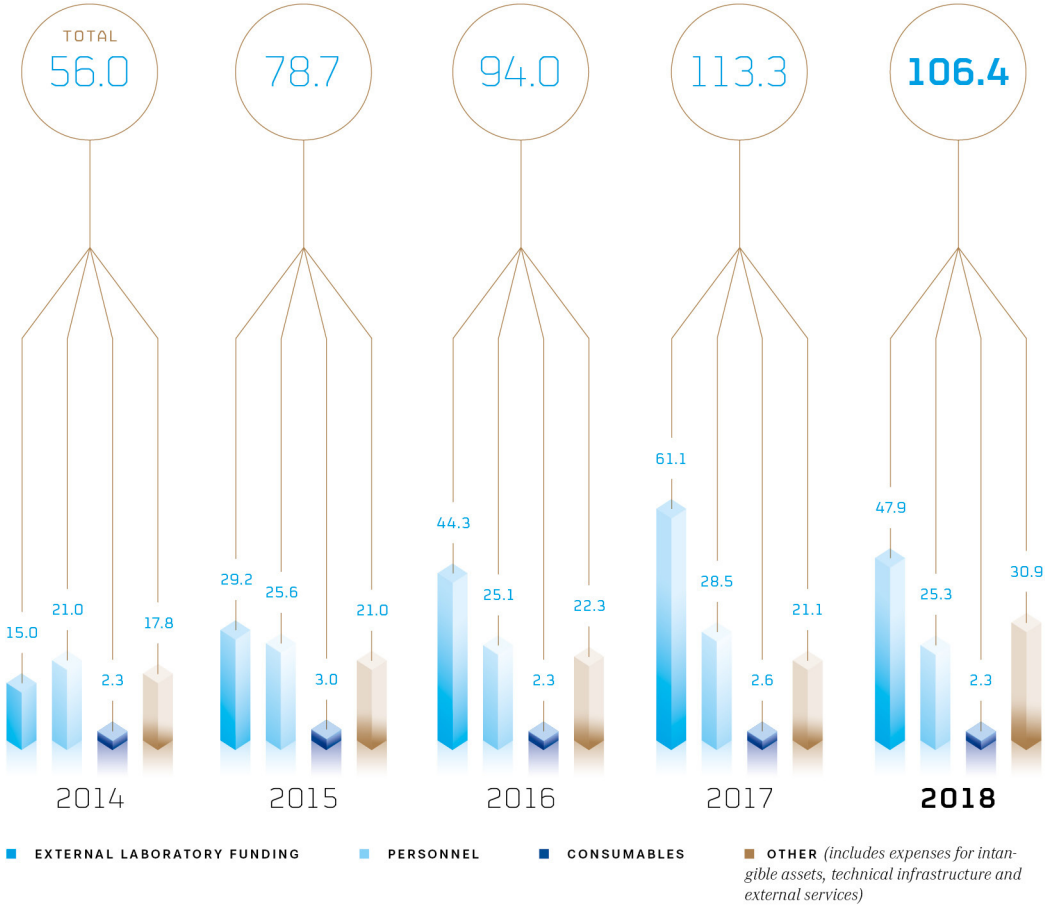
In 2018, operating expenses in our Partnered Discovery segment decreased by 50%, or € 9.4 million, from € 18.9 million in 2017 to € 9.5 million in 2018, primarily due to a decrease in research and development expenses. Research and development expenses in our Partnered Discovery segment decreased by 51%, or € 8.8 million, from € 17.3 million in 2017 to € 8.5 million in 2018. Research and development expenses in our Partnered Discovery segment in 2017 related primarily to the Novartis collaboration, which was concluded in 2017.

In 2017, operating expenses increased by 22%, or € 24.0 million, from € 109.8 million in 2016 to € 133.8 million in 2017. This increase was driven by higher research and development as well as general and administrative expenses. Research and development expenses increased by 21%, or € 19.3 million, from € 94.0 million in 2016 to € 113.3 million in 2017 mainly as a result of increased expenses for external services related to development in our Proprietary Development segment. General and administrative expenses increased by 17%, or € 2.3 million, from € 13.4 million in 2016 to € 15.7 million in 2017 mainly due to higher personnel expenses and costs for external services.

In 2017, operating expenses in our Proprietary Development segment increased by 26%, or € 20.6 million, from € 78.5 million in 2016 to € 99.1 million in 2017, primarily due to an increase in research and development expenses. Research and development expenses in our Proprietary Development segment, including technology development, increased by 24%, or € 18.7 million, from € 77.6 million in 2016 to € 96.3 million in 2017 due to increases mainly in research and development expenses for MOR208, MOR106 and MOR202.

In 2017, operating expenses in our Partnered Discovery segment increased by 4%, or € 0.8 million, from € 18.1 million in 2016 to € 18.9 million in 2017, primarily due to an increase in research and development expenses. Research and development expenses in our Partnered Discovery segment increased by 5%, or € 0.8 million, from € 16.5 million in 2016 to € 17.3 million in 2017. Research and development expenses in our Partnered Discovery segment related primarily to the Novartis collaboration, which is now concluded.

**FIG 10: SELECTED R&D EXPENSES (DECEMBER 31) (IN MILLION €)**




**RESEARCH AND DEVELOPMENT**

In 2018, research and development expenses decreased by 6%, or € 6.9 million, from € 113.3 million in 2017 to € 106.4 million in 2018, primarily due to lower expenses for external laboratory services and personnel which were partially offset by higher expenses for intangible assets. External laboratory services and other expenses (including legal and scientific consulting services) decreased from € 61.1 million in 2017 to € 47.9 million in 2018, primarily due to lower expenses for external laboratory services related to the licensing agreements for MOR202 and MOR106. Personnel expenses decreased from € 28.5 million in 2017 to € 25.3 million in 2018, primarily due to lower share-based compensation and severance expense (in the aggregate by € 1.5 million).

Expenses for intangible assets increased from € 13.5 million in 2017 to € 22.8 million in 2018. Expenses for intangible assets in 2018 were mainly driven by impairment charges of € 19.2 million primarily related to the impairment of goodwill for MOR107 and € 9.8 million in 2017 related to the termination of the cooperation with Aptevo Therapeutics for the development of MOR209. Depreciation and other costs for infrastructure expenses increased from € 4.9 million in 2017 to € 5.4 million in 2018, primarily due to higher insurance expenses. Other expenses remained unchanged at € 2.8 million in 2017 and 2018. Expenses for consumable supplies decreased from € 2.6 million in 2017 to € 2.3 million in 2018.

In 2017, research and development expenses increased by 21%, or € 19.3 million, from € 94.0 million in 2016 to € 113.3 million in 2017, primarily due to higher expenses for external laboratory services and personnel. External laboratory services and other expenses (including legal and scientific consulting services) increased from € 44.3 million in 2016 to € 61.1 million in 2017, primarily due to increased expenses related to our Proprietary

Development segment. Personnel expenses increased from € 25.1 million in 2016 to € 28.5 million in 2017, primarily due to higher share-based compensation and severance expense (in the aggregate by € 2.5 million) in connection with the conclusion of the Novartis collaboration, which were only partially offset by a decrease in the number of employees active in research and development.

Expenses for intangible assets remained almost unchanged and decreased slightly from € 13.7 million in 2016 to € 13.5 million in 2017. Expenses for intangible assets mainly represent impairment charges of € 9.8 million in 2017 related to the termination of the cooperation with Aptevo Therapeutics for the development of MOR209 and € 10.1 million in 2016. In 2017, the reason for the impairment was the termination of the cooperation with Aptevo Therapeutics due to the expectation of a delay in the development plan, a delayed market entry and a delay in the occurrence of future cash flows compared to previous assumptions. In 2016, the reason for the partial impairment was the expectation of a lower inflow of benefits and of a delay in the occurrence of future cash flows. Depreciation and other costs for infrastructure expenses decreased from € 5.9 million in 2016 to € 4.9 million in 2017, primarily due to one-time costs related to our move to a new building in 2016. Other expenses increased from € 2.6 million in 2016 to € 2.8 million in 2017 primarily due to higher maintenance expenses for laboratory equipment. Expenses for consumable supplies increased from € 2.3 million in 2016 to € 2.6 million in 2017 in line with the increase in our research and development operations.

### SELLING

Selling expenses increased by 33%, or € 1.6 million, from € 4.8 million in 2017 to € 6.4 million in 2018, primarily due to higher personnel expenses and external services. Personnel expenses increased from € 1.8 million in 2017 to € 2.5 million in 2018 due to intensified commercialization efforts for MOR208. Expenses for external services increased from € 2.7 million in 2017 to € 3.0 million in 2018.

Selling expenses increased by 100%, or € 2.4 million, from € 2.4 million in 2016 to € 4.8 million in 2017, primarily due to higher external services. Expenses for external services increased from € 0.3 million in 2016 to € 2.7 million in 2017.

### GENERAL AND ADMINISTRATIVE

In 2018, general and administrative expenses increased by 39%, or € 6.2 million, from € 15.7 million in 2017 to € 21.9 million in 2018, primarily due to higher personnel expenses and costs for external services. Personnel expenses increased from € 11.8 million in 2017 to € 15.0 million in 2018, primarily due to higher deferred compensation for share-based incentive plans, recruitment expenses and wages. Expenses for external services increased from € 2.2 million in 2017 to € 4.5 million in 2018, primarily due to one-time costs related to our initial public offering on the Nasdaq. Other expenses increased from € 0.7 million in 2017 to € 1.0 million in 2018, primarily due to higher rent expenses.

In 2017, general and administrative expenses increased by 17%, or € 2.3 million, from € 13.4 million in 2016 to € 15.7 million in 2017, primarily due to higher personnel expenses. Personnel expenses increased from € 9.2 million in 2016 to € 11.8 million in 2017, primarily due to higher deferred compensation for share-based incentive plans and bonus payments. Other expenses decreased from € 0.8 million in 2016 to € 0.7 million in 2017, primarily due to one-time costs related to our move in 2016 to a new building.

### OTHER INCOME

In 2018, other income increased by 47%, or € 0.5 million, from € 1.1 million in 2017 to € 1.6 million in 2018 and mainly consisted of currency gains in an amount of € 0.5 million in 2017 and € 0.7 million in 2018, gains from the recognition of previously unrecognized intangible assets of € 0 in 2017 and € 0.4 million (resulting from contribution in kind of the investment in adivo GmbH) in 2018, grant income in an amount of € 0.2 million in 2017 and € 0.2 million in 2018 and miscellaneous income of € 0.4 million in 2017 and € 0.4 million in 2018.

In 2017, other income increased by 57%, or € 0.4 million, from € 0.7 million in 2016 to € 1.1 million in 2017 and mainly consisted of grant income in an amount of € 0.2 million in 2017 and € 0.3 million in 2016, currency gains in an amount of € 0.5 million in 2017 and € 0.2 million in 2016 and miscellaneous income of € 0.5 million in 2017 and € 0.2 million in 2016.

### OTHER EXPENSES

In 2018, other expenses decreased by 59%, or € 1.0 million, from € 1.7 million in 2017 to € 0.7 million in 2018. Other expenses mainly consisted of currency losses in an amount of € 0.8 million in 2017 and € 0.5 million in 2018 and miscellaneous expenses of € 0.9 million in 2017 and € 0.2 million in 2018.

In 2017, other expenses increased by € 1.1 million, from € 0.6 million in 2016 to € 1.7 million in 2017. Other expenses mainly consisted of currency losses in an amount of € 0.8 million in 2017 and € 0.4 million in 2016 and miscellaneous expenses of € 0.8 million in 2017 and € 0.2 million in 2016.

### EBIT

EBIT, defined as earnings before finance income, finance expenses, impairment losses on financial assets and income taxes, amounted to € -59.1 million in 2018, compared to an EBIT of to € -67.6 million in 2017.

### FINANCE INCOME

Finance income decreased by 43%, or € 0.3 million, from € 0.7 million in 2017 to € 0.4 million in 2018, reflecting lower returns from investments. Finance income mainly consisted of realized gains from derivatives of € 0.4 million in 2017 and € 0.3 million in 2018 and interest income of € 0.2 million in 2017 and € 0.1 million in 2018 received from investments in term deposits with fixed or variable interest rates.

In 2017, finance income decreased by 50%, or € 0.7 million, from € 1.4 million in 2016 to € 0.7 million in 2017 reflecting lower returns from investments. Finance income mainly consisted of interest income of € 1.0 million in 2016 and € 0.2 million in 2017 received from investments in term deposits with fixed or variable interest rates, € 0.3 million in 2016 and less than € 0.1 million in 2017 in realized gains from the divestment of available-for-sale financial assets and bonds and € 0.1 million in 2016 and € 0.4 million in 2017 in realized gains from derivatives.

### FINANCE EXPENSES

In 2018, finance expenses decreased by 5%, or € 1.1 million, from € 1.9 million in 2017 to € 0.8 million in 2018 and primarily consisted of losses on marketable securities and derivatives of € 1.5 million in 2017 and € 0.4 million in 2018 and interest expenses of € 0.5 million in 2017 and € 0.3 million in 2018.

In 2017, finance expenses increased by 46%, or € 0.6 million, from € 1.3 million in 2016 to € 1.9 million in 2017 and consisted primarily of losses on derivatives of € 1.4 million and interest expenses of € 0.4 million in 2017. In 2016, finance expenses mainly consisted of € 1.2 million in realized losses from the sale of available-for-sale financial assets and bonds.

### INCOME TAX EXPENSES

In 2018, income tax benefits amounted to € 4.3 million and in 2017 income tax expenses amounted to € 1.0 million. The income tax benefit is mainly the consequence of derecognition of a deferred tax liability resulting from the impairment of intangible assets.

The effective income tax rate changed from negative 1.5% in 2017 to 7.1% in 2018. The difference to the expected tax rate of 26.7% (which would have resulted in an expected income tax benefit of € 16.1 million in

2018 and € 18.3 million in 2017) is primarily the result of the non-recognition of deferred tax assets on current year tax losses of € 14.5 million in 2018 and € 22.0 million in 2017 as well as permanent differences resulting from transaction costs in connection with the US IPO of negative € 3.7 million in 2018 and the non-recognition of deferred tax assets on temporary differences of € 0.3 million in 2018.

In 2017, income tax expenses increased by 100%, or € 0.5 million, from € 0.5 million in 2016 to € 1.0 million in 2017, due in large part to an income tax benefit in 2016 related to certain losses that were carried back to offset 2015 taxable income. In 2017, no such tax loss carry back was possible. The effective income tax rate changed from negative 0.9% in 2016 to negative 1.5% in 2017. The difference between the expected tax rate of 26.7% (which would have resulted in an expected income tax benefit of € 18.3 million in 2017 and € 16.0 million in 2016) is primarily the result of the non-recognition of deferred tax assets on current year tax losses of € 22.0 million in 2017 and € 13.4 million in 2016 and the non-recognition of deferred tax assets on temporary differences of negative € 3.3 million in 2017 and € 3.8 million in 2016.

## CONSOLIDATED NET PROFIT/LOSS FOR THE PERIOD

In 2018, the net result for the period amounted to € -56.2 million (2017: € -69.8 million).

### TAB. 03: MULTI-YEAR OVERVIEW – STATEMENT OF PROFIT OR LOSS[1]

| in million € | 2018 | 2017 | 2016 | 2015 | 2014 |
|---|---|---|---|---|---|
| **Revenues** | **76.4** | **66.8** | **49.7** | **106.2** | **64.0** |
| Cost of Sales | (1.8) | 0.0 | 0.0 | 0.0 | 0.0 |
| Research and Development Expenses [2] | (106.4) | (113.3) | (94.0) | (78.7) | (56.0) |
| Selling Expenses [2] | (6.4) | (4.8) | (2.4) | 0.0 | 0.0 |
| General and Administrative Expenses [2] | (21.9) | (15.7) | (13.4) | (15.1) | (14.1) |
| Other Income/Expenses | 1.0 | (0.6) | 0.2 | 4.7 | 0.2 |
| **EBIT** | **(59.1)** | **(67.6)** | **(59.9)** | **17.2** | **(5.9)** |
| Finance Income/Expenses | (0.3) | (1.2) | 0.1 | 3.4 | 1.6 |
| Impairment Losses on Financial Assets | (1.0) | 0.0 | 1.0 | 0.0 | 0.0 |
| Income Tax Benefit / (Expenses) | 4.3 | (1.0) | (0.5) | (5.7) | 1.3 |
| **Consolidated Net Profit / (Loss)** | **(56.2)** | **(69.8)** | **(60.4)** | **14.9** | **(3.0)** |
| Earnings per Share, basic and diluted (in €) [3] | (1.79) | (2.41) | (2.28) | - | (0.12) |
| Earnings per Share, basic (in €) | - | - | - | 0.57 | - |
| Earnings per Share, diluted (in €) | - | - | - | 0.57 | - |
| Shares Used in Computing Earnings per Share (in units), basic and diluted [3] | 31,338,948 | 28,947,566 | 26,443,415 | - | 25,903,995 |
| Shares Used in Computing Earnings per Share (in units), basic | - | - | - | 26,019,855 | - |
| Shares Used in Computing Earnings per Share (in units), diluted | - | - | - | 26,244,292 | - |
| Dividends Declared per Share (in € and $) | - | - | - | - | - |

1 Differences due to rounding.

2 In 2018, selling expenses were presented for the first time. In order to provide comparative information for the previous year, the figures for 2017 and 2016 have been adjusted accordingly. The figures for 2015 and 2014 were not adjusted due to materiality reasons.

3 Basic and diluted Earnings per Share are the same in each of the years ended December 31, 2018, 2017, 2016 and 2014, because the assumed exercise of outstanding stock options and convertible bonds would be anti-dilutive due to our consolidated net loss in the respective periods.

## LIQUIDITY AND CAPITAL RESOURCES

### SOURCES OF FUNDING

We have funded our operations primarily through the issuance of ordinary shares and through cash received in the ongoing operations of our business, including upfront fees, milestone payments, license fees, royalties, and support fees from our strategic partners and government grants.

Liquidity as of December 31, 2018 is presented in the balance sheet items “cash and cash equivalents”, “financial assets at fair value, with changes recognized in profit or loss” as well as “financial assets at amortized cost”. As of December 31, 2017, liquidity had been presented in the balance sheet items “cash and cash equivalents”, “available-for-sale financial assets” as well as “financial assets classified as loans and receivables”.

As of December 31, 2018, we had € 45.5 million in cash and cash equivalents, € 44.6 million in financial assets at fair value, with changes recognized in profit or loss, and € 364.7 million in current and non-current financial assets at amortized cost. As of December 31, 2017, we had € 76.6 million in cash and cash equivalents, € 86.5 million in available-for-sale financial assets and € 149.1 million in current other financial assets categorized as “loans and receivables.”

Cash in excess of immediate working capital requirements is invested in accordance with our investment policy, primarily with a view to liquidity and capital preservation. Investments are primarily made in money market funds, corporate bonds and term deposits with fixed or variable interest.

We do not have any financial indebtedness, and we are not subject to any operating covenants or capital requirements.

### USES OF FUNDING

Our primary use of cash is to fund research and development costs related to the development of our product candidates. Our primary future funding requirements include the development of our proprietary clinical pipeline (primarily MOR208) and the advancement of our earlier stage wholly-owned or co-developed product candidates.

We believe that our existing cash and cash equivalents and other financial instruments (including cash invested in various financial instruments as described above) will be sufficient to fund our anticipated operating expenses for at least the next twelve months.

We have based this estimate on assumptions that may prove to be wrong, and we could use our capital resources sooner than we currently expect. Additionally, the process of testing product candidates in clinical trials is costly, and the timing of progress in these trials is uncertain.

Because our product candidates are in various stages of development and the outcome of these efforts is uncertain, we cannot estimate the actual amounts necessary to successfully complete the development and commercialization of our product candidates or whether, or when, we may achieve profitability.

We will likely require additional capital for the further development of our existing product candidates, regulatory approval processes, the potential buildout of a commercial organization and for our operation as a public company in the U.S. and may also need to raise additional funds sooner to pursue other inlicensing or development activities related to additional product candidates. Until we can generate a sufficient amount of revenue, we expect to finance future cash needs primarily through public or private equity or debt offerings, including convertible bonds. Additional capital may not be available on reasonable terms, if at all. If we are unable to raise additional capital in sufficient amounts or on terms acceptable to us, we may have to significantly delay, scale back or discontinue the development or commercialization of one or more of our product candidates.

If we raise additional funds through the issuance of debt or equity securities, it could result in dilution to our existing shareholders, increased fixed payment obligations or the securities may have rights senior to those of our ordinary shares or the ADSs. If we incur indebtedness, we could become subject to covenants that would restrict our operations and potentially impair our competitiveness, such as limitations on our ability to incur additional debt, limitations on our ability to acquire, sell or license intellectual property rights and other operating restrictions that could adversely impact our ability to conduct our business.

## CASH FLOWS

### CASH FLOWS PROVIDED BY / USED IN OPERATING ACTIVITIES

In 2018, net cash used in operating activities was € 33.3 million, primarily driven by the consolidated net loss of € 56.2 million, partially offset by non-cash charges of positive € 27.4 million, and changes in operating assets and liabilities and taxes paid of negative € 4.5 million. The consolidated net loss of € 56.2 million was primarily driven by expenses incurred to fund our ongoing operations, in particular research and development expenses, selling expenses and general and administrative expenses. Non-cash charges consisted primarily of impairment expenses for intangibles assets in the amount of € 24.0 million, deferred compensation for share-based payment of € 5.6 million and depreciation and amortization of tangible and intangible assets of € 3.8 million, offset by an income tax benefit of € 4.3 million. Changes in operating assets and liabilities for 2018 consisted primarily of an increase in accounts receivable by € 6.6 million and a decrease in other liabilities by € 2.7 million, offset by contract liabilities in the amount of € 2.4 million incurred during the year as well as an increase in accounts payable and accruals by € 1.9 million. The increase in accounts receivable was mainly due to a comparatively higher level of receivables outstanding at year-end. The decrease in other liabilities was mainly due to the payment of tax liabilities and the repayment of a governmental cost subsidy. The contract liability incurred during the year mainly related to annual license fees. The increase in accounts payable and accruals was mainly due to an increase in external laboratory services that were outstanding at year end.

In 2017, net cash used in operating activities was € 38.4 million, primarily driven by the consolidated net loss of € 69.8 million, partially offset by non-cash charges of positive € 0.7 million, and changes in operating assets and liabilities and taxes paid of € 30.6 million. The consolidated net loss of € 69.8 million was primarily driven by expenses incurred to fund our ongoing operations, in particular research and development expenses and general and administrative expenses. Changes in operating assets and liabilities for 2017 consisted primarily of € 18.4 million in deferred revenue received during the year, a € 7.8 million increase in accounts payable and accruals and a € 3.1 million increase in other liabilities. The deferred revenue received during the year mainly related to annual license fees. The increase in accounts payable and accruals was mainly due to an increase in external laboratory services primarily related to the MOR208 program that were outstanding at year end. The increase in other liabilities was mainly due to the deferral of the rent-free period for the rental agreement for our headquarters.

In 2016, net cash used in operating activities was € 46.6 million, primarily driven by the consolidated net loss of € 60.4 million, after consideration of the net non-cash charges of negative € 0.7 million, and changes in operating assets and liabilities as well as taxes paid of € 14.4 million. Consolidated net loss of € 60.4 million, after consideration of the net non-cash charges of negative € 0.7 million, was primarily driven by expenses incurred to fund our ongoing operations, in particular research and development expenses and general and administrative expenses. Net cash provided by changes in operating assets and liabilities for 2016, consisted primarily of € 17.4 million in deferred revenue prepayments received during the year and a € 13.0 million increase in accounts payable and accruals, partially offset by a € 13.9 million increase in prepaid expenses and other assets. The prepayments for deferred revenue received during the year mainly related to annual license fees. The increase in accounts payable and accruals was mainly due to an increase in external laboratory services. The increase in prepaid expenses and other assets was mainly due to an increase in the purchase of combination compounds and prepaid fees for external laboratory services, in each case primarily related to our MOR208 program.

## CASH FLOWS PROVIDED BY / USED IN INVESTING ACTIVITIES

In 2018, net cash used in investing activities was € 177.3 million, primarily driven by the purchase of financial assets in the amount of € 451.3 million, of which € 366.8 million were classified at amortized cost, partially offset by proceeds from the sale of financial assets in the amount of € 276.4 million, of which € 150.0 million were classified at amortized cost. Cash used in investing activities primarily related to the investment of the proceeds from our initial public offering on the Nasdaq as well as a shift in the composition in our investment portfolio as financial assets matured and were sold and new, similar financial assets were purchased.

In 2017, net cash provided by investing activities was € 32.9 million, primarily driven by proceeds from the sale of financial assets in the amount of € 210.2 million, partially offset by the purchase of financial assets in the amount of € 164.4 million, of which € 108 million were classified as loans and receivables. Cash provided by investing activities primarily related to a shift in the composition in our investment portfolio as financial assets matured and were sold and new, similar financial assets were purchased.

In 2016, net cash used in investing activities was € 80.8 million, primarily driven by purchase of financial assets of € 423.4 million, partially offset by sales of financial assets and bonds of € 343.5 million. Use of cash in investing activities during the period primarily related to a shift in the composition in our investment portfolio.

## CASH FLOWS PROVIDED BY / USED IN FINANCING ACTIVITIES

In 2018, net cash provided by financing activities was € 179.5 million and mainly related to the gross proceeds from our initial public offering on the Nasdaq of € 193.6 million offset by the related issuance costs of € 15.0 million.

In 2017, net cash provided by financing activities was € 8.2 million and mainly related to exercises of convertible bonds by members of the Management Board and the senior management.

In 2016, net cash provided by financing activities was € 110.4 million. Cash provided by financing activities during the period primarily related to our capital increase in November 2016, resulting in gross proceeds of € 115.4 million.

## INVESTMENTS

In 2018, MorphoSys invested € 1.8 million in property, plant and equipment (2017: € 1.3 million), mainly laboratory equipment (i.e. machinery) and computer hardware. Depreciation of property, plant and equipment in 2018 decreased to € 1.8 million (2017: € 2.0 million).

The Company invested € 0.6 million in intangible assets in 2018 (2017: € 11.8 million). Amortization of intangible assets was below the prior year's level and amounted to € 1.9 million in 2018 (2017: € 2.1 million). In 2018, impairment of € 15.1 million was recognized on the in-process R&D programs, thereof € 13.4 million on the MOR107 program (2017: impairment of € 9.8 million was recognized on the in-process MOR209/ES414 program).

**TAB. 04: MULTI-YEAR OVERVIEW – FINANCIAL SITUATION [1]**

| in million € | 2018 | 2017 | 2016 | 2015 | 2014 |
|---|---|---|---|---|---|
| Net Cash Provided by/Used in Operating Activities [2] | (33.3) | (38.4) | (46.6) | (23.5) | (14.2) |
| Net Cash Provided by/Used in Investing Activities [2] | (177.3) | 32.9 | (80.8) | 86.3 | (21.5) |
| Net Cash Provided by/Used in Financing Activities [2] | 179.5 | 8.2 | 110.4 | (4.1) | (3.9) |
| Cash and Cash Equivalents (as of 31 December) | 45.5 | 76.6 | 73.9 | 90.9 | 32.2 |
| Financial Assets at Fair Value through Profit or Loss [3] | 44.6 | 0.0 | 0.0 | 0.0 | 0.0 |
| Other Financial Assets at Amortized Cost, Current Portion [3] | 268.9 | 0.0 | 0.0 | 0.0 | 0.0 |
| Other Financial Assets at Amortized Cost, Net of Current Portion [3] | 95.7 | 0.0 | 0.0 | 0.0 | 0.0 |
| Available-for-sale Financial Assets [3] | 0.0 | 86.5 | 63.4 | 64.3 | 106.0 |
| Bonds, Available-for-sale [3] | 0.0 | 0.0 | 6.5 | 33.1 | 7.5 |
| Financial Assets Categorized as Loans and Receivables, Current Portion [3] | 0.0 | 149.1 | 136.1 | 94.6 | 157.0 |
| Financial Assets Categorized as Loans and Receivables, Net of Current Portion [3] | 0.0 | 0.0 | 79.5 | 15.5 | 50.0 |

1 Differences due to rounding.
2 In 2015, interest paid and interest received were reclassified from operating activities into investing activities and financing activities in the statement of cash flows. In order to provide comparative information for the previous year, the figures for 2014 have been adjusted accordingly.
3 In 2018, due to the first time adoption of IFRS 9 Financial Instruments, the items representing liquidity are presented in different balance sheet than in prior years.

## NET ASSETS

### ASSETS

As of December 31, 2018, total assets amounted to € 538.8 million and were € 123.4 million above their level on December 31, 2017 (€ 415.4 million). Current assets increased by € 48.2 million. This change was mainly driven by an overall increase in financial assets and cash and cash equivalents as well as from an increase in accounts receivable and was partly offset by the decline in prepaid expenses and other current assets.

As of December 31, 2018, an amount of € 44.6 million (December 31, 2017: € 86.5 million) was invested in various money market funds and reported under “financial assets at fair value through profit or loss.” On December 31, 2017, such investments were reported as “available-for-sale financial assets.” The category “other financial assets at amortized cost” included financial instruments totaling € 268.9 million (December 31, 2017: € 149.1 million). These instruments comprised mainly term deposits with either fixed or variable interest rates as well as three commercial papers. In 2017 such investments were reported in the category “loans and receivables”.

Non-current assets increased by € 75.2 million to € 149.9 million compared to their level of € 74.7 million on December 31, 2017. The main reason for this change was an increase in non-current financial assets in the category “other financial assets at amortized cost, net of current portion” which was partially offset by a decline of the line item “In-process R&D Programs”.

### LIABILITIES

Current liabilities decreased from € 47.7 million on December 31, 2017 to € 45.9 million on December 31, 2018. This effect mainly resulted from a decrease in other provisions and contract liabilities.

Non-current liabilities (December 31, 2018: € 4.5 million; December 31, 2017: € 9.0 million) decreased mainly due to the decline in deferred tax liabilities. The decrease in deferred tax liabilities is mainly related to the impairment of in-process R&D programs.

## STOCKHOLDERS' EQUITY

As of December 31, 2018, Group equity totaled € 488.4 million compared to € 358.7 million on December 31, 2017. As of December 31, 2018, the Company's equity ratio amounted to 91% compared to 86% on December 31, 2017.

The number of shares issued totaled 31,839,572 as of December 31, 2018, of which 31,558,536 shares were outstanding (December 31, 2017: 29,420,785 shares issued and 29,101,107 shares outstanding). Common stock was higher due to the capital increases carried out in April 2018 as a result of the intial public offering on the Nasdaq Global Market. The capital increases were based on American Depositary Shares ("ADS"), with each ADS representing 1/4 of a MorphoSys common share. In the IPO process, 2,075,000 new shares were issued on April 18, 2018 and 311,250 new shares were issued on April 26, 2018 from Authorized Capital 2017-II. Common stock also increased by € 32,537 due to the exercise of 32,537 convertible bonds granted to the Management Board and the Senior Management Group. The weighted-average exercise price of the convertible bonds was € 31.88.

On December 31, 2018, the Company held 281,036 shares of treasury stock valued at € 10,398,773, representing a decline of € 1,428,208 compared to December 31, 2017 (319,678 shares, € 11,826,981). The cause of the decline was the transfer of 17,129 shares of treasury stock valued at € 636,414 to the Management Board and Senior Management Group from the performance-based 2014 long-term incentive program (LTI). The vesting periods for this LTI program expired on April 1, 2018. Beneficiaries were given the option to receive a total of 17,219 shares within six months. In May 2018, the Management Board, the Senior Management Group and certain employees of the Company who are not part of the Senior Management Group received a one-time entitlement in a total fixed amount of € 2.1 million. As of December 31, 2018, 20,105 shares in an amount of € 2.1 million have been transferred to beneficiaries as a result of this entitlement.

**TAB. 05: MULTI-YEAR OVERVIEW – BALANCE SHEET STRUCTURE [1]**

| in million € | 12/31/2018 | 12/31/2017 | 12/31/2016 | 12/31/2015 | 12/31/2014 |
|---|---|---|---|---|---|
| **Assets** | | | | | |
| Current Assets | 388.9 | 340.7 | 308.1 | 300.1 | 322.4 |
| Non-current Assets | 149.9 | 74.7 | 155.5 | 100.0 | 104.1 |
| **Total** | **538.8** | **415.4** | **463.6** | **400.1** | **426.5** |
| **Equity and Liabilities** | | | | | |
| Current Liabilities | 45.9 | 47.7 | 38.3 | 27.5 | 32.7 |
| Non-current Liabilities | 4.5 | 9.0 | 9.8 | 9.9 | 45.0 |
| Stockholders' Equity[2] | 488.4 | 358.7 | 415.5 | 362.7 | 348.8 |
| **Total** | **538.8** | **415.4** | **463.6** | **400.1** | **426.5** |

1 Differences due to rounding.

2 Includes Common Stock as of December 31, 2018: € 31,839,572; December 31, 2017: € 29,420,785; December 31, 2016: € 29,159,770; December 31, 2015: € 26,537,682; December 31, 2014: € 26,456,834.

## CONTRACTUAL OBLIGATIONS

The following table summarizes our contractual obligations at December 31, 2018.

**TAB. 06: CONTRACTUAL OBLIGATIONS (DECEMBER 31, 2018)**

| | Payments due by period | | | | |
|---|---|---|---|---|---|
| (in € thousands) | Total | Less than 1 year | 1 to 3 years | 3 to 5 years | More than 5 years |
| Operating Lease Obligations | 24,107 | 4,512 | 5,720 | 5,371 | 8,504 |

## OPERATING LEASE OBLIGATIONS

We lease facilities and equipment under long-term operating leases. In 2018, leasing expenses amounted to € 3.2 million. Leasing expenses also include leasing of company cars and machinery. The majority of these leasing contracts can be renewed on a yearly or quarterly basis, and some agreements may be terminated prematurely.

## OTHER COMMITMENTS

Other commitments may become due for future payments for outsourced studies. As of December 31, 2018, we expected to incur approximately € 97.0 million of fees for outsourced studies, of which approximately € 51.4 million will be paid in the next twelve months. Additionally, if certain milestones are achieved in the Proprietary Development segment, for example, filing an application for an investigational new drug, or IND, for specific target molecules, this may trigger regulatory and sales milestone payments to licensors of up to an aggregate of $ 287 million. The next milestone payment in the amount of $ 12.5 million could occur in approximately 12 to 18 months. No accruals have been recorded in our consolidated balance sheet for these amounts.

## OFF-BALANCE SHEET ARRANGEMENTS

We did not have, during 2018 and 2017, and we do not currently have, any off-balance sheet arrangements.

## COMPARISON OF ACTUAL BUSINESS RESULTS VERSUS FORECASTS

MorphoSys demonstrated solid financial performance during the 2018 reporting year. A detailed comparison of the Company's forecasts versus the actual results can be found in Table 7.

**TAB. 07: COMPARISON OF ACTUAL BUSINESS RESULTS VERSUS FORECASTS**

| | 2018 Targets | 2018 Results |
|---|---|---|
| **Financial targets** | Group revenues between € 67 million and € 72 million (initial forecast € 20–25 million; revised on July 19, 2018 upon announcement of licensing agreement with Novartis for MOR106) | Group revenues of € 76.4 million |
| | Expenses for proprietary product and technology development of € 87 million to € 97 million (initial forecast: € 95–105 million; revised on July 19, 2018 upon announcement of licensing agreement with Novartis for MOR106) | Expenses for proprietary product and technology development of € 98.3 million |

| | 2018 Targets | 2018 Results |
|---|---|---|
| | EBIT of € (55) million to € (65) million (initial forecast: € (110) million to € (120) million; revised on July 19, 2018 upon announcement of licensing agreement with Novartis for MOR106) | EBIT of € (59.1) million |
| | Proprietary Development segment:<br>R&D expenses to continue to rise (2017: € 99.1 million)<br>EBIT sharply negative due to planned R&D expenditures on proprietary programs (2017: € (81.3) million) | Proprietary Development segment:<br>R&D expenses of € 107.0 million<br>EBIT of € (53.2) million |
| | Partnered Discovery segment:<br>R&D expenses lower than in the prior year due to the expiration of the partnership with Novartis (2017: € 17.7 million)<br>EBIT positive (2017: € 30.2 million) | Partnered Discovery segment:<br>R&D expenses of € 8.5 million<br>EBIT of € 13.3 million |
| **Proprietary Development** | MOR208 | MOR208 |
| | • Update on interactions with the FDA based on breakthrough therapy designation status | • Regular updates on developments regarding path to market |
| | • Completion of treatment of 81 patients under the current study protocol of the fully recruited L-MIND trial with MOR208 and lenalidomide in r/r DLBCL and the start of data evaluation | • All 81 patients enrolled in the trial, data evaluation ongoing |
| | • Continuation of the pivotal phase 3 study evaluating MOR208 in combination with bendamustine in comparison to rituximab and bendamustine in r/r DLBCL (B-MIND study) | • B-MIND study ongoing |
| | • Continuation of the phase 2 COSMOS trial with MOR208 in combination with idelalisib or venetoclax in r/r CLL or SLL and presentation of study data at conferences | • COSMOS trial ongoing, data presented at conferences: EHA (June) and ASH (December) |
| | • Continue to advance the development towards a potential regulatory approval and begin to set up commercial capabilities in order to commercialize MOR208 in certain geographies | • Preparation for potential regulatory approval ongoing; set-up of commercial capabilities started, foundation of MorphoSys US Inc. to support commercialization of MOR208 in the U.S. |
| | MOR202 | MOR202 |
| | | • Termination of active partnering efforts for MOR202 in multiple myeloma |

| | 2018 Targets | 2018 Results |
|---|---|---|
| | • Evaluation of new potential partnerships for the compound's optimal development | outside I-Mab partnership for Greater China |
| | • Evaluate the start of an exploratory clinical trial in non-small-cell lung cancer (NSCLC) | • Stop of clinical development plans for NSCLC after discontinuation of a clinical study by Genmab and Janssen of anti-CD38 antibody daratumumab in combination with a checkpoint inhibitor in NSCLC due to safety findings |
| | • Presentation of study data after completion of the phase 1/2a dose-escalation trial in multiple myeloma | • Presentation of final phase 1/2a data in MM at ASH (December) |
| | MOR106 | MOR106 |
| | • Initiation of a phase 2 trial of MOR106 in atopic dermatitis under our co-development program with Galapagos | • Start of IGUANA phase 2 trial in atopic dermatitis in May<br>• Start of phase 1 bridging study wih Galapagos evaluating a subcutaneous formulation of MOR106 in September<br>• Exclusive global license agreement with Novartis signed together with Galapagos for further development of MOR106 in atopic dermatitis and potentially other indications |
| | MOR107 | MOR107 |
| | • Preclinical investigation of MOR107 with a focus on oncology indications based on initial anti-tumor data | • Preclinical investigation ongoing |
| | Initiation and continuation of development programs in the area of antibody discovery and preclinical development | • Exclusive strategic collaboration and regional licensing agreement for MOR210 with I-Mab Biopharma for development and commercialization in China, Hong Kong, Macao, Taiwan and South Korea<br>• Continuation of antibody discovery programs |
| **Partnered Discovery** | Progress of partnered development programs | Increasing number of partnered programs (103 programs) as maturity progresses<br><br>Guselkumab (Tremfya®, partner: Janssen):<br>• Further marketing approval for the treatment of moderate to severe plaque psoriasis in Brazil, Australia, South Korea and Japan as well as for psoriatic arthritis in Japan (April) and for the |

| 2018 Targets | 2018 Results |
| --- | --- |
| | treatment of patients with palmoplantar pustulosis in Japan (November)<br>• Start of phase 2/3 program (GALAXI) in Crohn's disease (July)<br>• Start of phase 3 trial (PROTOSTAR) in pediatric psoriasis patients (September)<br>• Start of a phase 2 study in patients with moderate to severe hidradenitis suppurativa (HS) (November)<br>• Data from phase 3 head-to-head study ECLIPSE demonstrated superiority of guselkumab (Tremfya®) vs. secukinumab (Cosentyx®) in the treatment of plaque psoriasis (December)<br><br>Partner Roche started two new phase 3 trials of gantenerumab in patients with early Alzheimer's disease (June)<br><br>Expansion of existing strategic alliance with LEO Pharma to include peptide-derived therapeutics with the objective of identifying novel, peptide-derived therapeutics for unmet medical needs (September)<br><br>Partner GSK reported data from phase 2 BAROQUE clinical study of GSK3196165 (formerly MOR103) in rheumatoid arthritis (RA) at ACR conference (October) |

## THE MANAGEMENT BOARD'S GENERAL ASSESSMENT OF BUSINESS PERFORMANCE

The 2018 financial year was marked by both operational highlights as well as positive events among our development programs. The successful Nasdaq listing in April strengthened our financial position and gave us more flexibility to allocate our resources. Moreover, the IPO enhanced our visibility in the U.S., which was further increased by the foundation of our wholly owned subsidiary MorphoSys US Inc. With this, we followed our plan to build a strong U.S. presence as preparation for the planned commercialization of MOR208, our antibody for the treatment of hematological malignancies, which was definitely the key focus during the reporting year. Driven by positive data from our L-MIND trial and encouraged by our ongoing discussions with the FDA we followed our plan to bring the antibody to the U.S. market as fast as possible, pending FDA approval.

Revenues in the 2018 financial year increased to € 76.4 million, and EBIT amounted to € –59.1 million. The increase in revenues and the improved operating result compared to the previous year were the result of our exclusive license agreement for MOR106, which we and our partner Galapagos signed with Novartis Pharma AG in July thereby covering the further development and commercialization of our joint program MOR106. This agreement resulted in an upfront payment of € 47.5 million, which prompted us to raise our financial forecast for the 2018 financial year. Moreover, guselkumab (Tremfya®) sales grew rapidly during 2018 resulting in royalty

payments with strong year-on-year growth as compared to 2017. The net cash outflow from operating activities amounted to € 33.3 million, which was the result of the planned expenses for proprietary research and development. Our equity ratio of 91% and liquid funds of € 454.7 million are a confirmation of the strength of the Company's financial resources.

Our other Proprietary Development and Partnered Discovery programs made great progress in 2018. For MOR202, we presented final data from our phase 1/2a trial in multiple myeloma at ASH. Our partner I-Mab submitted an investigational new drug application for MOR202 in MM in China in August and we expect them to start pivotal trials soon. We ourselves are not pursuing the further development in MM without a partner, but of course we continue to support I-Mab in their development of MOR202 in Greater China. We made progress evaluating potential options for MOR202 in other indications, such as autoimmune diseases, while we stopped the clinical development plans in NSCLC. For GSK3196165 (formerly MOR103), GSK presented data from their phase 2 trial in rheumatoid arthritis at the ACR conference in October, where they also announced plans to continue clinical development in this indication. Building on our existing collaboration with I-Mab Biopharma for MOR202 for China and certain other Asian territories, we entered into an exclusive strategic collaboration and regional licensing agreement for MOR210, a preclinical-stage antibody directed against C5aR, which has potential to be developed as an immuno-oncology agent.

We were also pleased to report successes of our Partnered Programs. Guselkumab (Tremfya®), developed by our partner Janssen and the first approved and marketed therapeutic antibody based on MorphoSys's proprietary technology, was granted marketing authorization in several additional countries during 2018, including Japan. Janssen continued to develop guselkumab (Tremfya®) in several additional indications and reported positive long-term data in plaque psoriasis. We were very pleased about the data from the ECLIPSE trial reported by Janssen in December showing superiority of guselkumab (Tremfya®) versus secukinumab (Cosentyx®) for the treatment of plaque psoriasis. Our partner Roche initiated two new phase 3 trials with gantenerumab, the antibody against amyloid-beta, which is being developed by Roche for the treatment of Alzheimer's disease patients. By the end of the year, our pipeline comprised a total of 115 drug candidates (103 proprietary and 12 partnered programs), 29 of which are in clinical development.

### c) Outlook and Forecast

MorphoSys's business model is focused on developing innovative drug candidates derived from its proprietary technologies, such as the HuCAL and Ylanthia antibody libraries. We develop drug candidates both on a proprietary basis and together with partners with the goal of giving patients access to better treatment alternatives. Our proprietary development activities focus mainly on oncology compounds, which we aim to bring to market and commercialize. We continue to concentrate on further developing our technologies in the fast-growing, innovation-driven areas of the life sciences sector as the foundation of our business model.

## GENERAL STATEMENT ON EXPECTED DEVELOPMENT

MorphoSys's strategic focus is on the development of innovative drugs to improve the lives of patients suffering from serious diseases. The development of MOR208, our most advanced drug candidate, for the treatment of certain forms of blood cancer, is currently our top priority. Our continued investment in the development of validated and innovative technology platforms is an important basis for our business. In the Partnered Discovery segment, the commercialization of our technologies provides contractually secured cash flows from our partnerships with pharmaceutical companies.

The Management Board expects, among others, the following developments in 2019:

- Complete the L-MIND trial and submit the filing package by end of the year for approval at the FDA
- Continue to build capabilities in the U.S. in order to prepare for commercialization of MOR208 there pending regulatory approval and explore commercialization options in other geographies.

- Continue the development of other proprietary drug candidates such as MOR202 and MOR106 and support our partners in the development of these compounds.
- Continue to participate in the development of our partners' drug candidates through the receipt of success-based revenues such as milestone payments or royalties on commercialized product sales and continue to invest these funds into the development of our proprietary programs.
- Evaluate new strategic agreements based on proprietary technologies focused on gaining access to innovative target molecules and compounds.
- Continue expansion of proprietary development activities through potential in-licensing, company acquisitions, co-development and new proprietary development activities.
- Invest in the development of proprietary technologies to maintain and expand our position in therapeutic antibodies and related technologies.

## STRATEGIC OUTLOOK

MorphoSys plans to invest a substantial portion of its financial resources in proprietary R&D for the foreseeable future. The Management Board believes this is the best route to increasing the Company's value for the long term. We plan to advance our portfolio of proprietary development candidates and further strengthen our technology platform. Revenues from R&D funding, royalties, license and milestone payments and a strong liquidity position should allow us to continue expanding our proprietary drug and technology development.

In our Proprietary Development segment, we will continue developing therapeutic antibodies and peptides for our own account. We concentrate on oncology, but also explore our drug candidates in other disease areas such as inflammatory or autoimmune disorders if opportunities arise. Decisions to enter into alliances with other companies to co-develop our proprietary candidates or to outlicense them, either globally or for certain geographies, are made on a case-by-case basis. It has become an increasingly integral part of our strategy to retain projects in proprietary development in-house until later states of clinical development or even until commercialization. Our main focus is currently developing MOR208 towards a potential regulatory approval and to preparing commercialization capabilities for MOR208 in selected geographies, in particular the U.S.

Our Partnered Discovery segment generates contractually secured cash flows based on various partnerships with pharmaceutical companies. The majority of development candidates in recent years stemmed from our partnership with Novartis. Although this partnership ended in accordance with the contract in November 2017, we expect that drug candidates under this and other partnerships will continue to be developed and may lead to additional milestone payments and royalties in the future. In 2017, Tremfya®, developed and marketed by Janssen, became the first antibody from our partnered discovery business to reach the market. We expect that Tremfya® will continue to provide the bulk of our royalty revenue for the foreseeable future. Based on its breadth, the partnered pipeline is expected to generate further marketable therapeutic antibodies in the future. Should these be successful, the Company's financial participation in the form of royalties on product sales would increase.

## EXPECTED ECONOMIC DEVELOPMENT

In its January 2019 report, the International Monetary Fund (IMF) projected global economic growth of 3.5% in 2019, compared to 3.7% forecast for 2018. Growth in advanced economies is anticipated to be 2.0% in 2019, compared to a forecast growth of 2.3% for 2018. The IMF expects growth in in the euro area to decline to 1.6% in 2019 compared to the 1.8% forecast for 2018. Growth rates have been marked down for many economies, including Germany. The IMF expects growth in Germany to be 1.3% in 2019 (2018E: 1.5%); this decrease is due to soft private consumption, weak industrial production following the introduction of revised auto emission standards and subdued foreign demand. The IMF is projecting U.S. economic growth in 2019 to be 2.5% (and soften further to 1.8% in 2020) compared to expected growth of 2.9% in 2018 with the unwinding of fiscal

stimulus and as the federal funds rate temporarily overshoots the neutral rate of interest. Nevertheless, the projected pace of expansion is above the U.S. economy's estimated potential growth rate in both years. Strong domestic demand growth will support rising imports and contribute to a widening of the U.S. current account deficit. According to the IMF, growth in emerging and developing countries in 2019 is expected to be 4.5% (2018E: 4.6%). Growth in China is projected to reach 6.2% in 2019 (2018E: 6.6%) while Russia is expected to grow 1.6% compared to growth of 1.7% in 2018. Brazil is also expected to experience positive growth, projected at 2.5% for 2019 (2018E: 1.3%).

## EXPECTED DEVELOPMENT OF THE LIFE SCIENCES SECTOR

According to research by BioCentury, two-thirds of biotech companies could be facing a cash crunch in 2019 if the markets remain difficult. While investors do not expect capital availability to be a problem, they think the rising cost of capital might mean employing alternative financing structures to help biotechs extend their runway. Investors and bankers contacted by BioCentury believe that most of the financial market issues facing the biotech sector in 2019 have nothing to do with industry fundamentals but that macro-economic forces have driven a shift toward a risk-off sentiment. The fourth quarter of 2018 was one of the worst quarters for biotech indexes in over 16 years, and investors see little reason to think the sentiment will change in the near-term.

One bright spot is the string of M&A events that kicked off 2019 that could draw investors back to the sector. But short of an M&A spending spree, investors expect cost of capital may be one of the most important areas of focus in 2019. Investors are holding a relatively bleak outlook for the sector in 2019, with enough reason to worry from the last three months, which saw biotech enter a bear market.

On the positive side, the number of new FDA product approvals reached an all-time high of 59 in 2018. Despite this, investors are wary about companies' ability to effectively commercialize products once approved, as revenue trajectories, particularly from small and mid-cap companies, have not met projections.

## FUTURE RESEARCH AND DEVELOPMENT AND EXPECTED BUSINESS PERFORMANCE

### PROPRIETARY DEVELOPMENT

The Company's R&D budget for proprietary drug and technology development in the 2019 financial year is expected to be in the range of € 95 million to € 105 million. The majority of investment will fund the development of our proprietary drug candidates MOR208, MOR202 and our discovery efforts. The lion's share of that funding will be dedicated to the clinical development of MOR208. Further investment will be made in the areas of target molecule validation as well as antibody and technology development. We will also continue to seek collaborations with partners such as academic institutions to gain access to new target molecules and technologies.

The events and development activities planned in 2019 include the following:

- Continue interactions with the FDA during the breakthrough therapy designation process for MOR208.
- Complete data evaluation of all 81 patients enrolled under the current study protocol of the fully recruited L-MIND trial in r/r DLBCL and present study results based on the primary completion analysis.
- Initiate phase 1b trial with MOR208 in frontline DLBCL in second half of 2019
- Continue the pivotal phase 3 study evaluating MOR208 in combination with bendamustine in comparison to rituximab and bendamustine in r/r DLBCL (B-MIND study)
- Continue the phase 2 COSMOS trial of MOR208 with idelalisib and venetoclax in CLL/SLL and present data.

- Complete the regulatory filing package comprising clinical and CMC (chemistry, manufacturing and controls) data for MOR208 and submit the regulatory filing in the U.S. to the FDA by year-end; according to current plans, the filing will be primarily based on data from the L-MIND study in addition to historical data from lenalidomide single-agent treatment of the targeted patient population.
- Continue the set up of commercial capabilities in the U.S. in order to prepare for expected commercialization of MOR208.
- Prepare for and start an exploratory clinical trial of MOR202 in an autoimmune indication.
- Continue ongoing clinical studies of MOR106 in atopic dermatitis together with our co-development partner Galapagos under the existing global licensing agreement with Novartis including the phase 2 iv IGUANA study and the phase 1 sc bridging study and prepare the start of additional clinical studies in atopic dermatitis.
- Continue preclinical investigations of MOR107 with a focus on oncology indications.
- Continue and/or initiate development programs in the area of antibody discovery and preclinical development.

Based on announcements made by our partner GSK earlier this year, we might see the initiation of phase 3 development of MOR103/GSK3196165 in rheumatoid arthritis in the second half of 2019 by our partner GSK.

## PARTNERED DISCOVERY

MorphoSys intends to continue to focus, above all, on the further development of its proprietary development pipeline. In the Partnered Discovery segment, MorphoSys will carefully review its options to enter into additional collaborations based on its proprietary technologies with pharmaceutical and biotech companies, similar to the dermatology partnership with LEO Pharma that was initiated in 2016 based on our Ylanthia antibody platform and that was expanded in 2018 based on our proprietary peptide platform.

According to information provided on the website clinicaltrials.gov, by the end of 2019 primary completion may be reached in a total of up to 13 clinical trials in phase 2 and 3 from partners evaluating antibodies made using MorphoSys technology. This includes a potentially pivotal phase 2b study by Mereo Pharma in osteogenesis imperfecta (brittle bone syndrome) of the HuCAL antibody setrusumab (BSP804), directed against the target molecule sclerostin and generated within the scope of the Novartis partnership. Phase 3 trials with Tremfya® conducted by Janssen in psoriasis and in psoriatic arthritis are also scheduled for primary completion in 2019.

Whether, when and to what extent news will be published following the primary completion of trials in the Partnered Discovery segment is at the full discretion of our partners.

## EXPECTED PERSONNEL DEVELOPMENT

The number of employees in the Proprietary Development segment is expected to increase during the 2019 financial year, partly due the increased number of employees in connection with the build-up of commercial capabilities. The number of employees in the Partnered Discovery segment is expected to remain stable. The number of employees in G&A is expected to increase slightly.

## EXPECTED DEVELOPMENT OF THE FINANCIAL POSITION AND LIQUIDITY

MorphoSys had financial resources of € 454.7 million at the end of the 2018 financial year. Revenues in the 2019 financial year are expected to be below those achieved in 2018. The main reason for this expected decline is a positive one-time effect in 2018, namely the upfront payment of € 47.5 million received from Novartis in connection with a global licensing deal for MOR106. The Management Board is projecting Group revenues of

€ 43 million to € 50 million in the 2019 financial year. Revenues are expected to include royalty income from Tremfya® ranging from € 23 million to € 30 million at constant US-$ currency. This forecast does not take into account revenues from future collaborations and/or licensing agreements.

R&D expenses for proprietary programs and technology development are expected to reach € 95 million to € 105 million in 2019. Most of these expenses in the Proprietary Development segment will arise from the development of MOR208, MOR202 and from our early-stage development programs, with the lion's share expected to stem from clinical development of MOR208. R&D expenses for the Partnered Discovery segment are expected to be lower than in the prior year.

MorphoSys will continue to build commercial structures in the U.S. in preparation for the potential commercialization of MOR208 pending regulatory approval and therefore expects to incur a significant amount of selling expenses in the low to mid double-digit million euro range for 2019.

The Company expects EBIT of approximately € –127 million to € –137 million in 2019.

This guidance does not include a potential larger milestone for the start of a phase 3 clinical trial for MOR103/GSK3196165 that could occur in the course of 2019. The guidance also does not include revenues from potential future partnership or licensing agreements for MOR208 or any other compound that is in MorphoSys's proprietary development. Effects from potential in-licensing or co-development deals for new development candidates are also not included in the guidance. The Partnered Discovery segment is expected to generate a positive operating result in 2019. The Proprietary Development segment is expected to report a sharply negative EBIT due to the continued high level of R&D expenditures on proprietary programs.

In the years ahead, one-time events, such as the in-licensing and out-licensing of development candidates and larger milestone payments and royalties from the market maturity of HuCAL and Ylanthia antibodies could have an impact on the Company's net assets and financial position. Such events could cause financial targets to change significantly. Similarly, failures in drug development could have negative consequences for the MorphoSys Group. Revenue growth in the near to medium term will depend on the Company's ability to out-license its proprietary programs and/or enter into new partnerships as well as to secure regulatory approval for, launch and successfully commercialize its first proprietary program MOR208. In addition, revenues should increasingly benefit from royalties based on sales of Tremfya® (guselkumab).

At the end of the 2018 financial year, MorphoSys had liquidity of € 454.7 million (December 31, 2017: € 312.2 million). The loss projected for 2019 will cause a decline in liquidity. MorphoSys sees its solid cash position as an advantage that can be used to accelerate its future growth through strategic activities such as the in-licensing of compounds and partnering with promising companies. Available liquidity can also be used to fund research and development expenses for the Company's proprietary portfolio of therapeutic antibodies.

## DIVIDEND

In the separate financial statements of MorphoSys AG, prepared in accordance with German Generally Accepted Accounting Principles (German Commercial Code), the Company is reporting an accumulated deficit, which prevents it from distributing a dividend for the 2018 financial year. In view of the anticipated losses in 2019, the Company expects to continue to report an accumulated loss for the 2019 financial year. MorphoSys will invest further in the development of proprietary drugs and the set up of commercial capabilities in the U.S. and will potentially pursue additional in-licensing and acquisition transactions to open up new growth opportunities and increase the Company's value. Based on these plans, the Company does not expect to pay a dividend in the foreseeable future.

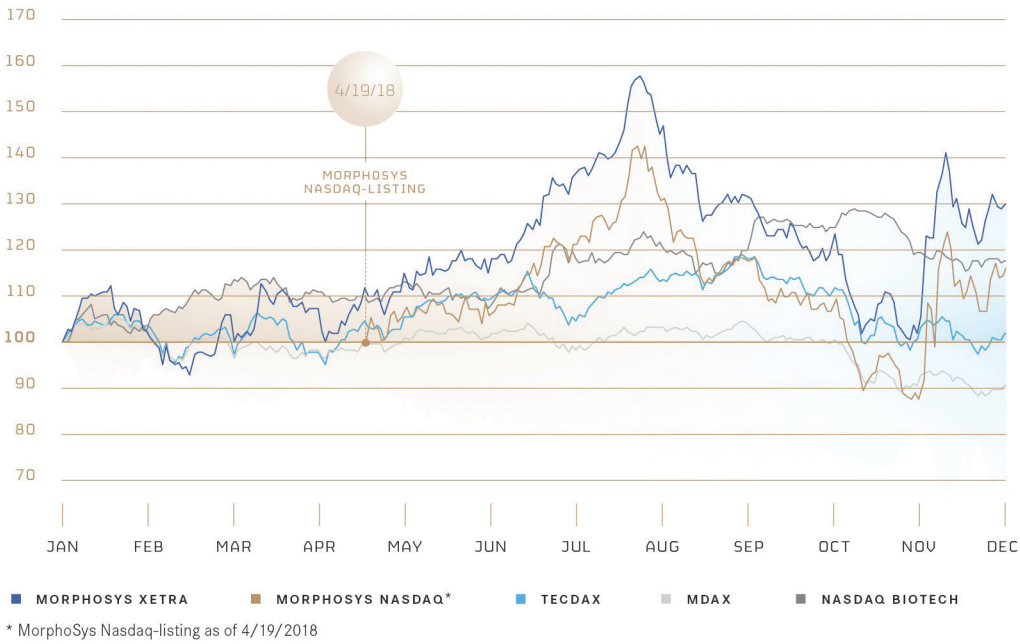
This outlook takes into account all known factors at the time of preparing this report and is based on the Management Board's assumptions of events that could influence the Company in 2019 and beyond. Future results may differ from the expectations described in the section entitled "Outlook and Forecast." The most significant risks are described in the risk report.

## d) Shares and the Capital Market

MorphoSys AG shares opened the reporting year at a share price of € 76.58. After a solid start in the first weeks of 2018, the share price dropped in line with the TecDax due to weak trends observed on Wall Street affecting the European markets and MorphoSys's share reached its low for the year of € 72.05 mid-February. The shares then trended higher in line with the TecDAX before breaking out in April after the Company announced the initial public offering in the United States and the listing of ADSs on the Nasdaq Global Market. From April 9 on, the share price constantly increased, far outpacing the benchmark index. The dual listing as well as positive news flow, such as approval of Tremfya® for plaque psoriasis in new regions and also for psoriatic arthritis in Japan received by Janssen in June as well as the global licensing agreement with Novartis and Galapagos for MOR106 mid-July, drove MorphoSys shares to a high of €122.20 on July 24. Thereafter, the worldwide stock markets were affected by the U.S. trade war with China and by the jump in returns in the U.S. Moreover, the European Market was marked by insecurities due to the banking crisis in Italy, with all causing a continuous decline for both the TecDAX as well as the MorphoSys shares. This resulted in a low of € 77.75 on October 26. Of note, MorphoSys shares were included into the MDAX as of September 24 while remaining part of the TecDAX segment. The simultaneous inclusion in both indices, MDAX and TecDAX, was based on the reorganization of the index rules of Deutsche Börse, the existing separation into the Tech and Classic segments having been removed. While both the TecDAX and MDAX declined further in the course of the year, MorphoSys's share price again increased from the beginning of November and closed the financial year at € 88.95, amounting to a share price increase of 16% and a market capitalization of € 2.8 billion.

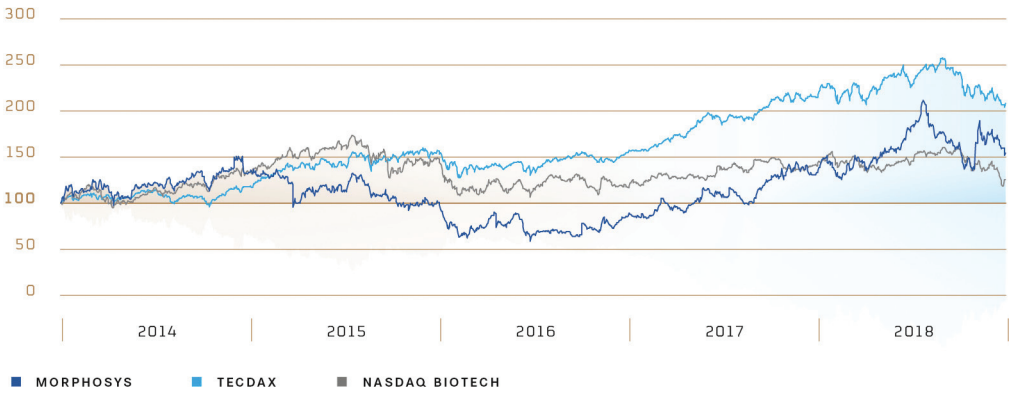
MorphoSys AG shares therefore clearly outperformed the development of the relevant indices, namely the Nasdaq Biotechnology Index (-9%), the MDAX (-18%) and the TecDAX (-3%) in 2018.

**FIG. 11: PERFORMANCE OF THE MORPHOSYS SHARE IN 2018 (JANUARY 1, 2018 = 100%)**




* MorphoSys Nasdaq-listing as of 4/19/2018

**FIG. 12: PERFORMANCE OF THE MORPHOSYS SHARE 2014 – 2018 (JANUARY 1, 2014 = 100%)**




## STOCK MARKET DEVELOPMENT

2018 was a difficult year on the stock markets. For the first time since 2011, the leading German index DAX was down significantly at about -18%. Concerns about a slowdown in the global economy, the trade dispute between the USA and China, and the approaching Brexit in March have had a greater impact on the German stock markets than on the U.S. markets. However, the Dow Jones index also ended the year down roughly 6%. Biotech shares did not manage to escape this negative stock market environment and also had to face falling prices. During the reporting year, MorphoSys continued to increase its investor relations activities both in Europe and with a growing focus also in the United States following the listing on the Nasdaq Global Market.

## LIQUIDITY AND INDEX MEMBERSHIP

The average daily trading volume in MorphoSys shares on all regulated trading platforms increased by about 45% in 2018, reaching a volume of € 22.5 million (2017: € 15.6 million). The average daily trading volume on the TecDAX, which contains the 30 largest technology stocks on the Frankfurt Stock Exchange, rose 93%. In addition, in 2018 MorphoSys shares were included for the first time in the German MDAX index, which comprises the 60 largest companies in terms of market capitalization and turnover on the Frankfurt Stock Exchange behind those that make up the DAX. By the end of 2018, MorphoSys ranked 10th in the TecDAX in terms of market capitalization (2017: 10th) and 14th in terms of trading volume (2017: 12th). In the MDAX, MorphoSys shares ranked 59th in terms of market capitalization and 65th in terms of trading volume (the rank refers to DAX (30) and MDAX (60) listed companies).

The average daily trading volume in MorphoSys shares on alternative trading platforms (“dark pools”) in 2018 was approximately € 16.2 million, or 173,000 shares (2017: approx. 98,700 shares valued at € 6.3 million), representing a year-on-year increase of 156%.

## MARKET INFORMATION

Our shares have been trading on the Frankfurt Stock Exchange under the symbol “MOR” since 1999. On April 23, 2018 we announced the closing of our initial public offering (IPO) in the United States through an ADS offering. The ADSs are listed on the Nasdaq Global Market under the symbol “MOR.”

The following table sets forth for the periods indicated the reported high and low closing sale prices per ordinary share in Xetra trading in euros on the Frankfurt Stock Exchange as well as per ADS in US dollars traded on Nasdaq.

**TAB. 08: CLOSING PRICES OF MORPHOSYS SHARES AND ADS**

| | ADSs traded on Nasdaq (in US$) | | Ordinary shares traded on Frankfurt Stock Exchange (in €) | |
|---|---|---|---|---|
| | High | Low | High | Low |
| 2014 | n/a | n/a | 86.72 | 55.45 |
| 2015 | n/a | n/a | 78.65 | 52.52 |
| 2016 | n/a | n/a | 56.07 | 33.25 |
| 2017 | n/a | n/a | 82.95 | 47.60 |
| 2018 | 35.66 | 21.96 | 122.00 | 72.05 |

## COMMON STOCK

The Company's common stock increased to 31,839,572 shares, or € 31,839,572, in the reporting year mainly due to a capital increase in connection with the initial public offering (IPO) on the Nasdaq Stock Market.

In April 2018, MorphoSys successfully completed the IPO on the Nasdaq Stock Market, generating gross proceeds of US$ 239,006,800. The transaction was executed in two consecutive capital increases from Authorized Capital 2017-II, excluding the subscription rights of existing shareholders. Initially, 2,075,000 new ordinary shares were issued as part of a basic offering in the form of 8,300,000 American Depositary Shares ("ADS"). This was followed by the full exercise of an option granted to the underwriters to acquire a further 311,250 new ordinary shares in the form of 1,245,000 ADSs. The price was US$ 25.04 per ADS in both transactions. Each ADS represents 1/4 of a MorphoSys ordinary share. The new ordinary shares underlying the ADSs in the basic offer and the option exercised by the underwriters correspond to approximately 8.1% of the common stock of MorphoSys prior to the capital increases from Authorized Capital 2017-II.

Another reason for the increase in the Company's common stock was the exercise of convertible bonds granted to the Management Board and the Senior Management Group. A detailed description of the convertible bond program can be found in the Notes (Item 7.2).

**TAB. 09: KEY DATA FOR THE MORPHOSYS SHARE (DECEMBER 31)**

| | 2018 | 2017 | 2016 | 2015 | 2014 |
|---|---|---|---|---|---|
| Total stockholders' equity (in million €) | 488.4 | 358.7 | 415.5 | 362.7 | 348.8 |
| Number of shares issued (number) | 31,839,572 | 29,420,785 | 29,159,770 | 26,537,682 | 26,456,834 |
| Market capitalization (in million €) | 2,832 | 2,253 | 1,422 | 1,530 | 2,027 |
| Closing price in € (Xetra) | 88.95 | 76.58 | 48.75 | 57.65 | 76.63 |
| Average daily trading volume (in million €) | 22.5 | 15.6 | 9.7 | 14.9 | 11.9 |
| Average daily trading volume (in % of common stock) | 0.77 | 0.83 | 0.78 | 0.87 | 0.65 |

## INTERNATIONAL INVESTOR BASE

Various voting right notifications were issued during the reporting year in accordance with Section 26 (1) of the German Securities Trading Act (WpHG). These notifications were published on the MorphoSys website and can be found under Media and Investors – Stock Information – Recent Voting Rights Notifications.

According to the definition given by the Deutsche Börse, the free float in MorphoSys AG's shares was 99.11% at the end of the reporting year.

## ANNUAL GENERAL MEETING

The Management and Supervisory Boards of MorphoSys AG welcomed shareholders to the Company's 20th Annual General Meeting (AGM) in Munich on May 17, 2018. The shareholders and proxies attending represented more than 60.7% of the common stock of MorphoSys AG (2017: 54.0% of the common stock represented).

All resolution proposals of the management were approved with the required majority of votes. At the close of the 2018 AGM, the terms of office of Supervisory Board members Dr. Gerald Möller and Dr. Marc Cluzel ended. Klaus Kühn resigned from the Supervisory Board for personal reasons at the end of the 2018 AGM. The Annual General Meeting re-elected Dr. Marc Cluzel and newly elected Dr. George Golumbeski and Michael Brosnan to the Company's Supervisory Board. In its constitutive meeting following the AGM, the Supervisory Board elected Dr. Marc Cluzel as its new chairman and Dr. Frank Morich as vice chairman.

## DIVIDEND POLICY

We have not paid any dividends on our ordinary shares since our inception, and we currently intend to retain any future earnings to finance the growth and development of our business. Therefore, we do not anticipate that we will declare or pay any cash dividends in the foreseeable future. Except as required by law, any future determination to pay cash dividends will be at the discretion of our Management Board and Supervisory Board and will be dependent upon our financial condition, results of operations, capital requirements, and other factors our Management Board and Supervisory Board deem relevant.

## INVESTOR RELATIONS ACTIVITIES

At the beginning of December, the Company held an Investor and Analyst Event in New York City dedicated to MOR208, immediately following the 60th ASH conference in San Diego. During this event, the latest L-MIND data were presented and the Company gave an outlook on the planned filing strategy. Following the presentation, participants were given an opportunity to address questions to the management. The event was also webcast, making it accessible to interested parties worldwide. A total of more than 100 investors, analysts and shareholders watched the Management Board's presentations.

MorphoSys also took part in over 20 international investor conferences. Several roadshows were held at various locations in both Europe and the USA. The strongest interest continued to be in the United States where a large number of specialized healthcare investors are located. Following the listing on Nasdaq in April, we estimate that nearly 50% of MorphoSys AG shares are meanwhile held by U.S. institutional investors.

The Management Board also held conference calls in conjunction with the publication of the annual, half-yearly and quarterly results to report past and expected business developments and answer questions from analysts and investors.

The development of our lead product candidate MOR208, the general progress of our proprietary portfolio and the partnered pipeline were the topics in investor discussions.

A total of 14 analysts covered MorphoSys shares at the end of 2018.

**TAB. 10: ANALYST RECOMMENDATIONS (DECEMBER 31, 2018)**

| Buy/Overweight/Market Outperform | Hold/Neutral | Reduce/Underperform |
|---|---|---|
| 7 | 5 | 2 |

Detailed information on MorphoSys shares, financial ratios, the Company's strategic direction and the Group's recent developments can be found on the Company's website (Media and Investors).

### e) Sustainable Business Development

We are aware of our responsibility to present and future generations and see sustainable behavior as a prerequisite for long-term business success. As a biotechnology company conducting both research and drug development, observing the highest ecological, social and ethical standards is a top priority and a key component of our corporate culture. The following section describes our sustainability strategy and the activities carried out during the reporting year that represent non-financial performance indicators. The financial performance indicators are presented in the section "Operating and Financial Review and Prospects." Information on our management structure and corporate governance practices can be found in the Corporate Governance Report.

## SUSTAINABLE CORPORATE MANAGEMENT

Sustainability is a hallmark of our corporate management and plays a major role in the pursuit of corporate goals and in contributing value to society. This applies to the short- and long-term objectives of all levels of management and is reflected in our core task of developing even more effective and safer drugs. To ensure lasting business success, we incorporate environmental and social responsibility into our daily business and base our business model on sustainable growth that protects the interests of our shareholders, creates long-term value and weighs our actions in terms of their impact on the environment, society, patients and employees. Internally, this business model is reflected in a progressive human resources policy that takes employees' needs seriously.

Our long-term and sustainable business success rests on innovative research and development to meet the major challenge of providing comprehensive healthcare in the future. Due to a growing and aging population, biotechnology-derived drugs represent a growing portion of the overall healthcare system. In the opinion of management, all aspects of our current business model support the sustainable investment interests of our shareholders.

A comprehensive risk management system ensures that factors that could threaten sustainable corporate performance are identified early and corrected if necessary. We only accept risk when there is an opportunity to increase our enterprise value. At the same time, great effort is made to systematically identify new opportunities and leverage our business success (more information on risks and opportunities can be found on page 103).

Group-wide compliance with the sustainability strategy is monitored by the entire Management Board, with primary responsibility assigned to the Chief Financial Officer. The sustainability strategy is based on the Company's Credo, which contains the ethical principles forming the foundation of all activities of MorphoSys and its employees. The Credo is developed further by our Code of Conduct. The Compliance Committee consists of six members and is available to employees at all times. The Compliance Officer, who is also a member of the committee, coordinates the elements of MorphoSys's Compliance Management System. More information on this subject can be found on page 141 of the Corporate Governance Report. Employees can ask for advice on all matters concerning compliance and report any suspected violations. If preferred, this may be done on an anonymous basis. Violations are systematically pursued, and appropriate remedial action is taken. No such violations have been reported to date.

Detailed information on the KPIs for sustainable development used by MorphoSys is provided in the section "Strategy and Group Management" (page 43). The following report on the implementation of our corporate strategy and the Company's sustainable business development is based on the recommendations of the German Sustainability Code originally presented by the Council for Sustainable Development in October 2011 and last updated in 2017.

## NON-FINANCIAL PERFORMANCE INDICATORS

### ETHICAL STANDARDS AND COMMUNICATION WITH STAKEHOLDERS

The highest scientific and ethical principles for conducting human clinical trials and animal testing are anchored in our Code of Conduct. Strict compliance with applicable national and international regulations is mandatory for all MorphoSys employees and sub-contractors.

As European and international legislation requires animal testing to determine the toxicity, pharmacokinetics and pharmacodynamics of drug candidates, the biotechnology industry cannot forgo this type of testing. Animal testing for our drug candidates is outsourced to contract research organizations (CROs) as we do not have laboratories suitable for this type of research. As part of our product development activities, we award animal experiments in accordance with the 3Rs principles of animal welfare (Replace, Reduce, Refine) as laid down in national, European and international regulations. We have established a quality assurance system with written standard operating procedures (SOPs) that are continuously updated to ensure that we only work with CROs that comply with local, national and international guidelines and animal welfare regulations. Animal studies are only conducted after approval by the relevant ethics committee and under the supervision of the attending veterinarian.

Contract research organizations cooperating with us must comply with ethical principles and legal regulations for research involving animals and, in case required, have the Good Laboratory Practice (GLP) certification. This is how we ensure we fulfill our moral obligation for the respectful treatment of animals. We also conduct on-site visits and audits of the research institute's study centers that include a review of the staff's skills and training as well as animal welfare.

We observe the ethical principles defined in The Declaration of Helsinki, and follow all applicable international and national laws and guidelines, such as Good Clinical Practice (GCP) guidelines, when conducting clinical trials. The trials are conducted in compliance with the relevant provisions on privacy and confidentiality. Protecting the rights, safety and well-being of all clinical trial participants has the highest priority at MorphoSys. Clinical trials are initiated only after the approval of the relevant independent ethics committee and/or institutional review board. Before participating in a clinical trial, each participant must voluntarily submit an informed consent.

The goal of our business activities is to improve patients' health through our scientific work. We can only achieve this goal if our activities are socially accepted. Achieving this acceptance requires a continuous and open dialog with stakeholders so that we can understand potential concerns with regard to biotechnological approaches and explain our activities and their benefits. To accomplish this, we are active in a variety of ways that range from participation in public information events to active support of the Communication and Public Relations task force of BIO Deutschland e.V., Berlin.

### PROCUREMENT

Our Central Purchasing and Logistics Department is responsible for negotiating and purchasing goods and services. The department is continuing to improve the efficiency of procurement management systems and processes including the introduction of electronic approval processes. Also, during this year, a new ERP system has been developed to address our future needs. For more details, please see section "Information Technology" on page 139.

### ENVIRONMENTAL PROTECTION AND OCCUPATIONAL SAFETY

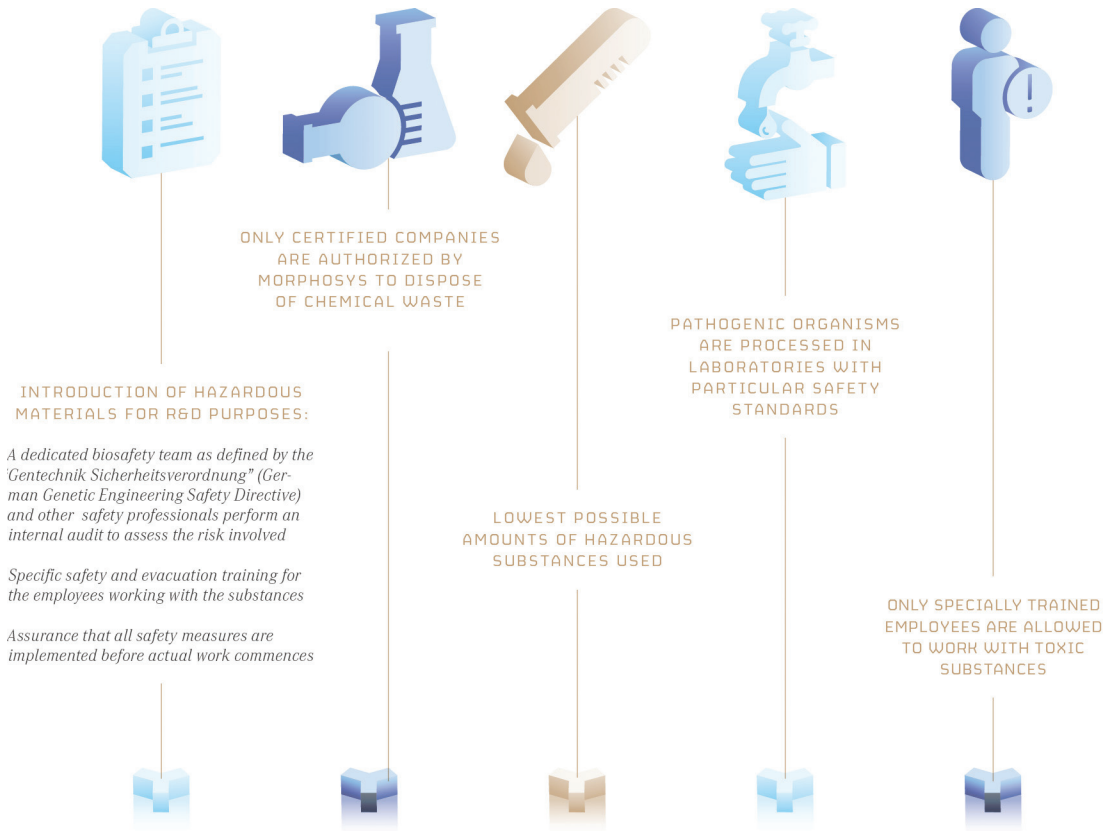
Because the biotechnology industry is subject to stringent regulatory requirements, environmental protection and occupational safety are important tasks for us. Our Technical Operations Department and its subsections monitor our compliance with all relevant requirements. In addition to strict compliance with all legal requirements, we make a tremendous effort to maintain sustainable environmental management and the effective protection of our employees.

We offer employees an extensive range of preventative healthcare options. A sample of these options can be found in the section entitled “Human Resources” (page 102).

With two reportable occupational accidents in 2018, the number of accidents remained at a very low level, placing our ratio of reportable accidents significantly below the average ratio in the German chemical industry (14.6 reportable occupational accidents as defined by the employers’ liability insurance association BG RCI per 1,000 full-time employees in the latest survey conducted in 2017).

We try to minimize the amount of harmful substances used in our laboratories. Only specific employees who are specially trained are allowed to work with toxins. Work involving contagious pathogens can only be carried out in secure laboratories. We only use certified companies to dispose of chemical waste and also refrain from radioactive substances.

**FIG 13: OCCUPATIONAL SAFETY AT MORPHOSYS**




## QUALITY ASSURANCE

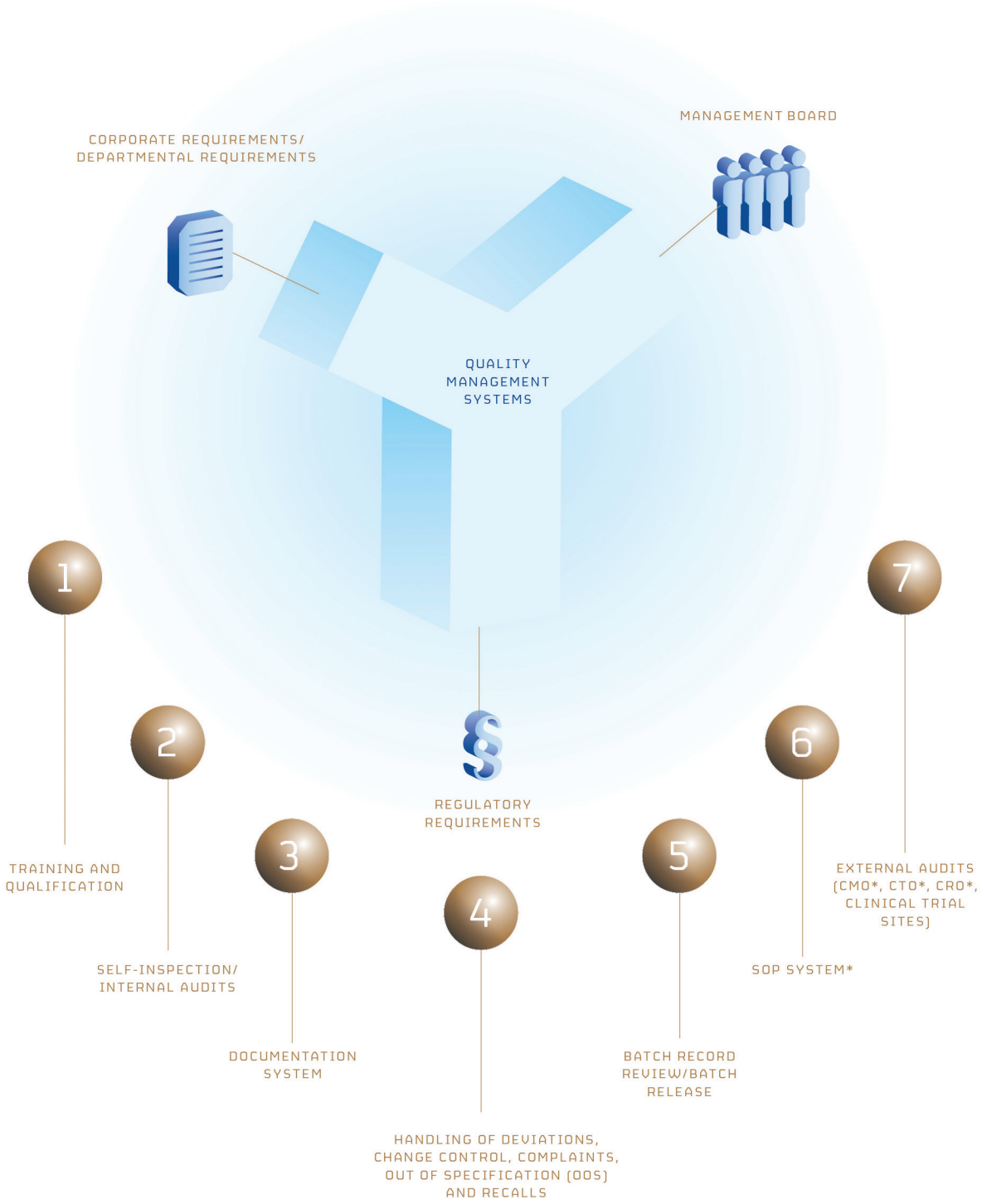
Biopharmaceutical companies bear a special responsibility to comply with the highest quality and safety standards. We follow detailed procedures and stringent rules in drug development to minimize safety risks for patients and ensure the quality of the investigational medicinal products, integrity and reliability of the data generated.

To control and regulate these processes in our own drug development activities, we implemented an integrated quality management system that complies with the applicable principles of Good Manufacturing Practice (GMP),

Good Clinical Practice (GCP), Good Laboratory Practice (GLP) and Good Distribution Praxis (GDP) to ensure that all development activities follow national and international laws, rules and guidelines. Our independent quality assurance department prepares an annual risk-based audit plan enabling an objective auditing of contract research organizations, investigational sites, suppliers and contract manufacturers selected for clinical studies as well as our own departments involved in drug development activities. The Head of Quality Assurance reports to and coordinates activities with the Chief Executive Officer to meet the stringent quality standards, ensure product quality and data integrity as well as the safety of volunteers and patients in clinical trials.

We hold a manufacturing license for the Qualified Person's certification of investigational medicinal products, as well as a certificate from the German authorities of Upper Bavaria confirming the Company's compliance with Good Manufacturing Practice (GMP) standards and guidelines.

**FIG. 14: QUALITY MANAGEMENT SYSTEM AT MORPHOSYS**



## INTELLECTUAL PROPERTY

Proprietary technology and the drug candidates derived therefrom are our most valuable assets. Therefore, it is critical to our success that these assets are protected by appropriate measures such as patents and patent filings. Only through these means can we ensure that these assets are exclusively utilized. It is also the reason our Intellectual Property (IP) Department seeks out the best strategy to protect our products and technologies. The rights of third parties are also actively monitored and respected.

Our core technologies, which include the Ylanthia antibody library and the Slonomics technology amongst others, form our basis for success. Each of these technologies is protected by a number of patent families. Meanwhile, most of these patents have been granted in all of the key regions, including the markets of Europe, the United States and Asia.

The same is true for our development programs. In addition to the patents that protect the drug candidates themselves, other patent applications were filed that cover other aspects of the programs. The relevant patents for our development candidates MOR103/GSK3196165 (out-licensed to GSK) and MOR202 (out-licensed to I-Mab for Greater China) are expected to expire not before 2031 (including the predicted patent term extensions and supplementary protection certificates). The MOR208 program is also protected by various patents. The key patents are scheduled to expire in 2029 (U.S.) and 2027 (Europe), not taking into account the additional protection of up to five years which is available via supplementary protection certificates or patent term extensions. Likewise, the key patent for MOR106 (out-licensed together with Galapagos to Novartis) expires in 2037, not taking into account any potential extensions. For all development programs regulatory exclusivities are available as well.

The programs developed in cooperation with or for partners are also fully secured by patent protection. Our patent department works closely with the relevant partners. The patents covering these drug development programs have durations that significantly exceed those of the underlying technology patents. In addition, we monitor the activities of our competitors and initiate any necessary actions.

For IP developments in the reporting year please see section “Patents” under “Research and Development and Business Performance.”

## HUMAN RESOURCES

We follow a progressive human resources policy for the long-term retention of professionally and personally suitable employees from a variety of fields. In an industry such as ours, where success largely depends on the creativity and commitment of staff, factors such as employee retention and employee satisfaction are crucial for success.

Employees have access to a broad range of in-house and external training programs, advanced education, specialized continuing education and development programs. Employees also can visit or present at industry conferences. We promote not only ongoing professional education but also the personal development of our employees and in some cases even offer support through customized coaching.

We encourage all employees with management responsibility to take part in management seminars created exclusively for us. The training is offered in several modules with themes that build upon one another. The goal is not only to provide theoretical knowledge but also to prepare participants for the special demands placed on our executives.

We actively promoted the professional career paths of specialists and experts once again during the reporting year. The intended goal of this type of career promotion, which is also available to employees without personnel responsibilities, is to continue to maintain flat hierarchies and place traditional management and professional career paths on an equal footing, also in terms of titles and compensation structures.

We offer in-house vocational training to open up promising career prospects, particularly for young people. In awarding apprenticeships, we have been very successful in considering students who are equally suitable but do not have a diploma. On December 31, 2018, we had two trainees in the IT department and six biology laboratory trainees (December 31, 2017: two IT trainees; six biology laboratory trainees).

Our corporate values – Innovation, Collaboration, Courage and Urgency – are the basis of our company culture. They determine how we act and interact. As articulated in our credo, transparent communication between employees is one central aspect of our corporate culture. One example is the employees' use of our intranet to obtain target-group-specific information. We also have a general meeting every three weeks, in which the Management Board presents the latest developments to employees, answers questions and provides an opportunity for employees to present selected projects. Employees' questions and feedback can be taken directly in the meeting or submitted in advance in writing – anonymously if desired.

We maintain a Facebook career page to promote employer branding. The target group is potential applicants who want to learn more about us. The page presents employee profiles and reports on a variety of activities extending beyond the typical workday to give an authentic and modern impression of us.

New employees are helped to become familiar with the Group through extensive onboarding activities. Employees can learn about our processes in one-day orientation seminars with presentations from all operating departments and by participating in laboratory tours. New executives are offered an additional seminar concerning their management duties.

Free athletic and relaxation options, such as soccer, volleyball and basketball, as well as autogenic training and massage for a fee, all work to promote health and socializing among employees of all departments.

Providing feasible concepts for reconciling a professional career with personal life is a strategic success factor for progressive companies. For many years, we have been offering employees a diverse range of options, such as flexible working hours and special part-time employment arrangements. Modern IT equipment also allows employees to work during business trips or from their home office without interruption. We make it easier for employees with families to reenter the workforce and combine work and family life. We cooperate with an external provider offering employees additional services related to care and nursing.

We make every effort to protect employees from workplace hazards and maintain their health through preventative measures. The extremely low number of occupational accidents illustrates the success of our strict monitoring of all occupational protection and safety measures. During the reporting year, there were two reportable occupational accidents. We try to maintain the low number of accidents and the highest level of employee safety and well-being through the help of policies and training from the Department of Health and Occupational Safety and by offering routine medical examinations.

A detailed overview of the Group's headcount development can be found in the section "Operations and Business Environment."

## f) RISK AND OPPORTUNITY REPORT

We operate in an industry characterized by constant change and innovation. The challenges and opportunities in the healthcare sector are influenced by a wide variety of factors. Global demographic changes, medical advances and the desire to increase quality of life provide excellent growth opportunities for the pharmaceutical and biotechnology industries; however, companies must also grapple with growing regulatory requirements in the field of drug development as well as cost pressure on healthcare systems.

We undertake great efforts to identify new opportunities and to leverage our business success to generate a lasting increase in enterprise value. Entrepreneurial success, however, is not achievable without conscious risk-

taking. Through our worldwide operations, we are confronted with a number of risks that could affect our business. Our risk management system identifies these risks, evaluates them and takes suitable action to avert risk and reach our corporate objectives. A periodic strategy review ensures that there is a balance between risk and opportunity. We only assume risk when there is an opportunity to increase our enterprise value.

## RISK MANAGEMENT SYSTEM

The risk management system is an essential element of our corporate governance and ensures we adhere to good corporate governance principles and comply with regulatory requirements.

We have a comprehensive system in place to identify, assess, communicate and deal with our risks. The risk management system identifies risk as early as possible and details possible actions to limit operating losses and avoid risks that could endanger the company. All actions to minimize risk are assigned to risk officers, who are also members of our Senior Management Group.

All of our material risks in the various business segments are assessed using a systematic risk assessment that is carried out twice a year. Risks are assessed by comparing their quantifiable financial impact with their probability of occurrence with and without initiating a risk mitigation process. This method is applied over a 12-month assessment period as well as a period of three years to include our risks related to proprietary development that have longer durations. Additionally, there is long-term strategic risk assessment that spans more than three years (qualitative assessment). An overview of our current risk assessment activities can be found in Tables 11 and 12.

Risk managers enter their risks into an IT platform that makes monitoring, analyzing and documenting risks easier. The risk management system distinguishes risk owners from risk managers. For risks relating to clinical development, the risk owner is the responsible business team head for the respective clinical program. For non-clinical risks, the risk owner is the responsible department head. Employees from the respective area of the risk owner can be risk managers as long as the risks included in the risk management system fall under their area of responsibility. Risk owners and risk managers are required to update their risks and assessments at half-yearly intervals. The process for this is coordinated and led from the Corporate Finance & Corporate Development Department, which is also responsible for monitoring the evaluation process and summarizing the key information. The information is regularly presented to the Management Board which, in turn, presents the results to the Supervisory Board twice a year. The entire evaluation process is based on standardized forms for the evaluations. Risk management and monitoring activities are carried out by the relevant managers. The changes in the risk profile resulting from these activities are recorded at regular intervals. It is also possible to report important risks on an ad hoc basis when they occur outside of the regular intervals. A regular audit by external consultants ensures the ongoing development of the risk management system and that any potential changes in our risk areas are promptly incorporated. The risk and opportunity management system combines a bottom-up approach for recognizing both short- and medium-term risks with a top-down approach that systematically identifies long-term global risks and opportunities. As part of the top-down approach, workshops are held twice per year with selected members of the Senior Management Group. These workshops assess and discuss the long-term risks and opportunities in different areas, including those exceeding a period of three years. The evaluation process is solely qualitative. These risks are listed in Tables 11 and 12.

## PRINCIPLES OF RISK AND OPPORTUNITY MANAGEMENT

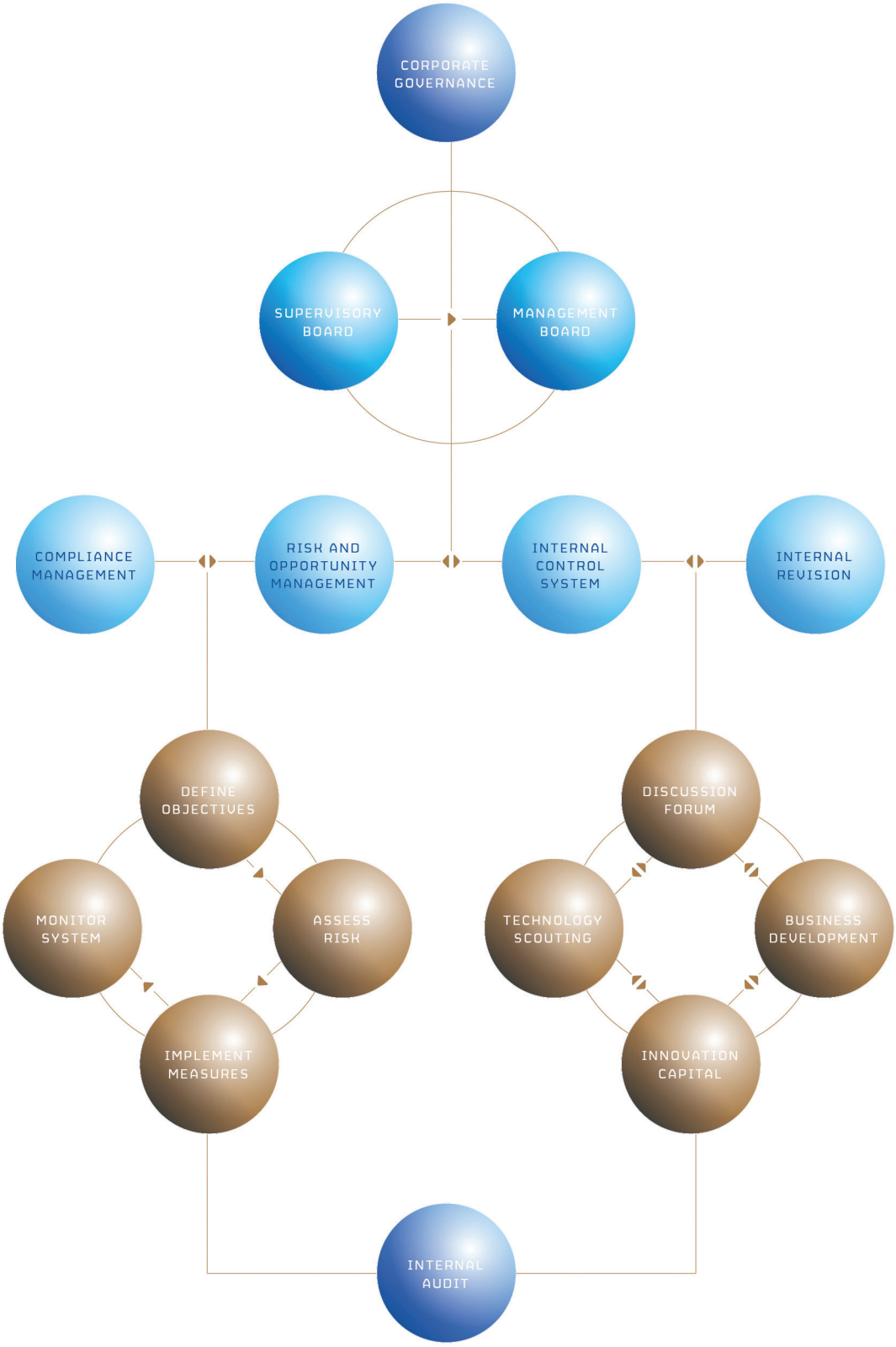
We continually encounter both risks and opportunities. These could have a potential material impact on our net assets and financial position as well as a direct effect on intangible assets, such as our image in the sector or our trademark.

We define risk as an internal or external event that has an immediate impact and includes an assessment of the potential financial impact on our targets. There is a direct relationship between opportunity and risk. Seizing opportunities has a positive influence on our targets, whereas risk emergence has a negative influence.

## RESPONSIBILITIES UNDER THE RISK AND OPPORTUNITY MANAGEMENT SYSTEM

Our Management Board is responsible for the risk and opportunity management system and ensures that all risks and opportunities are evaluated, monitored and presented in their entirety. The Corporate Finance & Corporate Development Department coordinates the risk management process and reports regularly to the Management Board. The Supervisory Board has appointed the Audit Committee to monitor the effectiveness of our risk management system. The Audit Committee periodically reports its findings to the entire Supervisory Board, which is also directly informed by the Management Board twice a year.

**FIG. 15: RISK AND OPPORTUNITY MANAGEMENT SYSTEM AT MORPHOSYS**



## ACCOUNTING-RELATED INTERNAL CONTROL SYSTEM

We employ extensive internal controls, Group-wide reporting guidelines as well as other measures, such as employee training and ongoing professional education with the goal of maintaining accurate bookkeeping and accounting and ensuring reliable financial reporting in the consolidated financial statements and group management report. This essential component of Group accounting consists of preventative, monitoring and detection measures intended to ensure security and control in accounting and operating functions. Detailed information about the internal control system for financial reporting can be found in the Corporate Governance Report.

## RISKS ACCORDING TO RISK MANAGEMENT SYSTEM

### RISK CATEGORIES

As part of its risk assessment, we assign risks to the six categories described below. The assessment of the relevance of the risks is not distinguished according to categories but according to impact and probability of occurrence. Therefore, Tables 11 and 12, which list our biggest risks, do not necessarily include risks from all six categories.

### FINANCIAL RISK

Our financial risk management seeks to limit financial risk and reconciles this risk with the requirements of our business.

Financial risk can arise in relation to licensing agreements, for example when projects (products or technologies) do not materialize, are delayed or are out-licensed under different terms and conditions than originally planned. Risk also arises when revenues do not reach their projected level or when costs are higher than planned due to greater resource requirements. Detailed project preparations, such as those made through in-depth exchanges with internal and external partners and consultants, ensure the optimal starting point early in the process and are important for minimizing risk. Our financial risk related to proprietary programs was reduced in July 2018 when we, together with Galapagos NV, entered into a worldwide, exclusive agreement with Novartis Pharma AG covering the development and commercialization of our joint program MOR106. The financial risk relating to the fully proprietary program MOR208 remains entirely with us. We retain some risk with respect to the clinical development of programs introduced into partnerships; for example MOR210. In 2018 we partnered this program with I-Mab for China, Taiwan, Hong Kong, Macao and South Korea, but retain responsibility for the rest of the world ourselves. The early termination of development partnerships may force us to bear future development costs alone and have a major impact on our statement of profit or loss and financial planning. Through our successful Nasdaq IPO in April 2018, we strengthened our financial position.

Continuing economic difficulties in Europe indicate that potential bank insolvencies still pose a financial risk. For this reason, we continue to invest only in funds and bank instruments deemed safe – to the extent this is possible and can be estimated – and that have a high rating and/or are secured by a strong partner. We limit our dependence on individual financial institutions by diversifying and/or investing in lower risk money market funds. However, a strategy that eliminates all risks of bank insolvency would be too costly and impractical. For example, German government bonds are a very secure form of investment but currently trade with negative interest rates. A further risk is the receipt of adequate interest on financial investments, particularly in light of today's negative interest rates. It is currently very difficult for us to invest within the scope of our policies and still avoid negative interest rates. We invest when possible in instruments that yield positive interest rates. However, there is no guarantee that positive, safe, interest-bearing investments will always be available.

In the Partnered Discovery segment, there is a financial risk associated with royalties on Tremfya® product sales. Revenues generated by our partner Janssen from the drug, which was approved in 2017, are difficult to predict and may lead to deviations from the budgeted revenues.

We plan to continue to invest a significant portion of our funds in the development of our product candidates. This includes identifying target molecules and drug candidates, conducting preclinical and clinical studies, producing clinical material, supporting partners and co-developing programs. Current financial resources and expected revenues are expected to be sufficient to meet our current and short-term capital needs. This does not guarantee, however, that sufficient funds will be available over the long term at all times.

## OPERATIONAL RISK

Operational risk includes risks related to the discovery and development of proprietary drug candidates.

The termination of a clinical trial prior to out-licensing to partners – which does not necessarily imply the failure of an entire program – can occur when the trial does not produce the expected results, shows unexpected adverse side effects or the data are compiled incorrectly. Clinical trial design and drafts of development plans are always completed with the utmost care. This gives the trials the best opportunity to show relevant data in clinical testing and convince regulatory agencies and potential partners of the drug candidate's potential. External experts also contribute to our existing internal know-how. Special steering committees and panels are formed to monitor the progress of clinical programs.

Any changes with respect to clinical trials such as the trial's design, the speed at which patients can be recruited or upcoming alternative therapies may lead to a delay in development and, as a result, have a negative impact on the trial's economic feasibility and potential.

There is also a risk associated with proprietary programs if partnerships fail or are delayed.

## STRATEGIC RISK

Access to sufficient financing options also poses a strategic risk for us. Following our decision to develop our proprietary portfolio in-house, the financing of research and development is now a key focus. Risks in this respect can arise from a lack of access to capital. We established an in-depth budget process to mitigate these risks. We also employ various departments and external consultants to ensure the smooth execution of capital market transactions.

A further strategic risk is the danger that a development program introduced into a partnership may fail. Partnerships can be terminated prematurely, forcing us to search for new development partners or bear the substantial cost of further development alone. This may result in a delay or even the termination of the development of individual candidates and could lead to additional costs and a potential long-term loss of revenues for us due to delayed market entry.

Another strategic risk is that preliminary data from clinical trials may lead to the trial's termination or a change in the trial's design.

With respect to the development and potential approval of MOR208, we are currently preparing a submission of a regulatory filing with the FDA based on the single-arm L-MIND trial. There may be a strategic risk that the regulatory authorities do not accept a filing and/or grant approval based on single-arm data for MOR208 plus lenalidomide.

## EXTERNAL RISKS

We face external risks with respect to intellectual property, among others. The patent protection of our proprietary technologies and compounds is especially important. To minimize risks in this area, we keep a vigilant eye on published patents and patent applications and analyze the corresponding results. We also develop strategies to ensure that the patents or patent applications of others do not limit our ability to pursue our own

activities. Through the years, we have seen increasing success with this strategy and have created ample leeway for our proprietary technology platforms and products for many years to come. Risks can also arise through the enforcement of our intellectual property rights vis-à -vis third parties. The respective proceedings can be costly and mobilize significant resources. There is also the risk that a third party files a counter-claim against us. External risks may also arise as a result of changes in the legal framework. This risk is minimized through continued training of the relevant staff and discussions with external experts. It is also conceivable that competitors might challenge our patents or infringe on our patents or patent families, which in turn could lead us to take legal action against our competitors. Such procedures, particularly when they take place in the U.S., are costly and represent a significant financial risk.

As an internationally operating biotechnology company with numerous partnerships and an in-house research and development department for developing drug candidates, we are subject to a number of regulatory and legal risks. These risks include those related to patent, competition, tax and antitrust law, potential liability claims from existing partnerships and environmental protection. The Regulatory Affairs department is also affected by this risk in terms of the feedback it receives from regulators on study design. Future legal proceedings are conceivable and cannot be anticipated. Therefore, we cannot rule out that we may incur expenses for legal or regulatory judgments or settlements that are not or cannot be partially or fully covered by insurance and may have a significant impact on our business and results.

### ORGANIZATIONAL RISK

Organizational risks arise, for example, with respect to setting up commercial structures and the related costs. For us, this means that processes and procedures need to be adapted accordingly. In September 2017, we established a “Global Commercial” department, which works with external consultants to set up commercial structures in the headquarters and supports other functions to get ready for commercialization. In July 2018, we opened a 100% affiliate in the U.S., MorphoSys US Inc., which will be the first commercial operation. Highly experienced employees are being hired to ensure thorough preparation for launch.

Risk also arises from missing or delayed information within the organization on patent issues.

### COMPLIANCE RISK

Compliance risks can arise when quality standards are not met, or business processes are not conducted properly from a legal standpoint. To counter these risks, we are committed to having our business operations meet the highest quality standards as set out in the Sustainability Report. Carrying out a compliance risk analysis is a central tool of the Compliance Management System.

Specific risks can arise, for example, when the internal quality management system does not meet the legal requirements or when there is no internal system for detecting quality problems. If the internal controls are not able to detect violations of Good Manufacturing Practice (GMP), Good Clinical Practice (GCP), Good Laboratory Practice (GLP) or Good Distribution Praxis (GDP) then this also would represent a compliance risk. To minimize risk, the internal quality management system is also regularly audited by external experts and subjected to recurring audits by an internal, independent quality assurance department.

Inadequate or late financial communication can lead to fines or even lawsuits. Annual General Meetings conducted incorrectly may lead to legal disputes with shareholders resulting in significant costs from attempts to prevent either a challenge to or repeat of the Annual General Meeting. Pending decisions for corporate actions, such as capital increases, could also be compromised. To minimize these risks, the preparation and execution of the Annual General Meeting and all related documents and processes are carefully reviewed and monitored by the relevant internal departments, as well as by external lawyers and auditors when it comes to the annual financial statements.

None of the Top 10 Risks listed in Tables 11 and 12 belonged to this risk category in the reporting period.

## THE MANAGEMENT BOARD'S EVALUATION OF THE OVERALL RISK SITUATION IN OUR GROUP

Our Management Board considers the overall risk to be manageable and trusts in the effectiveness of the risk management system in relation to changes in the environment and the needs of the ongoing business. It is the Management Board's view that our continued existence is not jeopardized. This assessment applies to us as a whole as well as to each Group company. This conclusion is based on several factors that are summarized below:

- We have an exceptionally high equity ratio.
- The Management Board firmly believes that we are well positioned to cope with any adverse events that may occur.
- We control a comprehensive portfolio of preclinical and clinical programs in partnerships with a number of large pharmaceutical companies and have a strong foundation of technologies for expanding our proprietary portfolio.

Despite these factors, it is impossible to rule out, control or influence risk in its entirety.

## OPPORTUNITIES

Cutting-edge antibody technologies, excellent know-how and a broad portfolio of validated clinical programs have made us one of the world's leading biotechnology companies in the field of therapeutic antibodies. This therapeutic class is now one of the most successful in the industry, and there is an impressive number of pharmaceutical and biotechnology companies in the field of antibodies that could potentially become customers or partners for our products and technologies. Based on this fact and our extensive, long-term technological and product development expertise, we have identified a number of future growth opportunities.

Our technologies for developing and optimizing therapeutic antibody candidates have distinct advantages that can lead to higher success rates and shorter development times in the drug development process. The transfer and application of our core capabilities – even those outside of the field of antibodies – opens up new opportunities for us because many classes of compounds have similar molecular structures.

## OPPORTUNITY MANAGEMENT SYSTEM

The opportunity management system is an important component of our corporate management and is used to identify opportunities as early as possible and generate added value for us.

Opportunity management is based on the following pillars:

- a routine discussion forum involving the Management Board and selected members of the Senior Management Group;
- our business development activities;
- a technology scouting team;
- a compound scouting team; and
- an in-house suggestion scheme, with appropriate incentive systems, for new scientific ideas.

Committees discuss specific opportunities and decide what action should be taken to exploit these opportunities. The meetings and their outcomes are recorded in detail, and any subsequent action is reviewed and monitored. Our Business Development Team takes part in numerous conferences and in the process identifies different opportunities that can enhance our growth. These opportunities are presented and considered by the committee by means of an evaluation process. The technology scouting team searches specifically for innovative

technologies that can generate synergies with our existing technology platforms and could be used to source new therapeutic molecules. The compound scouting team searches specifically for compounds that can add to our proprietary pipeline or future sales force. These outcomes are also discussed and evaluated in interdepartmental committees. A proven process for evaluating opportunities gives us a qualitative and replicable evaluation.

Our key opportunities are described in Table 13 (qualitative evaluation).

## GENERAL STATEMENT ON OPPORTUNITIES

Increased life expectancy in industrialized countries and rising incomes and living standards in emerging countries are expected to drive the demand for more innovative treatment options and advanced technologies. Scientific and medical progress has led to a better understanding of the biological process of disease and paves the way for new therapeutic approaches. Innovative therapies, such as fully human antibodies, have reached market maturity in recent years and have led to the development of commercially successful medical products. Therapeutic compounds based on proteins – also referred to as "biologics" – are less subject to generic competition than chemically produced molecules because the production of biological compounds is far more complex. The sharp rise in both the demand for antibodies and the interest in this class of drug candidates can be seen by the acquisitions and significant licensing agreements made over the past two to three years.

## MARKET OPPORTUNITIES

We believe our antibody platforms HuCAL, Ylanthia, Slonomics, the HTH peptide technology and the in-licensed lanthipeptide technology can all be used to develop products addressing significant unmet medical needs.

## THERAPEUTIC ANTIBODIES – PROPRIETARY DEVELOPMENT

It is reasonable to assume that the pharmaceutical industry will continue or even increase its in-licensing of drugs to refill its pipelines and replace key products and blockbusters that have lost patent protection. Our most advanced compounds MOR103/GSK3196165, MOR106, MOR202 and MOR208 place us in an excellent position to capitalize on the needs of pharmaceutical companies. Our collaborations with GSK (for MOR103/GSK3196165), with I-Mab (MOR202 and MOR210) and with Novartis (MOR106) exemplify this point.

We are continuously enhancing our proprietary portfolio and will continue to advance it by adding clinical trials with our key drug candidates in new disease areas and by adding additional programs. In this way, we may take advantage of existing and future opportunities for co-development or partnerships. We are also looking for more opportunities to in-license promising drug candidates.

The drug candidate MOR208 may provide us with our first opportunity to independently market a drug.

## THERAPEUTIC ANTIBODIES – PARTNERED DEVELOPMENT

By developing drugs with a number of partners, we have been able to spread the risk that is inevitably linked with drug development. With 103 individual therapeutic antibodies currently in partnered development programs, it is becoming more likely that we will have an opportunity to participate financially in marketed drugs. Since the first regulatory approval of Tremfya® by the U.S. FDA in mid-2017, our licensee Janssen reported in October that new Tremfya® (guselkumab) 3-year data show stably maintained rates of skin clearance in patients with moderate to severe plaque psoriasis. In December, Janssen reported that results from the ECLIPSE study demonstrated that Tremfya® was superior to Cosentyx® (secukinumab) in treating adults with moderate to severe plaque psoriasis for the primary endpoint of a PASI 90 response at week 48.

Tremfya® has received further regulatory approval in a number of territories worldwide, including Canada, the European Union, Brazil, Japan, Australia and South Korea to treat patients suffering from moderate-to-severe plaque psoriasis and in Japan additionally for the treatment of psoriatic arthritis, pustular psoriasis and erythrodermic psoriasis. Moreover, Tremfya® is being investigated in clinical studies including two phase 3 trials in psoriatic arthritis and a phase 2/3 clinical study program in Crohn's disease. Janssen also initiated a phase 2 study (NOVA) to evaluate guselkumab in hidradenitis suppurativa.

In June 2018, we announced new phase 3 clinical trials by our partner Roche with gantenerumab in early Alzheimer's disease.

## TECHNOLOGY DEVELOPMENT

We continue to invest in our existing and new technologies to defend our technological leadership. One example is our new antibody platform Ylanthia that enjoys much longer patent protection than its predecessor HuCAL.

This type of technological advance can help us to increase not only the speed but also the success rate of our partnered and proprietary drug development programs. New technology modules that enable the production of antibodies against novel classes of target molecules can also provide access to new disease areas in which antibody-based treatments are underrepresented.

In September 2018, we announced an expansion of the existing strategic dermatology alliance with LEO Pharma A/S. The objective of the alliance is to identify novel, peptide-derived therapeutics for unmet medical needs. Under the terms of the agreement, LEO Pharma will select targets against which MorphoSys will identify lead molecules using its proprietary peptide technology platform. MorphoSys has an exclusive option to secure worldwide rights to any drugs arising from the collaboration in the field of oncology.

Technology development is carried out by a team of scientists whose focus is the further development of our technologies. We not only develop technology internally but also use external resources to enhance our own activities. A good example of this is our acquisition of Lanthio Pharma, a Dutch company developing lanthipeptides.

## ACQUISITION OPPORTUNITIES

In the past, we have proven our ability to acquire compounds and technologies that accelerate our growth. Potential acquisition candidates are also systematically presented, discussed and evaluated during the routine meetings described above between the Management Board and selected members of the Senior Management Group. After these meetings, promising candidates are reviewed in terms of their strategic synergies and evaluated by internal specialist committees. Protocols are completed on all candidates and evaluations are systematically archived for follow-up and monitoring. A proprietary database helps administer this information and keep it available.

## FINANCIAL OPPORTUNITIES

Exchange rate and interest rate developments can positively or negatively affect our financial results. Interest rate and financial market developments are continuously monitored to promptly identify and take advantage of opportunities.

**TAB. 11: SUMMARY OF OUR KEY SHORT- AND MEDIUM-TERM RISKS**

| | Risk category | 3-year assessment |
|---|---|---|
| **Proprietary Development segment** | | |
| Risks related to building a marketing structure | Financial | ●● Moderate |
| Failure of one or more proprietary clinical programs | Financial, strategic, operational | ●● Moderate |
| Risks related to regulatory approval process | Financial, strategic | ●● Moderate |
| Increase in development costs | Strategic | ●● Moderate |
| **Outside of the Proprietary Development segment** | | |
| Failure to reach revenue targets in Partnered Discovery programs | Financial | ●● Moderate |

| | Risk category | 1-year assessment |
|---|---|---|
| **Proprietary Development segment** | | |
| Failure of one or more proprietary clinical programs | Operational | ●●● High |
| Risks related to regulatory approval process | Strategic | ●● Moderate |
| Delay in the development of one or more proprietary clinical programs and/or higher development costs | Financial, operational, organizational | ●● Moderate |
| Risks related to technology access | Strategic | ● Low |
| Patent-related risks | External | ● Low |
| **Outside of the Proprietary Development segment** | | |
| Failure to reach revenue targets in Partnered Discovery programs | Financial | ●● Moderate |
| Risks from bank insolvencies | Financial | ● Low |

Legend

| | | |
|---|---|---|
| ● | Low risk: | low probability of occurrence, low impact |
| ●● | Moderate risk: | moderate probability of occurrence, moderate impact |
| ●●● | High risk: | moderate probability of occurrence, moderate to strong impact |
| ●●●● | Catastrophic risk: | high probability of occurrence, severe impact |

**TAB. 12: SUMMARY OF OUR KEY LONG-TERM RISKS**

| Segment | Risk | Order of importance [1] |
|---|---|---|
| Proprietary Development | Failure to get approval or significant delay of approval of lead proprietary program | 1 |
| Proprietary Development | Failure to build a commercial structure in the U.S. | 2 |
| Proprietary Development | Negative study outcome of lead proprietary program | 3 |
| Partnered Discovery | Discontinuation, delay or less revenue than expected from late-stage partnered compounds | 4 |
| Proprietary Development | Termination of earlier stage proprietary programs | 5 |

[1] Declining importance of risk from 1 to 5, whereby 1 represents the most important risk.

**TAB. 13: SUMMARY OF OUR KEY OPPORTUNITIES**

| Segment | Opportunity | Order of importance [1] |
|---|---|---|
| Proprietary Development | Potential FDA approval for MOR208 based on L-MIND study in r/r DLBCL and successful commercialization of the drug | 1 |
| Proprietary Development | Potential positive outcome in CD38 patent infringement lawsuit [2] | 2 |
| Proprietary Development | MOR202 development in autoimmune disease | 3 |

[1] Declining importance of opportunity from 1 to 3, whereby 1 represents the greatest opportunity.

[2] The assessment of opportunities is based on the evaluation of the opportunity management system in the reporting year. Due to the settlement in the patent lawsuit with Janssen Biotech and Genmab A/S as of January 31, 2019, this is no longer an opportunity for MorphoSys and therefore it will not be evaluated in the opportunity management system any more.

### g) Statement on Corporate Governance, Group Statement on Corporate Governance and Corporate Governance Report

The Statement on Corporate Governance, the Group Statement on Corporate Governance and the Corporate Governance Report are available on our website under Media and Investors – Corporate Governance.

## STATEMENT ON CORPORATE GOVERNANCE UNDER SECTION 289F HGB AND GROUP STATEMENT ON CORPORATE GOVERNANCE UNDER SECTION 315D HGB FOR THE 2018 FINANCIAL YEAR

In the Statement on Corporate Governance under Section 289f HGB and the Group Statement on Corporate Governance under Section 315d HGB, the Management Board and the Supervisory Board provide information on the main elements of our corporate governance. In addition to the annual Declaration of Conformity in accordance with Section 161 of the Stock Corporation Act (AktG), the Statement on Corporate Governance and the Group Statement on Corporate Governance also include relevant information on corporate governance practices and other aspects of corporate governance, including a description of the working practices of the Management Board and Supervisory Board.

## DECLARATION OF CONFORMITY WITH THE GERMAN CORPORATE GOVERNANCE CODE (THE "CODE") OF THE MANAGEMENT BOARD AND SUPERVISORY BOARD OF MORPHOSYS AG

The Management Board and Supervisory Board of MorphoSys AG declare the following under Section 161 of the German Stock Corporation Act:

1. Since the last Declaration of Conformity on December 1, 2017, MorphoSys has complied with the recommendations of the "Government Commission on the German Corporate Governance Code" in the version from February 7, 2017 with the following exception:

   There is no cap on the overall or individual variable remuneration components of Management Board members' remuneration (see Item 4.2.3 (2) sentence 6 of the Code). Based on the Supervisory Board's existing limitations for the Management Board's variable remuneration components and their annual allocation, the Supervisory Board does not believe that an additional cap is required.

2. MorphoSys will continue to comply with the recommendations of the "Government Commission on the German Corporate Governance Code" in the version dated February 7, 2017 with the exception described under Item 1.

Planegg, November 30, 2018

MorphoSys AG

On behalf of the Management Board:
Dr. Simon Moroney
Chief Executive Officer

On behalf of the Supervisory Board:
Dr. Marc Cluzel
Chairman of the Supervisory Board

## RELEVANT INFORMATION ON CORPORATE GOVERNANCE PRACTICES

We ensure compliance with laws and rules of conduct through the Group-wide enforcement of the following documents: the Code of Conduct, the Compliance Management Handbook and additional internal policies and guidelines.

Our Code of Conduct sets out the fundamental principles and key policies and practices for business behavior. The Code is a valuable tool for employees and executives, particularly in business, legal and ethical conflict situations. It reinforces our principles of transparent and sound management and fosters trust from the public, business partners, employees and financial markets, and the compliance with the Code of Conduct is carefully monitored. The Group-wide application of the Code is overseen by the Compliance Committee, and the Code itself is regularly reviewed and updated. The Code of Conduct is being distributed to each new employee and can be downloaded from our website under Media and Investors – Corporate Governance.

The Compliance Handbook describes our Compliance Management System (CMS) and is intended to ensure compliance with all legal regulations as well as high ethical standards that apply to both the management and all employees. The Management Board has overall responsibility for the Compliance Management System and is required to report regularly to the Audit Committee and the Supervisory Board. In carrying out its compliance responsibility, the Management Board has assigned the relevant tasks to various functions at MorphoSys.

The Compliance Officer ensures the exchange of information between the internal compliance-relevant functions. The Compliance Officer monitors our existing CMS and upgrades it based on decisions taken by the Management Board and Compliance Committee. The Compliance Officer is the first point of contact for each employee for all compliance-related issues.

The Compliance Committee includes representatives from different functions and meets quarterly. The Compliance Committee supports the Compliance Officer in the implementation and monitoring of the CMS. The Compliance Committee is particularly responsible for the identification and discussion of all compliance-relevant issues and thus makes it possible for the Compliance Officer as well as the other members of the Compliance Committee to periodically verify our compliance status and, if necessary, update the CMS.

More information on our Compliance Management System can be found in the Corporate Governance Report.

## COMPOSITION OF THE MANAGEMENT BOARD AND SUPERVISORY BOARD

### MANAGEMENT BOARD

The Management Board of the Company consists of a Chief Executive Officer and three other members. A schedule of responsibilities currently defines the different areas of responsibility as follows:

- Dr. Simon Moroney, Chief Executive Officer: Strategy and Planning, Compliance & Quality Assurance, Internal Audit, Human Resources, Business Development & Portfolio Management, Legal, Commercial Planning, the coordination of individual areas of the Management Board, representation of the Management Board vis-à-vis the Supervisory Board
- Jens Holstein, Chief Financial Officer: Accounting & Tax, Controlling, Corporate Finance & Corporate Development, IT, Technical Operations, Central Purchasing & Logistics, Corporate Communications & Investor Relations, Environmental Social Governance (ESG)
- Dr. Markus Enzelberger, Chief Scientific Officer: Discovery Alliances & Technologies, CMC & Protein Sciences, Alliance Management, Supply Chain, Intellectual Property, Lanthio Pharma
- Dr. Malte Peters, Chief Development Officer: Preclinical Research, Project Management, Clinical Development, Clinical Operations, Drug Safety & Pharmacovigilance, Regulatory Affairs

## SUPERVISORY BOARD

As of December 31, 2018, our Supervisory Board consisted of six members who oversee and advise the Management Board. The current Supervisory Board consists of professionally qualified members who represent our shareholders. The Chairman of the Supervisory Board (Dr. Gerald Möller until May 17, 2018 and Dr. Marc Cluzel since May 17, 2018), coordinates the Board's activities, chairs the Supervisory Board meetings and represents the interests of the Supervisory Board externally. All Supervisory Board members are independent, as defined in the German Corporate Governance Code and the Nasdaq Listing Rules, and have many years of experience in the biotechnology and pharmaceutical industries. The Chairman of the Supervisory Board is not a former member of our Management Board. The members of the Supervisory Board and its committees are listed in the table below.

### TAB. 14: COMPOSITION OF THE SUPERVISORY BOARD UNTIL TERMINATION OF THE 2018 ANNUAL GENERAL MEETING

| Name | Position | Initial Appointment | End of Term | Audit Committee | Remuneration and Nomination Committee | Science and Technology Committee |
|---|---|---|---|---|---|---|
| Dr. Gerald Möller | Chairman | 1999 | 2018 | | Chairperson | |
| Dr. Frank Morich | Deputy Chairman | 2015 | 2020 | | | Member |
| Krisja Vermeylen | Member | 2017 | 2019 | Member | Member | |
| Klaus Kühn | Member | 2015 | 2020 | Chairperson | | |
| Dr. Marc Cluzel | Member | 2012 | 2018 | | Member | Chairperson |
| Wendy Johnson | Member | 2015 | 2020 | Member | | Member |

Independent financial expert

### TAB. 15: COMPOSITION OF THE SUPERVISORY BOARD SINCE TERMINATION OF THE 2018 ANNUAL GENERAL MEETING

| Name | Position | Initial Appointment | End of Term | Audit Committee | Remuneration and Nomination Committee | Science and Technology Committee |
|---|---|---|---|---|---|---|
| Dr. Marc Cluzel | Chairman | 2012 | 2021 | | Chairperson | |
| Dr. Frank Morich | Deputy Chairman | 2015 | 2020 | | Member | Member |
| Krisja Vermeylen | Member | 2017 | 2019 | Member | Member | |
| Michael Brosnan | Member | 2018 | 2020 | Chairperson | | |
| Dr. George Golumbeski | Member | 2018 | 2020 | | | Chairperson |
| Wendy Johnson | Member | 2015 | 2020 | Member | | Member |

Independent financial expert

## WORKING PRACTICES OF THE MANAGEMENT BOARD AND SUPERVISORY BOARD

To ensure good corporate governance, a guiding principle of the cooperation between our Management Board and Supervisory Board is the open, comprehensive and regular communication of information. The dual board system prescribed by the German Stock Corporation Act clearly differentiates between a company's management and supervision. The responsibility of both boards is clearly stipulated by law and by the boards' bylaws and Articles of Association. The boards work closely together to make decisions and take actions for our benefit. Their stated objective is to sustainably increase our value.

Management Board members each have their own area of responsibility as defined in the schedule of responsibilities. They regularly report to their Management Board colleagues, their cooperation being governed

by the bylaws. The Supervisory Board ratifies both the schedule of responsibilities and the bylaws. Management Board meetings are typically held weekly and are chaired by the Chief Executive Officer. During these meetings, resolutions are passed concerning dealings and transactions that, under the bylaws, require the approval of the entire Management Board. At least half of the Management Board's members must be present to pass a resolution. Management Board resolutions are passed by a simple majority and, in the event of a tied vote, the Chief Executive Officer's vote decides. For material events, each Management Board or Supervisory Board member can call an extraordinary meeting of the entire Management Board. Management Board resolutions can also be passed outside of meetings by an agreement made orally, by telephone or in writing (also by e-mail). Minutes are taken of each meeting of the full Management Board, are submitted for approval to the full Management Board and for signature by the Chief Executive Officer at the following meeting.

In addition to the regularly scheduled meetings, Management Board strategy workshops are also held for developing and prioritizing the Group-wide strategic objectives.

The Management Board promptly and comprehensively informs the Supervisory Board in writing and at Supervisory Board meetings about planning, business development, the Group's position, risk management and other compliance issues. Extraordinary meetings of the Supervisory Board are also called for material events. The Management Board involves the Supervisory Board in the strategy, planning and all fundamental Company issues. In addition to regular Supervisory Board meetings, a strategy meeting takes place between the Management Board and Supervisory Board once annually to discuss our strategic direction. The Management Board's bylaws specify that material business transactions require the approval of the Supervisory Board. Detailed information on the cooperation of the Management Board and Supervisory Board and important items of discussion during the 2018 financial year can be found in the Report of the Supervisory Board.

The Supervisory Board holds a minimum of two meetings per calendar half-year and at least four meetings per full calendar year. The Supervisory Board has supplemented the Articles of Association with bylaws that apply to its duties. In accordance with these bylaws, the Chairperson of the Supervisory Board coordinates the activities of the Supervisory Board, chairs the Supervisory Board meetings and represents the interests of the Supervisory Board externally. The Supervisory Board typically passes its resolutions in meetings, but resolutions may also be passed outside of meetings in writing (also by e-mail), by telephone or video conference.

The Supervisory Board has a quorum when at least two-thirds of its members (including either the Chairperson or Deputy Chairperson of the Supervisory Board) take part in the vote. Resolutions of the Supervisory Board are generally passed with a simple majority unless the law prescribes otherwise. In the event of a tied vote, the vote of the Chairperson of the Supervisory Board is decisive.

Minutes are completed for Supervisory Board meetings and resolutions passed outside of meetings. A copy of the Supervisory Board's minutes is made available to all Supervisory Board members. The Supervisory Board conducts an efficiency evaluation regularly in accordance with the recommendation in Item 5.6 of the Code.

## COMPOSITION AND WORKING PRACTICES OF THE MANAGEMENT BOARD AND SUPERVISORY BOARD COMMITTEES

The Management Board has not formed any committees.

The Supervisory Board has three committees: the Audit Committee, the Remuneration and Nomination Committee and the Science and Technology Committee. The members of the three committees formed by the Supervisory Board are professionally qualified.

## TAB. 16: PARTICIPATION OF SUPERVISORY BOARD MEMBERS

### SUPERVISORY BOARD MEETINGS

| Name | by phone 01/16 2018 | 03/09 2018 | 05/16 2018 | 05/17 2018 | by phone 06/24 2018 | 07/26 2018 | 07/27 2018 | 10/26 2018 | 12/12 2018 |
|---|---|---|---|---|---|---|---|---|---|
| Dr. Gerald Möller [1)] | X | X | X | | | | | | |
| Dr. Marc Cluzel | X | X | X | X | X | X | X | X | X |
| Wendy Johnson | X | X | X | X | X | X | X | X | X |
| Klaus Kühn [1)] | X | X | X | | | | | | |
| Dr. Frank Morich | X | X | X | X | X | X | X | X | X |
| Krisja Vermeylen | X | X | X | X | X | X | X | X | X |
| Dr. George Golumbeski [2)] | | | | X | X | X | X | X | X |
| Michael Brosnan [2)] | | | | | X | X | X | X | X |

1 Supervisory Board member until termination of the 2018 Annual General Meeting.
2 Supervisory Board member since termination of the 2018 Annual General Meeting.

### MEETINGS OF THE AUDIT COMMITTEE

| Name | 03/08/2018 | by phone 04/26/2018 | 07/25/2018 | 10/26/2018 | 12/12/2018 |
|---|---|---|---|---|---|
| Wendy Johnson | X | X | X | X | X |
| Klaus Kühn [1)] | X | X | | | |
| Krisja Vermeylen | X | X | X | X | X |
| Michael Brosnnan [2)] | | | X | X | X |

1 Supervisory Board member until termination of the 2018 Annual General Meeting.
2 Supervisory Board member since termination of the 2018 Annual General Meeting.

### MEETINGS OF THE REMUNERATION AND NOMINATION COMMITTEE

| Name | by phone 01/16/2018 | by phone 03/02/2018 | by phone 05/07/2018 | by phone 06/08/2018 | by phone 10/10/2018 |
|---|---|---|---|---|---|
| Dr. Gerald Möller [1)] | X | X | X | | |
| Dr. Marc Cluzel | X | X | X | X | X |
| Krisja Vermeylen | X | X | X | X | X |
| Frank Morich | | | | X | X |

1 Supervisory Board member until termination of the 2018 Annual General Meeting.

### MEETINGS OF THE SCIENCE AND TECHNOLOGY COMMITTEE

| Name | 03/08/2018 | 05/16/2018 | 06/18 & 19/2018 | 07/25/2018 | 10/26/2018 | 12/12/2018 |
|---|---|---|---|---|---|---|
| Dr. Marc Cluzel | X | X | | | | |
| Wendy Johnson | X | X | | X | X | X |
| Dr. Frank Morich | X | X | | X | X | X |
| Dr. George Golumbeski [1)] | | | X | by phone | X | X |

1 Supervisory Board member since termination of the 2018 Annual General Meeting.

## AUDIT COMMITTEE

The main task of the Audit Committee is to support the Supervisory Board in fulfilling its supervisory duties with respect to the accuracy of the annual and consolidated financial statements, the activities of the auditor and internal control functions, such as risk management, compliance and internal auditing. The Audit Committee submits a recommendation to the Supervisory Board for the election at the Annual General Meeting of an independent auditor. The members of the Audit Committee until May 17, 2018 were Klaus Kühn (Chairperson), Wendy Johnson and Krisja Vermeylen. The members of the Audit Committee since May 17, 2018 are Michael Brosnan (Chairperson), Wendy Johnson and Krisja Vermeylen. Michael Brosnan currently fulfills the prerequisite of an independent financial expert.

## REMUNERATION AND NOMINATION COMMITTEE

The Remuneration and Nomination Committee is responsible for preparing and reviewing the Management Board's compensation system annually before its final approval. When necessary, the Committee searches for suitable candidates to appoint to the Management Board and Supervisory Board and submits appointment proposals to the Supervisory Board. The Committee also prepares the contracts made with Management Board members. The members of the Remuneration and Nomination Committee until May 17, 2018 were Dr. Gerald Möller (Chairperson), Dr. Marc Cluzel and Krisja Vermeylen. The members of the Remuneration and Nomination Committee since May 17, 2018 are Krisja Vermeylen (Chairperson), Dr. Marc Cluzel and Frank Morich.

## SCIENCE AND TECHNOLOGY COMMITTEE

The Science and Technology Committee advises the Supervisory Board on matters concerning proprietary drug and technology development and prepares the relevant Supervisory Board resolutions. The members of the Science and Technology Committee until May 17, 2018 were Dr. Marc Cluzel (Chairperson), Dr. Frank Morich and Wendy Johnson. The members of the Science and Technology Committee since May 17, 2018 are Dr. George Golumbeski (Chairperson), Dr. Frank Morich and Wendy Johnson.

In line with Section 5.4.1. para. 5 sentence 2 of the Corporate Governance Code, the Supervisory Board members' biographies are published on our website under Company – Management – Supervisory Board.

## CORPORATE GOVERNANCE REPORT

At MorphoSys, responsible, sustainable and value-oriented corporate governance is a high priority. Good corporate governance is an essential aspect of our corporate management and forms the framework for the Group's management and supervision, which includes the Group's organization, commercial principles and tools for its guidance and control.

The German Corporate Governance Code ("the Code") provides a standard for the transparent monitoring and management of companies that strongly emphasizes shareholder interests. The Code was originally published by the German Federal Ministry of Justice (Bundesministerium der Justiz) in 2002 and was most recently amended on February 7, 2017 and published by the German Federal Gazette (Bundesanzeiger) on April 24, 2017. The Code contains recommendations (Empfehlungen) and suggestions (Anregungen) relating to the management and supervision of German companies that are listed on a stock exchange. It follows internationally and nationally recognized standards for good and responsible corporate governance. The purpose of the Code is to make the German system of corporate governance transparent for investors. The Code includes corporate governance recommendations and suggestions with respect to shareholders and shareholders' meetings, the management and Supervisory Boards, transparency, accounting policies and auditing.

There is no obligation to comply with the recommendations or suggestions of the Code. The German Stock Corporation Act requires only that the Management Board and Supervisory Board of a German listed company

issue an annual declaration that either (i) states that the company has complied with the recommendations of the Code or (ii) lists the recommendations that the company has not complied with and explains its reasons for deviating from the recommendations of the Code. In addition, a listed company is also required to state in this annual declaration whether it intends to comply with the recommendations or list the recommendations it does not plan to comply with in the future. These declarations have to be published permanently on the company's website. If the company changes its policy on certain recommendations between such annual declarations, it must disclose this fact and explain its reasons for deviating from the recommendations. Non-compliance with suggestions contained in the Code need not be disclosed.

Many of the corporate governance principles contained in the Code have been practiced at MorphoSys for many years. Our corporate governance is detailed in the Statement on Corporate Governance under Section 289f HGB and 315d HGB. The statement also contains the annual Declaration of Conformity, relevant information on corporate governance practices and a description of the Management Board and Supervisory Board's working practices. Additional information can be found in this Corporate Governance Report.

## COMMUNICATION WITH THE CAPITAL MARKETS

At MorphoSys, a key principle of corporate communication is to inform institutional investors, private shareholders, financial analysts, employees and all other stakeholders, simultaneously and fully of the Company's situation through regular, transparent and timely communication. Shareholders have immediate access to the information provided to financial analysts and similar recipients and can obtain this information in both German and English. The Company is firmly committed to following a fair information policy.

Regular meetings with analysts and investors in the context of road shows and individual meetings play a central role in investor relations at MorphoSys. Conference calls accompany publication of quarterly results and give analysts and investors an immediate opportunity to ask questions about the Company's development. Company presentations for on-site events, visual and audio recordings of other important events as well as conference call transcripts are also available on the Company's website to all interested parties.

The Company's website www.morphosys.com serves as a central platform for current information on the Company and its development. Financial reports, analyst meetings and conference presentations, as well as press releases and ad hoc statements, are also available. The important regularly scheduled publications and events (annual reports, interim reports, annual general meetings and press and analyst conferences) are published in the Company's financial calendar well in advance.

## ESTABLISHMENT OF SPECIFIC TARGETS FOR THE COMPOSITION OF THE SUPERVISORY BOARD

The Supervisory Board shall determine concrete objectives regarding its composition and prepare a profile of skills and expertise for the Supervisory Board such that (i) the Supervisory Board in its entirety has the necessary knowledge, skills and professional experience to properly perform its duties, (ii) the Company's international activities and potential conflicts of interest are taken into consideration, (iii) a sufficient number of independent Supervisory Board members is ensured, (iv) an age limit and a regular limit on the length of service is specified for members of the Supervisory Board, and (v) the aspect of diversity is taken into account.

In view of these factors and in consideration of the Company's specific circumstances (Section 5.4.1 of the German Corporate Governance Code), the Supervisory Board first set targets for its composition in July 2015 and reviewed and updated these targets on July 26, 2017. The Supervisory Board has taken these targets into account when it submitted its proposal for the election of three new members to the Supervisory Board to the 2018 Annual General Meeting, while at the same time aiming at fulfilling the overall profile of reported skills and expertise of the Supervisory Board. The implementation of these targets is as follows:

### APPROPRIATE REPRESENTATION OF WOMEN AND DIVERSITY

Our Supervisory Board has a total of six members, two of whom are women. The Supervisory Board strongly believes that, at 33.33%, the current proportion of women is appropriate and intends to maintain this proportion in the future. The Supervisory Board currently fulfills this quota.

The Supervisory Board also believes a quota of at least two non-German members or at least two members with extensive international experience represents a fair share of diversity given our international orientation. The Supervisory Board currently meets this quota.

### INDEPENDENCE

The Supervisory Board considers it appropriate that at least four of its members are independent (Section 5.4.2 of the German Corporate Governance Code and the Nasdaq listing rules). Members of the Supervisory Board are considered independent when they have no personal or business relationship with MorphoSys, its management, a controlling shareholder or an affiliate that may give rise to a material and more than temporary conflict of interest. All six current members of the Supervisory Board meet the criteria to be classified as independent. Therefore, the Supervisory Board currently meets the quota of four independent members.

Significant and more than temporary conflicts of interest should be avoided, especially when it involves work for major competitors. It should be noted, however, that conflicts of interest in certain cases cannot be excluded. Any potential conflicts of interest must be disclosed to the Chairperson of the Supervisory Board and remedied appropriately. There are currently no conflicts of interest.

### AGE LIMIT

At the time of their appointment by the Annual General Meeting, Supervisory Board members should not be older than 75 years. However, the Supervisory Board may decide to make an exception in specific cases. The age limit of 75 years is currently met by the Supervisory Board members.

### TERM OF APPOINTMENT

At the Annual General Meeting, the Supervisory Board intends to propose an initial two-year period of office for Supervisory Board members. The Supervisory Board intends to allow reappointment twice, each for an additional term of three years, but reserves the right to make exceptions in specific cases and propose to the Annual General Meeting to permit members to be reappointed for a fourth term of three years. Since the time of setting this target, the maximum term of appointment for all elected Supervisory Board members has been respected.

The Supervisory Board intends to adhere to the targets set for its composition when making future election proposals to the Annual General Meeting.

## SKILL AND EXPERIENCE PROFILE FOR THE SUPERVISORY BOARD AS A WHOLE

In addition to defining specific targets, the Supervisory Board should develop a profile of skills and experience for the entire Supervisory Board (Section 5.4.1 of the German Corporate Governance Code). On July 26, 2017, the Supervisory Board defined the following profile of skills and experience for the entire Supervisory Board:

### PROFESSIONAL EXPERTISE AND EXPERIENCE

Supervisory Board members should possess the necessary professional expertise and experience to fulfill their duties as members of the Supervisory Board of MorphoSys as an international biotechnology company. All current Supervisory Board members have the relevant experience in management positions in the pharmaceutical and biotechnology industries and, therefore, meet this requirement.

In order to promote further cooperation between members of the Supervisory Board, care should be taken in the selection of candidates to ensure that the aspect of diversity in terms of professional background, expertise, experience and personality is sufficiently taken into account.

### GENERAL KNOWLEDGE

All members of the Supervisory Board should have general knowledge of the industry in which we operate in order to make sufficient and substantial contributions to Supervisory Board meetings. All Supervisory Board members have the necessary expertise in the pharmaceutical and biotechnology industries based on their background and, therefore, meet this requirement.

### PROFESSIONAL EXPERTISE

- At least two members of the Supervisory Board must have extensive experience in drug development
- At least one Supervisory Board member must have expertise in the areas of accounting or auditing (Section 100 (5) AktG)
- At least one member of the Supervisory Board must have experience in human resource issues, particularly with regard to Management Board matters

The Company currently meets the above targets.

### SUFFICIENT AVAILABILITY OF TIME

All members of the Supervisory Board must ensure that they have sufficient time available to properly perform their Supervisory Board duties. It must therefore be ensured that

- the Supervisory Board member is able to personally attend at least four ordinary Supervisory Board meetings per year, as well as the annual strategy meeting, for which a reasonable amount of preparation time is required in each case;
- the Supervisory Board member is able to attend extraordinary meetings of the Supervisory Board if necessary to deal with specific topics;
- the Supervisory Board member is able to attend the Annual General Meeting;
- the Supervisory Board member has sufficient time available to review the annual and consolidated financial statements;
- the Supervisory Board member sets aside additional time to prepare and participate in committee meetings, depending on his/her possible membership in one or more of the current three committees of the Supervisory Board.

The Supervisory Board intends to observe the skills and experience profile for the entire Supervisory Board when making future election proposals to the Annual General Meeting.

## WOMEN'S QUOTA FOR THE SUPERVISORY BOARD, MANAGEMENT BOARD AND THE TWO MANAGEMENT LEVELS BELOW THE MANAGEMENT BOARD

In July 2015, the Supervisory Board adopted a women's quota for the Supervisory Board for an initial period of two years. The Supervisory Board reviewed this quota in July 2017 and updated it as follows: "MorphoSys AG's Supervisory Board has a total of six members. Two of those members are women, which places the current quota of 33.33% for female members on the Company's Supervisory Board above the 30% target. The Supervisory Board confirms its decision regarding the quota for women on the Supervisory Board, which was passed in July 2015, and intends to maintain this ratio until June 30, 2022."

We continue to meet this target.

In July 2015, the Supervisory Board adopted the following quota for women on the Management Board for an initial period of two years, which was reviewed and updated in July 2017 as follows:

"The Management Board of MorphoSys AG has a total of five members, including one female member. The current ratio of women's representation on the Management Board of the company is therefore below 30% and amounts to 20%. With reference to the decision on the quota of women on the Management Board, which was taken in July 2015, the Supervisory Board intends to achieve a ratio of 25% in the future, namely by June 30, 2022."

We do not currently meet this target. The reason this target has not been met was the unplanned departure of Dr. Marlies Sproll as Chief Scientific Officer as of October 31, 2017 for personal reasons and the appointment of Dr. Markus Enzelberger initially as Interim Chief Scientific Officer from April 15, 2017 to October 31, 2017, and then as Dr. Marlies Sproll's successor as Chief Scientific Officer beginning on November 1, 2017. As a result, since October 31, 2017, the Management Board consists of four male members, and there are currently no women on the Management Board.

In July 2015, the Management Board adopted the following quota for women in the first level of management below the Management Board for an initial period of two years and reviewed and updated it in July 2017 as follows:

"At the time of the decision, the first management level below the Management Board (the Senior Management Group) consisted of 22 members, nine of whom were women, placing the level of female representation at this management level at 40.9%, which is above the 30% target. The Management Board confirms its July 2015 decision on the quota of women in the first level of management below the Management Board and intends to continue to maintain a minimum ratio of 30% until June 30, 2022."

We continue to meet this target.

In July 2015, the Management Board adopted a women's quota for the second level of management below the Management Board initially for a period of two years and reviewed and updated the quota in July 2017 as follows: "The second management level below the Management Board (i.e. the Company's managers excluding the Senior Management Group) at the time of the decision consisted of 40 members, 14 of whom were women. This placed the quota of women in the second management level below the Company's Management Board at 35%, which is above the 30% target at the time of the resolution. The Management Board confirms its July 2012 decision on the quota of women in the second level of management below the Management Board and intends to maintain a quota of at least 30% until June 30, 2022."

We continue to meet this target.

## DIVERSITY PLAN

Diversity is firmly anchored in our corporate culture and our affiliates. All dimensions of diversity are of equal importance, be it age, gender, educational background, occupation, origin, religion, sexual orientation or identity. Our Management Board and Supervisory Board see it as their responsibility to further increase and effectively utilize the various aspects of diversity beyond the mere determination of targets for the proportion of women on the Management Board, Supervisory Board and in executive positions.

We have not yet developed our own diversity plan with respect to the composition of the Management and Supervisory Boards. Nevertheless, the internal organization and continued development of an open and inclusive corporate culture play an important role in the day-to-day work of the Management and Supervisory Boards. The skills and experience profile for the Supervisory Board as a whole also takes diversity into consideration. The Management and Supervisory Boards intend to develop a diversity plan for their composition in the future that addresses key aspects of diversity, defines specific goals for this purpose and contains guidelines on how these goals should be achieved.

## REMUNERATION REPORT

The Remuneration Report presents the principles, structure and amount of Management Board and Supervisory Board remuneration. The report complies with the legal provisions and considers the recommendations of the German Corporate Governance Code.

## MANAGEMENT BOARD REMUNERATION

The Management Board's remuneration system is intended to provide an incentive for performance-oriented and sustainable corporate management. Therefore, the aggregate remuneration of the Management Board members consists of different components: fixed components, an annual cash bonus based on the achievement of corporate targets (short-term incentive – STI), a variable compensation component with a long-term incentive (long-term incentive – LTI) and other remuneration components. Variable remuneration components with long-term incentive consist of performance share plans from the current and prior years, a convertible bond program from the year 2013, as well as a stock option plan from the current and prior year. Due to the successful U.S. listing the Management Board members received a special one-time bonus in the form of treasury shares held by MorphoSys AG. These shares could be called by the individual Management Board members during the time period from June 1 until end of December 2018 for a pre-defined maximal amount in EUR. The relevant number of shares was determined on the basis of the share price of one MOR share (final auction price in Xetra-trading on the Frankfurt Stock Exchange) on the date the shares were called. Management Board members also receive fringe benefits in the form of non-cash benefits, mainly the use of a company car and the payment of insurance premiums. All remuneration packages are reviewed annually for their scope and appropriateness by the Remuneration and Nomination Committee and are compared to the results of an annual Management Board remuneration analysis. The amount of compensation paid to Management Board members highly depends on their individual areas of responsibility, the Company's economic situation and success and the Company's business prospects versus its competition. All decisions concerning adjustments to remuneration packages are made by the entire Supervisory Board. The Management Board's remuneration and index-linked pension scheme were last adjusted in July 2018.

## OVERVIEW

In the 2018 financial year, total benefits of € 6,904,508 (2017: € 6,453,649) were granted to the Management Board in accordance with the provisions of the German Corporate Governance Code. Of the total remuneration granted for the year 2018, € 3,616,602 was cash compensation and € 3,287,906, or 48%, resulted from personnel expenses for share-based compensation (remuneration with short-term incentive: one-time bonus award in shares due to the successful U.S. listing; remuneration with long-term incentive: performance share plan, stock option plan and convertible bond plan).

The total amount of benefits paid to the Management Board in the 2018 financial year amounted to € 7,505,917 (2017: € 10,593,126). In addition to cash compensation payments of € 3,189,972 (2017: € 2,963,485), this amount includes primarily the relevant value under German tax law of the transfer of treasury stock from a performance-based share plan (share-based compensation), which amounted to € 626,606 (2017: € 1,986,671) as well as from the one-time bonus award in shares due to the successful U.S. listing, which amounted to € 1,483,804 in 2018. Because convertible bonds were exercised in 2018 and 2017, the total amount for 2018 also included proceeds from the exercise of convertible bonds in the amount of € 2,205,535 (2017: € 4,743,008).

As of April 11, 2018, a total of 6,969 treasury shares from the 2014 performance-based share plan for the Management Board vested because the vesting period for this LTI program had expired. The beneficiaries had the option to call the shares during a six-month period ending on October 10, 2018. All transactions in MorphoSys shares executed by members of the Management Board were reported as required by law and are published in the Corporate Governance Report as well as on the Company's website.

In accordance with the requirements of Section 4.2.5 (3) of the German Corporate Governance Code, the tables that follow provide detailed mandatory information on the remuneration of the individual Management Board members.

Please note that the tables that follow are provided in the context of the Corporate Governance Report and differ from the information about Management Board remuneration presented in the Notes of this report (Item 7.4). These differences are due to the differing presentation requirements under the German Corporate Governance Code and IFRS.

**TAB. 17: COMPENSATION OF THE MANAGEMENT BOARD IN 2018 AND 2017 (DISCLOSURE IN ACCORDANCE WITH THE GERMAN CORPORATE GOVERNANCE CODE)**
**Benefits granted to the Management Board**

| | Dr. Simon Moroney<br>Chief Executive Officer | | | |
|---|---|---|---|---|
| in € | 2017 | 2018 | 2018<br>(Minimum) | 2018<br>(Maximum) |
| Fixed Compensation | 500,876 | 542,074 | 542,074 | 542,074 |
| Fringe Benefits [1] | 35,912 | 32,654 | 32,654 | 32,654 |
| Total Fixed Compensation | 536,788 | 574,728 | 574,728 | 574,728 |
| One -Year Variable Compensation [2] | 368,144 | 455,343 | 0 | 474,315 |
| One-Time Bonus in Shares | 0 | 483,616 | 0 | 483,616 |
| Multi-Year Variable Compensation: | | | | |
| 2013 Convertible Bonds Program [3] (Vesting Period 4 Years) | 58,224 | 0 | 0 | 0 |
| 2017 Long-Term Incentive Program [4] (Vesting Period 4 Years) | 343,009 | 0 | 0 | 0 |
| 2018 Long-Term Incentive Program [4] (Vesting Period 4 Years) | 0 | 307,529 | 0 | 1,230,116 |
| 2017 Stock Option Plan [4] (Vesting Period 4 Years) | 267,861 | 0 | 0 | 0 |
| 2018 Stock Option Plan [4] (Vesting Period 4 Years) | 0 | 300,770 | 0 | 1,203,080 |
| Total Variable Compensation | 1,037,238 | 1,547,258 | 0 | 3,391,127 |
| Service Cost | 149,567 | 158,788 | 158,788 | 158,788 |
| Total Compensation | 1,723,593 | 2,280,774 | 733,516 | 4,124,643 |

| | Dr. Markus Enzelberger [5]<br>Chief Scientific Officer<br>Appointment (Interim-CSO): April 15, 2017<br>Appointment: November 1, 2017 | | | |
|---|---|---|---|---|
| in € | 2017 | 2018 | 2018<br>(Minimum) | 2018<br>(Maximum) |
| Fixed Compensation | 204,698 | 321,300 | 321,300 | 321,300 |
| Fringe Benefits [1] | 417,158 | 31,211 | 31,211 | 31,211 |
| Total Fixed Compensation | 621,856 | 352,511 | 352,511 | 352,511 |
| One -Year Variable Compensation [2] | 121,688 | 269,892 | 0 | 281,138 |
| One-Time Bonus in Shares | 0 | 286,650 | 0 | 286,650 |
| Multi-Year Variable Compensation: | | | | |
| 2013 Convertible Bonds Program [3] (Vesting Period 4 Years) | 0 | 0 | 0 | 0 |
| 2017 Long-Term Incentive Program [4] (Vesting Period 4 Years) | 144,354 | 0 | 0 | 0 |
| 2018 Long-Term Incentive Program [4](Vesting Period 4 Years) | 0 | 201,463 | 0 | 805,852 |
| 2017 Stock Option Plan [4] (Vesting Period 4 Years) | 112,745 | 0 | 0 | 0 |
| 2018 Stock Option Plan [4] (Vesting Period 4 Years) | 0 | 197,065 | 0 | 788,260 |
| Total Variable Compensation | 378,787 | 955,070 | 0 | 2,161,900 |
| Service Cost | 29,186 | 68,515 | 68,515 | 68,515 |
| Total Compensation | 1,029,829 | 1,376,096 | 421,026 | 2,582,926 |

| Jens Holstein<br>Chief Financial Officer | | | | Dr. Malte Peters<br>Chief Development Officer<br>Appointment: March 1, 2017 | | | |
|---|---|---|---|---|---|---|---|
| 2017 | 2018 | 2018 (Minimum) | 2018 (Maximum) | 2017 | 2018 | 2018 (Minimum) | 2018 (Maximum) |
| 372,652 | 402,235 | 402,235 | 402,235 | 281,500 | 397,800 | 397,800 | 397,800 |
| 42,905 | 46,725 | 46,725 | 46,725 | 568,644 | 30,613 | 30,613 | 30,613 |
| **415,557** | **448,960** | **448,960** | **448,960** | **850,144** | **428,413** | **428,413** | **428,413** |
| 273,899 | 337,877 | 0 | 351,955 | 206,903 | 334,152 | 0 | 348,075 |
| 0 | 358,857 | 0 | 358,857 | 0 | 354,900 | 0 | 354,900 |
| 59,641 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 224,747 | 0 | 0 | 0 | 224,747 | 0 | 0 | 0 |
| 0 | 201,463 | 0 | 805,852 | 0 | 201,463 | 0 | 805,852 |
| 175,498 | 0 | 0 | 0 | 175,498 | 0 | 0 | 0 |
| 0 | 197,065 | 0 | 788,260 | 0 | 197,065 | 0 | 788,260 |
| **733,785** | **1,095,262** | **0** | **2,304,924** | **607,148** | **1,087,580** | **0** | **2,297,087** |
| 99,949 | 111,233 | 111,233 | 111,233 | 60,967 | 76,190 | 76,190 | 76,190 |
| **1,249,291** | **1,655,455** | **560,193** | **2,865,117** | **1,518,259** | **1,592,183** | **504,603** | **2,801,690** |

| Dr. Marlies Sproll[6]<br>Chief Scientific Officer<br>Temporary Leave: April 15, 2017 - October 31, 2017<br>Resignation: October 31, 2017 | | | | Dr. Arndt Schottelius<br>Chief Development Officer<br>Resignation: February 28, 2017 | | | | Total | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2017 | 2018 | 2018 (Minimum) | 2018 (Maximum) | 2017 | 2018 | 2018 (Minimum) | 2018 (Maximum) | 2017 | 2018 | 2018 (Minimum) | 2018 (Maximum) |
| 222,450 | 0 | 0 | 0 | 103,253 | 0 | 0 | 0 | 1,685,429 | 1,663,409 | 1,663,409 | 1,663,409 |
| 20,427 | 0 | 0 | 0 | 9,161 | 0 | 0 | 0 | 1,094,207 | 141,203 | 141,203 | 141,203 |
| **242,877** | **0** | **0** | **0** | **112,414** | **0** | **0** | **0** | **2,779,636** | **1,804,612** | **1,804,612** | **1,804,612** |
| 67,745 | 0 | 0 | 0 | 23,490 | 0 | 0 | 0 | 1,061,869 | 1,397,264 | 0 | 1,455,483 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,484,023 | 0 | 1,484,023 |
| 39,879 | 0 | 0 | 0 | 39,879 | 0 | 0 | 0 | 197,623 | 0 | 0 | 0 |
| 168,543 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,105,400 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 911,918 | 0 | 3,647,672 |
| 131,629 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 863,231 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 891,965 | 0 | 3,567,860 |
| **407,796** | **0** | **0** | **0** | **63,369** | **0** | **0** | **0** | **3,228,123** | **4,685,170** | **0** | **10,155,038** |
| 77,976 | 0 | 0 | 0 | 28,245 | 0 | 0 | 0 | 445,890 | 414,726 | 414,726 | 414,726 |
| **728,649** | **0** | **0** | **0** | **204,028** | **0** | **0** | **0** | **6,453,649** | **6,904,508** | **2,219,338** | **12,374,376** |

[1] In 2017, the fringe benefits of Dr. Malte Peters and Dr. Markus Enzelberger each included a one-time compensation in the form of MorphoSys shares as an incentive to join the Management Board of MorphoSys AG.

[2] The one-year compensation granted for the 2018 financial year represents the bonus accrual for 2018 that will be paid in February 2019. The bonus granted for the 2017 financial year was paid in February 2018.

[3] Stock-based compensation plans not issued on an annual basis. The fair value was determined pursuant to the regulations of IFRS 2 "Share-based Payment." For plans that are not issued annually, the pro rata share of personnel expenses resulting from share-based payments is presented for each financial year.

[4] Stock-based compensation plans issued annually. The fair value was determined pursuant to the regulations of IFRS 2 "Share-based Payment." For plans issued annually, the personnel expenses resulting from share-based payments are presented for the entire term at the time of issue.

[5] In 2017, the figures presented for Dr. Markus Enzelberger do not include any compensation granted for his activities as a member of the Senior Management Group as they do not relate to his appointment as a member of the Management Board.

[6] Dr. Marlies Sproll left the Management Board of MorphoSys AG on October 31, 2017. Since November 1, 2017, Dr. Marlies Sproll has taken on a new part-time role at MorphoSys as Special Advisor to the CEO. Therefore, the figures presented for Dr. Marlies Sproll do not include any remuneration granted for these activities.

**Payment During the Financial Year**

| in € | Dr. Simon Moroney Chief Executive Officer | | Jens Holstein Chief Financial Officer | | Dr. Malte Peters Chief Development Officer Appointment: March 1, 2017 | |
|---|---|---|---|---|---|---|
| | 2017 | 2018 | 2017 | 2018 | 2017 | 2018 |
| Fixed Compensation | 500,876 | 542,074 | 372,652 | 402,235 | 281,500 | 397,800 |
| Fringe Benefits [1] | 35,912 | 32,654 | 42,905 | 46,725 | 568,644 | 30,613 |
| **Total Fixed Compensation** | **536,788** | **574,728** | **415,557** | **448,960** | **850,144** | **428,413** |
| One-time bonus award in shares | 0 | 483,597 | 0 | 358,785 | 0 | 354,822 |
| One -Year Variable Compensation [2] | 210,873 | 368,144 | 143,054 | 273,899 | 0 | 206,903 |
| Multi-Year Variable Compensation: | | | | | | |
| 2013 Convertible Bonds Program [3] (Vesting Period 4 Years) | 0 | 0 | 658,350 | 2,205,535 | 0 | 0 |
| 2013 Long-Term Incentive Program [3] (Vesting Period 4 Years) | 650,378 | 0 | 445,431 | 0 | 0 | 0 |
| 2014 Long-Term Incentive Program [3] (Vesting Period 4 Years) | 0 | 351,412 | 0 | 223,600 | 0 | 0 |
| Other [4] | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total Variable Compensation** | **861,251** | **1,203,153** | **1,246,835** | **3,061,819** | **0** | **561,725** |
| Service Cost | 149,567 | 158,788 | 99,949 | 111,233 | 60,967 | 76,190 |
| **Total Compensation** | **1,547,606** | **1,936,669** | **1,762,341** | **3,622,012** | **911,111** | **1,066,328** |

| Dr. Markus Enzelberger [5] Chief Scientific Officer Appointment (Interim-CSO): April 15, 2017 Appointment: November 1, 2017 | | Dr. Marlies Sproll [6] Chief Scientific Officer Temporary Leave: April 15, 2017 – October 31, 2017 Resignation: October 31, 2017 | | Dr. Arndt Schottelius [7] Chief Development Officer Resignation: February 28, 2017 | | Total | |
|---|---|---|---|---|---|---|---|
| 2017 | 2018 | 2017 | 2018 | 2017 | 2018 | 2017 | 2018 |
| 204,698 | 321,300 | 222,450 | 0 | 103,253 | 0 | 1,685,429 | 1,663,409 |
| 417,158 | 31,211 | 20,427 | 0 | 9,161 | 0 | 1,094,207 | 141,203 |
| **621,856** | **352,511** | **242,877** | **0** | **112,414** | **0** | **2,779,636** | **1,804,612** |
| 0 | 286,600 | 0 | 0 | 0 | 0 | 0 | 1,483,804 |
| 0 | 121,688 | 143,054 | 0 | 140,940 | 0 | 637,921 | 970,634 |
| | | | | | | 0 | 0 |
| 0 | 0 | 2,800,381 | 0 | 1,284,277 | 0 | 4,743,008 | 2,205,535 |
| 0 | 0 | 445,431 | 0 | 445,431 | 0 | 1,986,671 | 0 |
| 0 | 51,594 | 0 | 0 | 0 | 0 | 0 | 626,606 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **0** | **459,882** | **3,388,866** | **0** | **1,870,648** | **0** | **7,367,600** | **5,286,579** |
| 29,186 | 68,515 | 77,976 | 0 | 28,245 | 0 | 445,890 | 414,726 |
| **651,042** | **880,908** | **3,709,719** | **0** | **2,011,307** | **0** | **10,593,126** | **7,505,917** |

1 In 2017, the fringe benefits of Dr. Malte Peters and Dr. Markus Enzelberger each included a one-time compensation in the form of MorphoSys shares as an incentive to join the Management Board of MorphoSys AG.

2 The one-year variable compensation presented here represents the bonus paid in the respective financial year for the previous financial year.

3 The date and value of the payments is the date and value applicable under German tax law. Therefore, this table shows the non-cash benefits arising in the respective financial year from the difference between the exercise or conversion price and the stock market price at the time of exercising the convertible bonds or at the time of transfer of own shares from a performance share plan.

4 No compensation recovery claims against the Management Board existed in 2018 or 2017.

5 In 2017, the figures presented for Dr. Markus Enzelberger do not include any payments for his activities as a member of the Senior Management Group as they do not relate to his appointment as a member of the Management Board.

6 Dr. Marlies Sproll left the Management Board of MorphoSys AG on October 31, 2017. Since November 1, 2017, Dr. Marlies Sproll has taken on a new part-time role at MorphoSys as Special Advisor to the CEO. Therefore, the payments presented for Dr. Marlies Sproll do not include any remuneration for these activities.

7 In 2017, the figures presented for Dr. Arndt Schottelius do include remuneration from the exercise of convertible bonds and the transfer of treasury stock from a long-term incentive program after his resignation as Chief Development Officer. These were granted for his activities as a member of the Management Board in previous years.

## FIXED REMUNERATION AND FRINGE BENEFITS

The non-performance-related remuneration of the Management Board consists of fixed remuneration and additional benefits, which primarily include the use of company cars, as well as subsidies for health, welfare and disability insurance. The Chief Financial Officer, Mr. Jens Holstein, receives an additional expense allowance for maintaining two households.

**PENSION EXPENSES**

The Company also provides payments to Management Board members equal to a maximum of 10% of the member's fixed annual salary and partly plus any taxes payable. This compensation is intended for the members' individual retirement plans. Additionally, all Management Board members participate in a pension plan in the form of a provident fund, which was introduced in cooperation with Allianz Pensions-Management e.V. The pension obligations of the provident fund will be met by Allianz Pensions-Management e.V. These pension obligations are not pension benefit plans.

**PERFORMANCE-BASED COMPENSATION (SHORT-TERM INCENTIVE – STI)**

Members of the Management Board each receive performance-based compensation in the form of an annual bonus payment of up to 70% of the gross base salary when 100% of the member's targets have been achieved. These bonus payments are dependent on the achievement of corporate targets specified by the Supervisory Board at the start of each financial year. Targets are typically based on, amongst other objectives, the Company's performance and the progress of the partnered pipeline and the Company's proprietary pipeline. At the start of the year, the Supervisory Board assesses the degree to which corporate goals were achieved in the prior year and uses this information to determine the bonus. The bonus may not exceed 125% of the target amount (corresponding to 87.5% of the gross base salary). Performance-based compensation can be reduced to zero if goals are not achieved. The bonus for the 2018 financial year will be paid in February 2019.

**LONG-TERM INCENTIVE COMPENSATION (LONG-TERM INCENTIVE – LTI)**

In 2011, MorphoSys introduced a long-term incentive compensation plan (Performance Share Plan) for the Management Board and members of the Senior Management Group. The Performance Share Plan is based on the allocation of shares linked to the achievement of predefined performance targets over a four-year period.

Each year, the Supervisory Board determines the number of shares to be allocated to the Management Board. On April 1, 2018, the Management Board members were granted a total of 8,804 shares. Each Management Board member received an entitlement benefit for a specific number of shares. For more information, please refer to Item 7.3.5 in the Notes to the Consolidated Financial Statements and the explanation on stock repurchases in the Corporate Governance Report.

Long-term performance targets are set by the Supervisory Board at the time the shares are allocated for a specific year. The defined targets for the 2018 Performance Share Plan were the absolute performance of MorphoSys shares, as well as the relative performance of MorphoSys shares relative to a benchmark index comprising of equal parts of the Nasdaq Biotechnology Index and the TecDAX Index. The absolute and relative performance of the share price for each of the four assessment periods (one year each) is determined by comparing the average share price of the last 30 trading days prior to the beginning of the relevant assessment period (April 1) with the average share price of the last 30 trading days prior to the end of the evaluation period. The participants in the Performance Share Plan receive an annual share entitlement, which will be evaluated on the basis of the absolute and relative performance of the share price, that is, a comparison of the performance of MorphoSys shares versus the benchmark index. Depending on the absolute and relative performance of the share price over the course of an evaluation period, certain (absolute and relative) tiered target attainment levels between 10% and 300% can be achieved. Exceeding the target attainment level of 300% does not grant entitlement to additional shares during the relevant assessment period (cap). At the end of the four-year term, a total level of target achievement based on the absolute and relative target attainment levels has to be established. The average absolute and relative attainment levels reached are weighted at 50%. The overall target achievement is capped at 200%.

The ultimate number of performance shares allocated to the Performance Share Plan participants is determined at the completion of the program, which spans four years. This calculation incorporates the number of shares initially granted ("grants") multiplied with the total level of target achievement, as well as a "company factor"

that is determined at the Supervisory Board's discretion. This company factor is a number between zero and two that is set by the Supervisory Board based on the Company's situation. The company factor's predefined default value is one (1).

In 2017, MorphoSys also introduced a stock option plan (SOP) as another form of long-term incentive compensation based on the resolution of the Annual General Meeting on June 2, 2016 (Agenda Item 9). As of April 1, 2018, a total of 29,312 stock options were granted to the Management Board. Each member of the Management Board received a specific number of stock options that entitle them to purchase up to two MorphoSys shares each. Further details can be found in Item 7.1 in the Notes to the Consolidated Financial Statements and the explanations on stock repurchases in the Corporate Governance Report.

In accordance with the resolution of the Annual General Meeting on June 2, 2016 (Agenda Item 9), the SOP's performance targets include the absolute price performance of MorphoSys shares and the relative price performance of MorphoSys shares compared to a benchmark index. The benchmark index consists of equal parts of the Nasdaq Biotechnology Index and the TecDAX Index. Each performance target has a 50% weighting in the achievement of the overall target.

To determine the degree of target achievement for each performance target, the four-year vesting period (until the first stock options can be exercised) is subdivided into four equal periods of one year each. An arithmetic mean is calculated based on the degree of target achievement in each of the four years. This, in turn, determines the final percentage of target achievement for each performance target. The final percentage of target achievement for each of the two performance targets are then added together and divided by two, the result being the overall level of target achievement.

For the performance target of absolute price performance, a comparison is made between the stock market price of MorphoSys shares at the beginning of each year in the four-year period with the price at the end of each respective period. If MorphoSys shares perform well, the degree of target achievement can reach up to 200% on a straight-line basis for that particular year. Any further positive share price development of MorphoSys shares will not lead to any further increase in the performance target (cap).

For the performance target of relative price performance, the development of MorphoSys's share price is compared with the development of the benchmark index during each annual period and set in relation to each other. In forming the benchmark index, the Nasdaq Biotech Index and the TecDAX Index are each weighted at 50% in such a way that the percentage price movements of each index are added for the respective annual period and divided by two. If MorphoSys shares outperform the benchmark index, the degree of target achievement for the relevant period can reach up to 200% on a straight-line basis. Any further positive share price development of MorphoSys shares versus the benchmark index will not lead to any further increase in the performance target (cap).

Stock options can only be exercised when the four-year (minimum) vesting period prescribed by law has expired, and the specified minimum value for the degree of target achievement of a performance target has been exceeded. The ultimate number of exercisable stock options is calculated by multiplying the number of initially granted stock options ("grants") by the total level of target achievement and rounding up to the nearest whole number. The resulting ultimate number of stock options is limited to 200% of the initially granted number of stock options. The stock options are settled in the form of Company shares, with each stock option entitling the holder to one share for the final number of stock options.

When the stock options are exercised, the exercise price must be paid for each underlying share. The exercise price corresponds to the average closing auction price of MorphoSys shares in the 30 trading days prior to the day on which the stock options were issued.

The terms of the stock option plan provide further details on the granting and settlement of stock options, the issue of Company shares from the Conditional Capital 2016-III and the administration of the SOP. For more information, please refer to the corresponding resolution of the Annual General Meeting on June 2, 2016 (Agenda Item 9).

## MISCELLANEOUS

None of the Management Board members were granted any loans or similar benefits in the reporting year nor have they received any benefits from third parties that were promised or granted based on their positions as members of the Management Board.

## PAYMENTS UPON TERMINATION OF MANAGEMENT BOARD EMPLOYMENT CONTRACTS/ CHANGE OF CONTROL

In case of a premature termination of the service contract with a Management Board member, the compensation, including fringe benefits, is capped at 200% of the fixed yearly gross salary and the annual bonus (Severance Cap) and no more than the remaining term of the service contract is compensated. If the service contract is terminated for good cause for which the Management Board member is responsible, such member is not entitled to any payments. The Severance Cap is calculated on the basis of the total compensation of the full business year prior to the termination and, if appropriate, the expected total compensation of the business year in which the termination occurs.

If a Management Board member's service contract terminates due to the member's death, the member's spouse or life partner is entitled to the fixed monthly salary for the month of death and the 12 months thereafter. In the event of a change of control, Management Board members are entitled to exercise their extraordinary right to terminate their employment contracts and demand the fixed salary and annual bonus still outstanding until the end of the service contract, however at least 200% of the fixed yearly gross salary and annual bonus. Moreover, in such a case, all stock options and performance shares granted will become vested immediately and can be exercised after the expiration of the statutory vesting periods or blackout periods. A change of control has occurred when (i) MorphoSys transfers assets or a substantial portion of its assets to unaffiliated third parties, (ii) MorphoSys merges with an unaffiliated company, (iii) MorphoSys AG as dominated company becomes party to an agreement pursuant to Section 291 of the German Stock Corporation Act or MorphoSys is integrated in accordance with Section 319 of the German Stock Corporation Act, or (iv) a shareholder or third party holds 30% or more of MorphoSys's voting rights.

In addition, post-contractual non-compete clauses exist with the members of the Board of Management, providing for compensatory payments to be made by MorphoSys AG until six months after the service contract has terminated. During the duration of the non-compete clause, the compensatory payment amounts to up to 100% of the fixed salary.

## CHANGE IN THE COMPOSITION OF THE MANAGEMENT BOARD

There was no change in the composition of our Management Board in the 2018 financial year.

## AGE LIMIT

The age limit for Executive Board members at the time of their appointment or re-appointment by the Supervisory Board shall correspond to 67 years. Exceptions thereto may be resolved by the Supervisory Board in the individual case. The age limit of 67 years is currently respected by the Executive Board members.

## SAY ON PAY

Due to the existing legal uncertainty resulting from the forthcoming legal changes to the Shareholders' Rights Directive and the German Corporate Governance Code, MorphoSys will deliberately refrain from submitting the Management Board compensation system to a vote at its forthcoming 2019 Annual General Meeting. The current

remuneration system for the members of the Management Board remains unchanged from the remuneration system approved by the Annual General Meeting on May 19, 2011 with a majority of more than 91%. A corresponding vote on the remuneration system is planned for the 2020 Annual General Meeting.

## SUPERVISORY BOARD REMUNERATION

The remuneration of Supervisory Board members is governed by our Articles of Association and a corresponding Annual General Meeting resolution on Supervisory Board remuneration. In the 2018 financial year, Supervisory Board members received fixed compensation, attendance fees and expense allowances for their participation in Supervisory Board and committee meetings. Each Supervisory Board member has received annual fixed compensation (€ 85,400 for Chairpersons, € 51,240 for Deputy Chairpersons and € 34,160 for all other members) for their membership of the Supervisory Board. The Chairperson receives € 4,000 for each Supervisory Board meeting chaired and the other members receive € 2,000 for each Supervisory Board meeting attended. For committee work, the committee Chairperson receives € 12,000 and other committee members each receive € 6,000. Committee members also receive € 1,200 for their participation in a committee meeting. Participation in a Supervisory Board or committee meeting by telephone or video conference results in a 50% reduction in compensation for meeting participation. Supervisory Board members residing outside of Europe who personally take part in a Supervisory Board or committee meeting are entitled to a fixed expense allowance of € 2,000 (plus any sales tax due) for additional travel time in addition to attendance fees and reimbursed expenses.

Supervisory Board members are also reimbursed for travel expenses and value-added taxes (VAT) on their compensation.

In the 2018 financial year, Supervisory Board members received a total of € 525,428 (2017: € 523,015) excluding the reimbursement of travel expenses. This amount consists of fixed compensation and attendance fees for participating in Supervisory Board and committee meetings.

We did not grant any loans to Supervisory Board members.

The table below details the Supervisory Board's remuneration.

**TAB. 18: COMPENSATION OF THE SUPERVISORY BOARD IN 2018 AND 2017**

| | Fixed Compensation | | Attendance Fees [1] | | Total Compensation | |
|---|---|---|---|---|---|---|
| in € | 2018 | 2017 | 2018 | 2017 | 2018 | 2017 |
| Dr. Marc Cluzel | 76,742 | 52,160 | 32,400 | 26,800 | 109,142 | 78,960 |
| Dr. Frank Morich | 61,004 | 57,240 | 23,200 | 23,200 | 84,204 | 80,440 |
| Krisja Vermeylen | 49,916 | 28,961 | 24,400 | 16,000 | 74,316 | 44,961 |
| Wendy Johnson | 46,160 | 46,160 | 37,400 | 38,000 | 83,560 | 84,160 |
| Dr. George Golumbeski [2] | 28,961 | - | 25,200 | - | 54,161 | - |
| Michael Brosnan [2] | 28,961 | - | 18,600 | - | 47,561 | - |
| Dr. Gerald Möller [3] | 36,558 | 95,156 | 11,800 | 36,800 | 48,358 | 131,956 |
| Klaus Kühn [3] | 17,326 | 46,160 | 6,800 | 22,000 | 24,126 | 68,160 |
| Karin Eastham [4] | - | 19,578 | - | 14,800 | - | 34,378 |
| **Total** | **345,628** | **345,415** | **179,800** | **177,600** | **525,428** | **523,015** |

1 The attendance fee contains expense allowances for the attendence at the Supervisory Board and the Committee meetings.

2 Dr. George Golumbeski and Michael Brosnan have joined the Supervisory Board of MorphoSys AG on May 17, 2018.

3 Dr. Gerald Möller and Klaus Kühn have left the Supervisory Board of MorphoSys AG AG on May 17, 2018.

4 Karin Eastham has left the Supervisory Board of MorphoSys AG AG on May 17, 2017.

## HOLDINGS OF MANAGEMENT BOARD AND SUPERVISORY BOARD MEMBERS

The members of the Management Board and the Supervisory Board hold more than 1% of the shares issued by the Company. All shares, performance shares, stock options and convertible bonds held by each member of the Management Board and the Supervisory Board are listed below.

### TAB. 19: DIRECTORS' HOLDINGS

| Shares | 01/01/2018 | Additions | Sales | 12/31/2018 |
|---|---|---|---|---|
| **Management Board** | | | | |
| Dr. Simon Moroney | 483,709 | 8,928 | 8,928 | 483,709 |
| Jens Holstein | 11,000 | 36,554 | 30,537 | 17,017 |
| Dr. Malte Peters | 9,505 | 3,313 | 0 | 12,818 |
| Dr. Markus Enzelberger | 7,262 | 3,248 | 8,834 | 1,676 |
| **Total** | **511,476** | **52,043** | **48,299** | **515,220** |
| **Supervisory Board** | | | | |
| Dr. Marc Cluzel | 500 | 0 | 0 | 500 |
| Dr. Frank Morich | 1,000 | 0 | 0 | 1,000 |
| Krisja Vermeylen | 350 | 0 | 0 | 350 |
| Wendy Johnson | 500 | 0 | 0 | 500 |
| Dr. George Golumbeski [1] | - | 0 | 0 | 0 |
| Michael Brosnan [1] | - | 0 | 0 | 0 |
| Dr. Gerald Möller [2] | 11,000 | 900 | 0 | - |
| Klaus Kühn [2] | 0 | 0 | 0 | - |
| **Total** | **13,350** | **900** | **0** | **2,350** |

### STOCK OPTIONS

| | 01/01/2018 | Additions | Forfeitures [3] | Exercises | 12/31/2018 |
|---|---|---|---|---|---|
| **Management Board** | | | | | |
| Dr. Simon Moroney | 12,511 | 9,884 | 0 | 0 | 22,395 |
| Jens Holstein | 8,197 | 6,476 | 0 | 0 | 14,673 |
| Dr. Malte Peters | 8,197 | 6,476 | 0 | 0 | 14,673 |
| Dr. Markus Enzelberger | 5,266 | 6,476 | 0 | 0 | 11,742 |
| **Total** | **34,171** | **29,312** | **0** | **0** | **63,483** |

### CONVERTIBLE BONDS

| | 01/01/2018 | Additions | Forfeitures [3] | Exercises | 12/31/2018 |
|---|---|---|---|---|---|
| **Management Board** | | | | | |
| Dr. Simon Moroney | 88,386 | 0 | 0 | 0 | 88,386 |
| Jens Holstein | 60,537 | 0 | 0 | 30,537 | 30,000 |
| Dr. Malte Peters | 0 | 0 | 0 | 0 | 0 |
| Dr. Markus Enzelberger | 0 | 0 | 0 | 0 | 0 |
| **Total** | **148,923** | **0** | **0** | **30,537** | **118,386** |

**PERFORMANCE SHARES**

| | 01/01/2018 | Additions | Forfeitures [3] | Allocations [4] | 12/31/2018 |
|---|---|---|---|---|---|
| **Management Board** | | | | | |
| Dr. Simon Moroney | 30,060 | 2,969 | 2,182 | 3,797 | 27,050 |
| Jens Holstein | 20,086 | 1,945 | 1,495 | 2,600 | 17,936 |
| Dr. Malte Peters | 3,187 | 1,945 | 0 | 0 | 5,132 |
| Dr. Markus Enzelberger | 5,987 | 1,945 | 329 | 572 | 7,031 |
| **Total** | **59,320** | **8,804** | **4,006** | **6,969** | **57,149** |

1 Dr. George Golumbeski and Michael Brosnan have joined the Supervisory Board of MorphoSys AG on May 17, 2018.

2 Dr. Gerald Möller and Klaus Kühn have left the Supervisory Board of MorphoSys AG AG on May 17, 2018. Changes in the number of shares after resignation from the Supervisory Board of MorphoSys AG are not presented in the tables.

3 Forfeited performance Shares are a result of the KPI achievement rate of 63.5 % and a company factor of 1.0 as determined at the end of the performance period of the LTI plan 2014.

4 Allocations are made as soon as performance shares are transferred within the six-month exercise period after the end of the four-year waiting period.

The members of our Supervisory Board do not hold stock options, convertible bonds or performance shares.

## MANAGERS TRANSACTIONS

In accordance with the relevant legal provisions of Article 19 para. 1 (a) of the Market Abuse Regulation (MAR), the members of MorphoSys AG's Management Board and Supervisory Board and persons related to such members are required to disclose any trading in MorphoSys shares.

During the reporting year, MorphoSys received the following notifications under Article 19 para 1 (a) MAR listed in the table below.

**TAB. 20: MANAGERS TRANSACTIONS IN 2018**

| Party Subject to the Notification Requirement | Function | Date of Transaction in 2018 | Type of Transaction | Aggregated Share Price | Aggregated Volume | Place of Transaction |
|---|---|---|---|---|---|---|
| Markus Enzelberger | Chief Scientific Officer | 09/24/2018 | Disposal | € 91.43 | € 52296.75 | Xetra |
| Simon Moroney | Chief Executive Officer | 09/20/2018 | Disposal | € 93.63 | € 323300.40 | Xetra |
| Simon Moroney | Chief Executive Officer | 09/19/2018 | Disposal | € 94.1 | € 515186.55 | Xetra |
| Markus Enzelberger | Chief Scientific Officer | 08/07/2018 | Disposal | € 107.35 | € 886946.90 | Xetra |
| Markus Enzelberger | Chief Scientific Officer | 08/06/2018 | Purchase of 2,676 shares as part of his remuneration as member of the Managing Board (issuer's own shares) | not numberable | not numberable | Outside a trading venue |

| Party Subject to the Notification Requirement | Function | Date of Transaction in 2018 | Type of Transaction | Aggregated Share Price | Aggregated Volume | Place of Transaction |
|---|---|---|---|---|---|---|
| Malte Peters | Chief Development Officer | 08/06/2018 | Purchase of 3,313 shares as part of his remuneration as member of the Managing Board (issuer's own shares) | not numberable | not numberable | Outside a trading venue |
| Jens Holstein | Chief Financial Officer | 08/06/2018 | Disposal | € 105.58 | € 622,920.00 | Xetra |
| Jens Holstein | Chief Financial Officer | 08/03/2018 | Purchase of 3,417 shares as part of his remuneration as member of the Managing Board (issuer's own shares) | not numberable | not numberable | Outside a trading venue |
| Jens Holstein | Chief Financial Officer | 08/03/2018 | Purchase of shares based on conversion of convertible bonds as part of his remuneration as member of the Managing Board (Convertible Bonds Program 2013) | € 31,875 | € 973,366.875 | Outside a trading venue |
| Jens Holstein | Chief Financial Officer | 08/03/2018 | Disposal | € 105.13 | € 2,59,084.30 | Xetra |
| Dr. Gerald Möller | Member of the Supervisory Board | 05/09/2018 | Purchase | € 88.70 | € 79,830.00 | Xetra |
| Simon Moroney | Chief Executive Officer | 04/11/2018 | Allocation of 3,797 shares as part of his remuneration as member of the Managing Board (Long-Term Incentive Program 2014) (issuer's own shares) | not numberable | not numberable | Outside a trading venue |
| Jens Holstein | Chief Financial Officer | 04/11/2018 | Allocation of 2,600 shares as part of his | not numberable | not numberable | Outside a trading venue |

| Party Subject to the Notification Requirement | Function | Date of Transaction in 2018 | Type of Transaction | Aggregated Share Price | Aggregated Volume | Place of Transaction |
|---|---|---|---|---|---|---|
| | | | remuneration as member of the Managing Board (Long-Term Incentive Program 2014) (issuer's own shares) | | | |
| Markus Enzelberger | Chief Scientific Officer | 04/11/2018 | Allocation of 572 shares as part of his remuneration as member of the Managing Board (Long-Term Incentive Program 2014) (issuer's own shares) | not numberable | not numberable | Outside a trading venue |
| Simon Moroney | Chief Executive Officer | 04/10/2018 | Acceptance of 9,884 stock options to subscribe for up to 2 shares each within the compensation as a Management Board Member (Stock Option-Program 2018) | not numberable | not numberable | Outside a trading venue |
| Jens Holstein | Chief Financial Officer | 04/10/2018 | Acceptance of 6,476 stock options to subscribe for up to 2 shares each within the compensation as a Management Board Member (Stock Option-Program 2018) | not numberable | not numberable | Outside a trading venue |
| Markus Enzelberger | Chief Scientific Officer | 04/10/2018 | Acceptance of 6,476 stock options to subscribe for up to 2 shares each within the compensation as a Management | not numberable | not numberable | Outside a trading venue |

| Party Subject to the Notification Requirement | Function | Date of Transaction in 2018 | Type of Transaction | Aggregated Share Price | Aggregated Volume | Place of Transaction |
|---|---|---|---|---|---|---|
| Malte Peters | Chief Development Officer | 04/10/2018 | Board Member (Stock Option-Program 2018) Acceptance of 6,476 stock options to subscribe for up to 2 shares each within the compensation as a Management Board Member (Stock Option-Program 2018) | not numberable | not numberable | Outside a trading venue |

## AVOIDING CONFLICTS OF INTEREST

Management Board and Supervisory Board members are required to refrain from any actions that could lead to a conflict of interest with their duties at MorphoSys AG. Such transactions or the secondary employment of Management Board members must be disclosed immediately to the Supervisory Board and are subject to the Board's approval. The Supervisory Board, in turn, must inform the Annual General Meeting of any conflicts of interest and their handling. In the 2018 financial year, no conflicts of interest arose in the Supervisory Board.

## STOCK REPURCHASES

By resolution of the Annual General Meeting on May 23, 2014, MorphoSys is authorized in accordance with Section 71 (1) no. 8 AktG to repurchase its own shares in an amount of up to 10% of the existing common stock. This authorization can be exercised in whole or in part, once or several times by the Company or a third party on the Company's behalf for the purposes specified in the authorizing resolution. It is at the Management Board's discretion to decide whether to carry out a repurchase on a stock exchange, via a public offer or through a public invitation to submit a bid.

In 2018, MorphoSys did not repurchase any shares based on the authorization from the year 2014.

## INFORMATION TECHNOLOGY

In preparation for our planned transition to a commercial biopharmaceutical company, the replacement of our current ERP system with SAP Business By Design was started in April 2018. In parallel, we started the integration of SAP Concur in July 2018 to substitute our legacy systems for absence and business travel management.

IT security and compliance continued to be key topics in the area of information technology in 2018. External security experts checked the technical security controls, inter alia, using simulated different hacking attacks to detect potential weaknesses. The IT Security Awareness Campaign (ISAC) simulated deceitful phishing attacks to sensitize employees for their co-responsibility and essential contribution to IT security in our organization.

Any security-relevant system notifications or user notifications that occurred were analyzed by the internal CERT (Computer Emergency Response Team) with partial external support. As in the previous year, no serious security incidents occurred.

A SIEM (Security Information and Event Management) system was integrated to optimize our cyber defense measures. The previous system for auditing and tracking system changes, configurations and access controls was replaced with a new tool enabling control over changes, configurations and access in our hybrid IT environment. The new tool provides additional intelligence to identify security risks, detect anomalous user behavior and investigate threat patterns in time to prevent damage.

## INFORMATION ON THE INTERNAL CONTROL AND RISK MANAGEMENT SYSTEM WITH REGARD TO THE ACCOUNTING PROCESS UNDER SECTION 289 (4) AND SECTION 315 (4) HGB

In the 2018 financial year, we completed a regular update of the documentation for our existing internal control and risk management system. This update serves to maintain adequate internal control over financial reporting and to ensure the availability of key controls so that financial figures can be reported as precisely and accurately as possible. COSO (Committee of Sponsoring Organizations of the Treadway Commission) defines the corresponding COSO framework ("Internal Control – Integrated Framework"). We use this framework which is the most commonly used for the internal control over financial reporting.

System constraints make it impossible to give absolute assurance that internal controls will always prevent or completely detect all misrepresentations made in the context of financial reporting. Internal controls can only provide reasonable assurance that financial reporting is reliable and verify that the financial statements were prepared in accordance with the IFRS standards that were effective on and endorsed by the European Union (EU) for external purposes.

The consolidated financial statements are subjected to numerous preparation, review and control processes so that they can be reported promptly to the market and to shareholders. To accomplish this, our executives have a coordinated plan for which all internal and external resources are made available. We also use a strict four-eye principle to ensure the accuracy of the key financial ratios reported and the underlying execution of all accounting processes. Numerous rules and guidelines are also followed to ensure the strict separation of the planning, posting and execution of financial transactions. This functional separation of processes is ensured by all of our operating IT systems through an appropriate assignment of rights. External service providers regularly review the implementation of and compliance with these guidelines as well as the efficiency of the accounting processes.

Predicting future events is not the job of our internal control and risk management system. Our risk management system does, however, ensure that business risks are detected and assessed early. The risks identified are eliminated or at least brought to an acceptable level using appropriate corrective measures. Special attention is given to risks that could jeopardize us.

The Management Board ensures that risks are always dealt with responsibly and keeps the Supervisory Board informed of any risks and their development. Detailed information on our risks and opportunities can be found in the "Risk and Opportunity Report."

## ACCOUNTING AND EXTERNAL AUDIT

We prepare our financial statements in accordance with the provisions of the German Commercial Code (HGB) and the Stock Corporation Act (AktG).

The consolidated financial statements are prepared in accordance with International Financial Reporting Standards ("IFRS") and take into account the recommendations of the International Financial Reporting Standards Interpretations Committee (IFRS IC). We have applied all standards and interpretations that were effective on and endorsed by the European Union (EU) as at December 31, 2018. There were no standards or interpretations as at December 31, 2018, impacting our consolidated financial statements for the years ended December 31, 2018 and 2017, that were effective but not yet endorsed. As a result, our consolidated financial

statements comply with both the IFRSs published by the International Accounting Standards Board (IASB) and those adopted by the EU. These consolidated financial statements also take into account the supplementary provisions under commercial law, which must be applied in accordance with Section 315e (1) of the German Commercial Code (Handelsgesetzbuch – HGB).

For the election of our auditor, the Audit Committee of the Supervisory Board submits a nomination proposal to the Supervisory Board. At the 2018 Annual General Meeting, PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft was appointed as auditor for the 2018 financial year. As proof of its independence, the auditor submitted an Independence Declaration to the Supervisory Board. The lead auditor of these consolidated financial statements was Stefano Mulas, who has audited the consolidated financial statements since 2018. PricewaterhouseCoopers GmbH has been our auditor since the 2011 financial year. Information on audit-related fees and all other fees provided by PricewaterhouseCoopers GmbH to us during the 2018 financial year can be found in the Notes under Item 6.1.

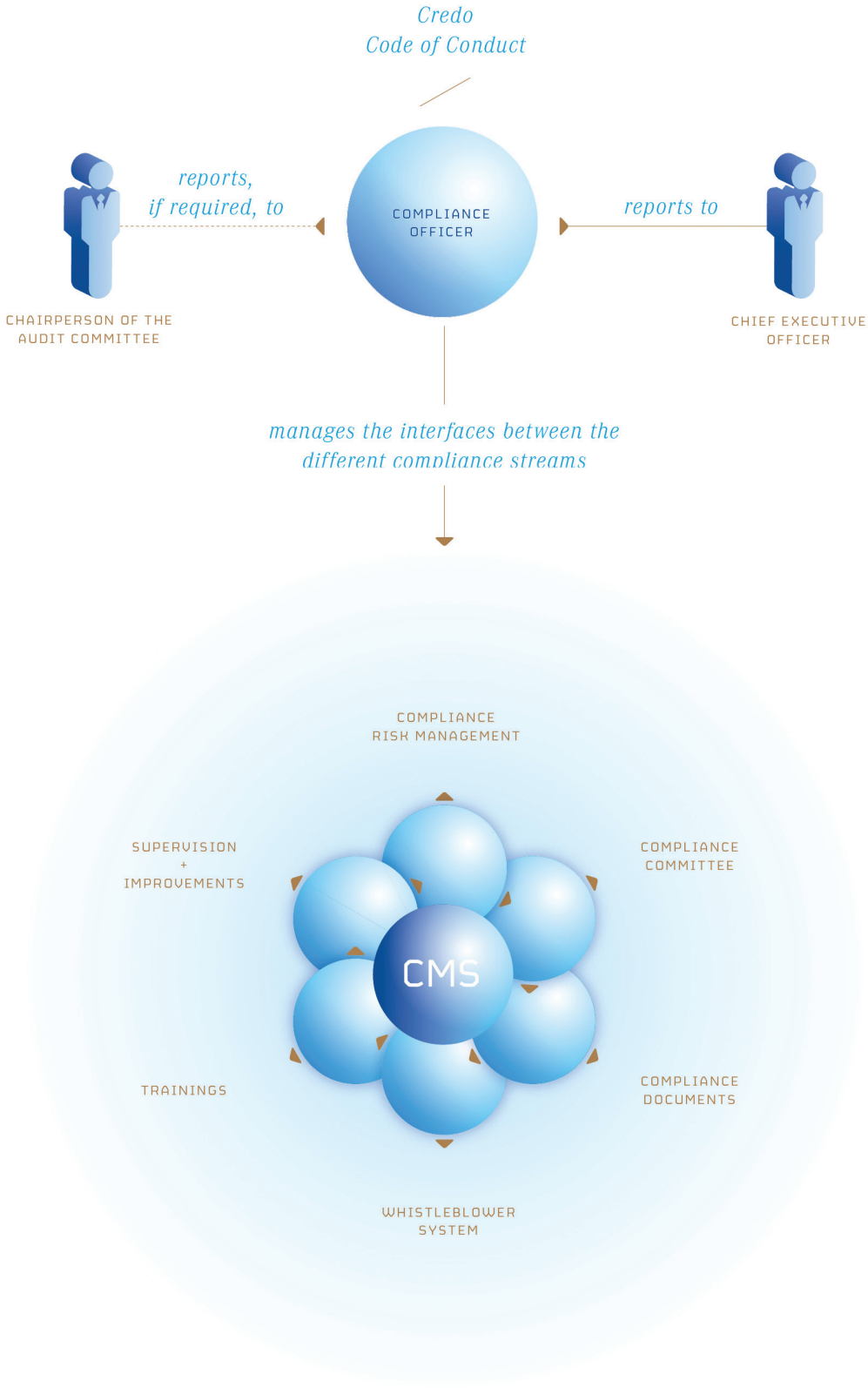
## COMPLIANCE MANAGEMENT SYSTEM

Our basic mechanisms of the Compliance Management System (CMS) are presented in the section "Relevant Information on Corporate Governance Practices." In addition to this information, the responsibilities within our compliance organization are shown in Figure 16.

The identification and assessment of compliance risks are an important part of the CMS, and feed the overall CMS strategic development. Our main compliance-relevant risk areas are evaluated using a systematic approach, taking into account our current business strategy and priorities. In the 2018 financial year, we carried out a compliance risk analysis, including anti-bribery and corruption risks. Risk mitigation measures are being identified for the areas requiring action. As part of the CMS, employees are given the opportunity to report suspected breaches of law within the MorphoSys Group in a protected manner.

In connection with the General Data Protection Regulation of the EU (Regulation (EU) 2016/679 – "GDPR") which came into effect on May 25, 2018, we implemented various procedures in 2018 to safeguard compliance with the GDPR.

FIG. 16: COMPLIANCE MANAGEMENT SYSTEM (CMS)



## INTERNAL AUDIT DEPARTMENT

Our Internal Audit Department is an essential element of the Corporate Governance structure. The Internal Audit Department assists us in accomplishing our objectives by bringing a systematic approach to evaluate and improve the effectiveness of our risk management, internal control and other corporate governance processes. The accounting and consulting firm KPMG was mandated for 2018 as a co-sourcing partner for the internal auditing process.

The Corporate Internal Audit Department executes on a risk-based audit plan including requirements and recommendations of the Management Board and Supervisory Board's Audit Committee.

Our Internal Audit Department reports regularly to the Management Board. The Head of Internal Audit and the Chief Executive Officer both report to the Supervisory Board's Audit Committee twice a year or on an ad hoc basis when necessary.

Five audits were conducted successfully in the course of 2018. Some areas requiring action were identified and corrective action plans were agreed. The Corporate Internal Audit Department is planning four audits in 2019.

## DISCLOSURES UNDER SECTION 289A (1), SECTION 315A (1) HGB AND EXPLANATORY REPORT OF THE MANAGEMENT BOARD UNDER SECTION 176 (1) SENTENCE 1 AKTG

### COMPOSITION OF COMMON STOCK

As of December 31, 2018, the Company's statutory common stock amounted to € 31,807,035.00 and was divided into 31,807,035 no-par-value bearer shares. Excluding the 281,036 treasury shares held by the Company, the statutory common stock concerns bearer shares with voting rights granting each share one vote at the Annual General Meeting. On January 17, 2019, our Supervisory Board resolved to adjust the share capital to reflect the issuance of new shares in 2018 based on the exercise of 32,537 convertible bonds. This results in an increase of the share capital from € 31,807,035 to € 31,839,572, which was entered in the commercial register on February 2, 2019.

### RESTRICTIONS AFFECTING VOTING RIGHTS OR THE TRANSFER OF SHARES

Our Management Board is not aware of any restrictions that may affect voting rights, the transfer of shares or those that may emerge from agreements between shareholders.

Voting rights restrictions may also arise from the provisions of the German Stock Corporation Act (AktG), such as those under Section 136 AktG, or the provisions for treasury stock under Section 71b AktG.

### SHAREHOLDINGS IN COMMON STOCK EXCEEDING 10% OF VOTING RIGHTS

We are not aware of nor have we been notified of any direct or indirect interests in the Company's common stock that exceed 10% of the voting rights.

### SHARES WITH SPECIAL RIGHTS CONFERRING POWERS OF CONTROL

Shares with special rights conferring powers of control do not exist.

### CONTROL OVER VOTING RIGHTS WITH REGARD TO EMPLOYEE OWNERSHIP OF CAPITAL

Employees who hold shares in the Company exercise their voting rights directly in accordance with the statutory provisions and the Articles of Association as do other shareholders.

## APPOINTMENT AND DISMISSAL OF MANAGEMENT BOARD MEMBERS AND AMENDMENTS TO THE ARTICLES OF ASSOCIATION

The number of Management Board members, their appointment and dismissal and the nomination of the Chief Executive Officer are determined by the Supervisory Board in accordance with Section 6 of the Articles of Association and Section 84 AktG. Our Management Board currently consists of the Chief Executive Officer and three other members. Management Board members may be appointed for a maximum term of five years. Reappointments or extensions in the term of office are allowed for a maximum term of five years in each case. The Supervisory Board may revoke the appointment of a Management Board member or the nomination of a Chief Executive Officer for good cause within the meaning of Section 84 (3) AktG. If a required member of the Management Board is absent, one will be appointed by the court in cases of urgency under Section 85 AktG.

As a rule, the Articles of Association can only be amended by a resolution of the Annual General Meeting in accordance with Section 179 (1) sentence 1 AktG. Under Section 179 (2) sentence 2 AktG in conjunction with Section 20 of the Articles of Association, our Annual General Meeting resolves amendments to the Articles of Association generally through a simple majority of the votes cast and a simple majority of the common stock represented. If the law stipulates a higher mandatory majority of votes or capital, this shall be applied. Amendments to the Articles of Association that only affect their wording can be resolved by the Supervisory Board in accordance with Section 179 (1) sentence 2 AktG in conjunction with Section 12 (3) of the Articles of Association.

## POWER OF THE MANAGEMENT BOARD TO ISSUE SHARES

The Management Board's power to issue shares is granted under Section 5 (5) through (6e) of the Company's Articles of Association and the statutory provisions:

1. Authorized Capital

    a. According to Section 5 (5) of the Articles of Association, with the Supervisory Board's consent, the Management Board is authorized to increase the Company's common stock on one or more occasions by up to € 11,768,314.00 for cash contributions and/or contributions in kind by issuing up to 11,768,314 new, no-par-value bearer shares until and including the date of April 30, 2022 (Authorized Capital 2018-I).

    Shareholders are principally entitled to subscription rights in the case of a capital increase. One or more credit institutions may also subscribe to the shares with the obligation to offer the shares to shareholders for subscription. With the Supervisory Board's consent, the Management Board is, however, authorized to exclude shareholder subscription rights:

    aa) in the case of a capital increase for cash contribution, to the extent necessary to avoid fractional shares; or

    bb) in the case of a capital increase for contribution in kind; or

    cc) in the case of a capital increase for cash contribution when the new shares are placed on a domestic and/or foreign stock exchange in the context of a public offering.

    The total shares to be issued via a capital increase against contribution in cash and/or in kind, excluding preemptive rights and based on the authorizations mentioned above, shall not exceed 20% of the common stock. The calculation used is based on either the effective date of the authorizations or the exercise of the authorizations, whichever amount is lower. The 20% limit mentioned above shall take into account (i) treasury shares sold excluding preemptive rights after the effective date of these authorizations (unless they service the entitlements of members of the Management Board and/or employees under employee participation programs), (ii) shares that are issued from other authorized capital existing on the effective date of these authorizations and excluding preemptive rights during the effective period of these authorizations or resolved by the

same Annual General Meeting that resolved these authorizations, and (iii) shares to be issued during the effective period of these authorizations to service convertible bonds and/or bonds with warrants whose basis for authorization exists on the effective date of these authorizations provided that the convertible bonds and/or bonds with warrants have been issued with the exclusion of the preemptive rights of shareholders (unless they service the entitlements of members of the Management Board and/or employees under employee participation programs).

With the Supervisory Board's consent, the Management Board is authorized to determine the further details of the capital increase and its implementation.

b) Pursuant to Section 5 (6) of the Articles of Association, with the Supervisory Board's consent, the Management Board is authorized to increase the common stock of the Company against contribution in cash once or several times by a total of up to € 2,915,977.00 until and including April 30, 2022 by issuing up to 2,915,977 new no-par-value bearer shares (Authorized Capital 2017-I).

Shareholders are principally entitled to subscription rights in the case of a capital increase. One or more credit institutions may also subscribe to the shares with the obligation to offer the shares to shareholders for subscription. With the Supervisory Board's consent, the Management Board is, however, authorized to exclude shareholder subscription rights:

aa) to the extent necessary to avoid fractional shares; or

bb) if the issue price of the new shares is not significantly below the market price of shares of the same class already listed and the total number of shares issued against contribution in cash, excluding subscription rights, during the term of this authorization does not exceed 10% of the common stock on the date this authorization takes effect or at the time it is exercised, in accordance with or in the respective application of Section 186 (3) sentence 4 AktG.

The total number of shares to be issued via capital increases against contribution in cash, excluding subscription rights and based on the authorizations mentioned above, shall not exceed 20% of the common stock when calculated based on the authorizations' effective date or exercise, whichever amount is lower. This 20% limit shall take into account (i) treasury shares sold with the exclusion of subscription rights after the effective date of these authorizations (unless they service the entitlements of members of the Management Board and/or employees under employee participation programs); (ii) shares to be issued with the exclusion of subscription rights during the effective period of these authorizations from other authorized capital existing on the effective date of these authorizations or to be resolved by the same Annual General Meeting resolving these authorizations; and (iii) shares to be issued during the effective period of these authorizations to service bonds with conversion or warrant rights, whose authorization basis exists on the effective date of these authorizations, to the extent the bonds with conversion or warrant rights were issued with the exclusion of shareholders' subscription rights (unless they service the entitlements of members of the Management Board and/or employees under employee participation programs).

With the Supervisory Board's consent, the Management Board is authorized to determine the further details of the capital increase and its implementation.

2. Conditional Capital

a. According to Section 5 (6b) of the Articles of Association, the Company's common stock is conditionally increased by up to € 5,307,536.00, divided into a maximum of 5,307,536 no-par-value bearer shares (Conditional Capital 2016-I). The conditional capital increase serves solely as a means to grant new shares to the holders of conversion or warrant rights, which will be issued by the company or companies in which the Company has a direct or indirect majority interest according to the authorizing resolution of the Annual General Meeting on June 2, 2016, under Agenda Item 7 letter a). The shares will be issued at the respective conversion or exercise

price to be determined in accordance with the resolution above. The conditional capital increase will only be carried out to the extent that the holders of conversion or warrant rights exercise these rights or fulfill conversion obligations under such bonds. The shares will be entitled to dividends as of the beginning of the previous financial year, provided they were issued before the start of the Company's Annual General Meeting, or as of the beginning of the financial year in which they were issued.

b. According to Section 5 (6e) of the Articles of Association, the Company's common stock is conditionally increased by up to € 188,985.00 through the issue of up to 188,985 new no-par-value bearer shares of the Company (Conditional Capital 2008-III). The conditional capital increase will only be executed to the extent that holders of the convertible bonds exercise their conversion rights for conversion into ordinary shares of the Company. The new shares participate in the Company's profits from the beginning of the financial year, for which there has been no resolution on the appropriation of accumulated income at the time of issuance. With the Supervisory Board's consent, the Management Board is authorized to determine the further details of the capital increase and its implementation. On January 17, 2019, our Supervisory Board resolved to adjust the conditional capital to reflect the issuance of new shares in 2018 based on the exercise of 32,537 convertible bonds. This results in a reduction of the conditional capital 2008-III from EUR 188,985 to EUR 156,448, which was entered in the commercial register on February 1, 2019.

c. According to Section 5 (6g) of the Articles of Association, the Company's common stock is conditionally increased by up to € 995,162.00 through the issue of up to 995,162 new no-par-value bearer shares of the Company (Conditional Capital 2016-III). The conditional capital serves to meet the obligations of subscription rights that have been issued and exercised based on the authorization resolved by the Annual General Meeting of June 2, 2016 under Agenda Item 9 letter a). The conditional capital increase will only be executed to the extent that holders of subscription rights exercise their right to subscribe to shares of the Company. The shares will be issued at the exercise price set in each case as the issue amount in accordance with Agenda Item 9 letter a) subparagraph (8) of the Annual General Meeting's resolution dated June 2, 2016; Section 9 (1) AktG remains unaffected. The new shares are entitled to dividends for the first time for the financial year for which there has been no resolution by the Annual General Meeting on the appropriation of accumulated income. The Management Board, and the Company's Supervisory Board where members of the Management Board are concerned, is authorized to determine the additional details of the conditional capital increase and its execution.

## POWER OF MANAGEMENT BOARD TO REPURCHASE SHARES

The Management Board's power to repurchase the Company's own shares is granted in Section 71 AktG and by the authorization of the Annual General Meeting of May 23, 2014:

Until and including the date of April 30, 2019, the Company is authorized to repurchase its own shares in an amount of up to 10% of the common stock existing at the time of the resolution (or possibly a lower amount of common stock at the time of exercising this authorization) for any purpose permitted under the statutory limits. The repurchase takes place at the Management Board's discretion on either the stock exchange, through a public offer or public invitation to submit a bid. The authorization may not be used for the purpose of trading in the Company's own shares. The intended use of treasury stock acquired under this authorization may be found under Agenda Item 9 of the Annual General Meeting of May 23, 2014. These shares may be used as follows:

1. The shares may be redeemed without the redemption or its execution requiring a further resolution of the Annual General Meeting.
2. The shares may be sold other than on the stock exchange or shareholder offer if the shares are sold for cash at a price that is not significantly below the market price of the Company's shares of the same class at the time of the sale.

3. The shares may be sold for contribution in kind, particularly in conjunction with company mergers, acquisitions of companies, parts of companies or interests in companies.

4. The shares may be used to fulfill subscription or conversion rights resulting from the exercise of options and/or conversion rights or conversion obligations for Company shares.

5. The shares may be offered or transferred to employees of the Company and those of affiliated companies, members of the Company's management and those of affiliated companies and/or used to meet commitments or obligations to purchase Company shares that were or will be granted to employees of the Company or those of affiliated companies, members of the Company's management or managers of affiliated companies. The shares may also be used to fulfill obligations or rights to purchase Company shares that will be agreed with the Company's employees, members of the senior management and affiliates in the context of employee participation programs.

If shares are used for the purposes mentioned above, shareholder subscription rights are excluded, with the exception of share redemptions.

## MATERIAL AGREEMENTS MADE BY THE COMPANY THAT FALL UNDER THE CONDITION OF A CHANGE OF CONTROL AFTER A TAKEOVER BID

The Company has not entered into any material agreements that fall under the condition of a change of control after a takeover bid.

## COMPENSATION AGREEMENTS CONCLUDED BY THE COMPANY WITH MANAGEMENT BOARD MEMBERS AND EMPLOYEES IN THE EVENT OF A TAKEOVER BID

Following a change of control, Management Board members may terminate their service contract and demand the fixed salary and annual bonus still outstanding until the regular end of the service contract, however at least 200% of the fixed yearly gross salary and the annual bonus. Moreover, in such a case, all stock options, convertible bonds and performance shares granted will become vested immediately and can be exercised after the expiration of the statutory vesting or blackout periods.

Following a change of control, some Senior Management Group members may also terminate their employment contract and demand a severance payment equal to one annual gross fixed salary and the full contractual bonus for the calendar year in which the termination is exercised, whereby a target achievement rate of 100% shall be applied. Moreover, in such a case, all stock options and performance shares granted will become vested immediately and can be exercised after the expiration of the statutory vesting or blackout periods.

The following cases constitute a change of control: (i) MorphoSys transfers all or a material portion of the Company's assets to an unaffiliated entity, (ii) MorphoSys merges with an unaffiliated entity, (iii) MorphoSys AG as dominated company becomes party to an agreement pursuant to Section 291 of the German Stock Corporation Act or MorphoSys is integrated in accordance with Section 319 of the German Stock Corporation Act, or (iv) a shareholder or third party directly or indirectly holds 30% or more of MorphoSys's voting rights.

### h) Subsequent Events

On January 26, 2019, we announced that in our lawsuit against Janssen Biotech and Genmab A/S, the United States (U.S.) District Court of Delaware, based on a hearing held November 27, 2018, ruled in a Court Order on January 25, 2019, that the asserted claims of three MorphoSys patents with U.S. Patent Numbers 8,263,746, 9,200,061 and 9,758,590 are invalid. The Court thus granted a motion for Summary Judgement of invalidity filed by Janssen Biotech and Genmab, A/S against the three patents held by MorphoSys. As a result of this decision, the jury trial scheduled for February 2019 to consider Janssen's and Genmab's alleged infringement and the validity of the MorphoSys patents did not take place. On January 31, 2019 we announced that we had settled the

dispute with Janssen Biotech and Genmab A/S. The parties agreed to drop the mutual claims related to the litigation: MorphoSys dismissed claims for alleged patent infringement against Janssen Biotech and Genmab A/S and agreed not to appeal from the court order dated January 25, 2019. Janssen and Genmab dismissed their counterclaims against MorphoSys.

In early February 2019, we announced the appointment of David Trexler as President and Member of the Board of Directors of MorphoSys US Inc. effective February 6, 2019. Mr. Trexler will lead the further development of MorphoSys's U.S. subsidiary with a focus on building commercial capabilities. Mr. Trexler joins MorphoSys from EMD Serono, a subsidiary of Merck KGaA, Darmstadt. AT EMD Serono, he was responsible, among other things, for establishing the first commercial organization of Merck KGaA's oncology division in the U.S. and for the market launch of the cancer drug avelumab for the treatment of metastatic Merkel cell carcinoma.

On February 19, 2019, Simon Moroney, CEO and co-founder of MorphoSys AG (informed the Company's Supervisory Board that he has decided not to renew his contract as a member of the company's Management Board. As a result of his decision, Dr. Moroney will step down as CEO on expiry of his current contract on June 30, 2020, or when a successor is appointed, whichever comes sooner.

At the end of February 2019, our partner Janssen announced that it had received U.S. FDA approval for Tremfya® One-Press, a single-dose, patient-controlled injector for adults with moderate-to-severe plaque psoriasis. This is a device that allows patients to administer the drug subcutaneously by themselves and is thus intended to provide a higher convenience to psoriasis patients with respect to the treatment of their chronic disease.

On March 7, 2019 MorphoSys announced that during the first quarter of 2019, the Company in agreement with the FDA implemented an amendment of the B-MIND study by introducing a co-primary endpoint into the trial. The scientific rationale for the amendment is based on published literature as well as MorphoSys's own pre-clinical data, which indicate that MOR208 might be particularly active in patients who can be characterized by the presence of a certain biomarker. Discussions with the FDA regarding the biomarker assay are currently being planned and are expected to take place in the middle of 2019. The pre-planned, event-driven interim analysis of B-MIND remains projected to take place in the second half of 2019. Depending on the outcome of the interim analysis, an increase from 330 to 450 patients may be required, in which case an event-driven primary analysis of the study is expected in the first half of 2021.

## 5. ADDITIONAL BUSINESS INFORMATION

### Business Overview

This section provides background information on our Proprietary Development and Partnered Discovery programs and our technologies. For information on events related to our programs and technologies that occurred during 2018, please refer to Section 4a – Group Management Report – Operations and Business Environment – of this report. For information on respective events that occurred in 2019, please refer to Section 4h – Group Management Report – Subsequent Events.

Our Proprietary Development activities are currently focused on the five clinical candidates:

- MOR208 – an antibody for the treatment of hematological (blood) cancers for which MorphoSys holds exclusive worldwide commercial rights
- MOR202 – an antibody for the treatment of multiple myeloma and other cancers as well as certain autoimmune diseases for which we have signed a regional licensing agreement with I-Mab Biopharma for development and commercialization in China, Hong Kong, Taiwan and Macao
- MOR106 – an antibody for the treatment of inflammatory diseases for which MorphoSys and Galapagos entered into an exclusive license agreement with Novartis in July 2018
- MOR103/GSK3196165 – an antibody that we have fully out-licensed to GlaxoSmithKline (GSK) and which is currently in clinical development at GSK for the treatment of rheumatoid arthritis

- MOR107 – a lanthipeptide developed by our subsidiary, Lanthio Pharma which is currently in preclinical testing in oncology settings.

In addition to the programs listed above, we are pursuing several proprietary programs in earlier-stage research and development, including MOR210, a preclinical antibody that was licensed to I-Mab in November 2018 for China and certain other territories in Asia.

Our most advanced Partnered Discovery products and product candidates include:

Guselkumab (Tremfya®) – a HuCAL antibody targeting IL-23 that is being developed and commercialized by our partner Janssen in plaque psoriasis and other indications. Guselkumab (Tremfya®) is approved in the United States, Canada, European Union, Japan and a number of other countries worldwide.

Gantenerumab - a HuCAL antibody targeting amyloid beta that is in clinical testing by our partner Roche for the treatment of Alzheimer's disease.

Other programs - In addition to the two programs above, we have a large number of programs in various stages of research and development from our partnerships with major pharmaceutical companies.

As of December 31, 2018, for both our proprietary and partnered programs, we had 61 programs in discovery and 25 programs in preclinical development.

The majority of our Proprietary Development product candidates and all product candidates in our Partnered Discovery programs have been discovered and engineered using our advanced antibody technology platforms. Our core platforms include:

HuCAL (Human Combinatorial Antibody Library)—HuCAL is our original technology platform, which constitutes a collection or "library" of several billion distinct fully human antibodies. This platform enables rapid selection of antibodies having high affinity and specificity as well as systematic optimization of antibodies to precisely-defined specifications to increase the probability of successful clinical development.

Ylanthia—Ylanthia is our newest antibody library, which comprises over 100 billionfully human antibodies. Ylanthia enables the generation of fully human antibody candidates with optimized biophysical properties, which we believe offer a number of important advantages over competing platforms. This platform builds on our experience in generating more than 100 therapeutic product candidates using our original HuCAL platform. We believe Ylanthia will be the source of the next generation of therapeutic antibody candidates in our and our partners' future pipelines.

Lanthipeptides—Our lanthipeptide platform opens up new possibilities for discovering product candidates based on highly specific and stable peptides, which are intended to bind and activate only one target receptor subtype.

The newest addition to the technology portfolio is our proprietary Helix-Turn-Helix (HTH) peptide technology. In contrast to the lanthipeptides that are stabilized by amino acid modifications, the HTH peptides are stabilized by their structure.

Please see "—Our Technology Platforms" for a more detailed description of our antibody technologies.

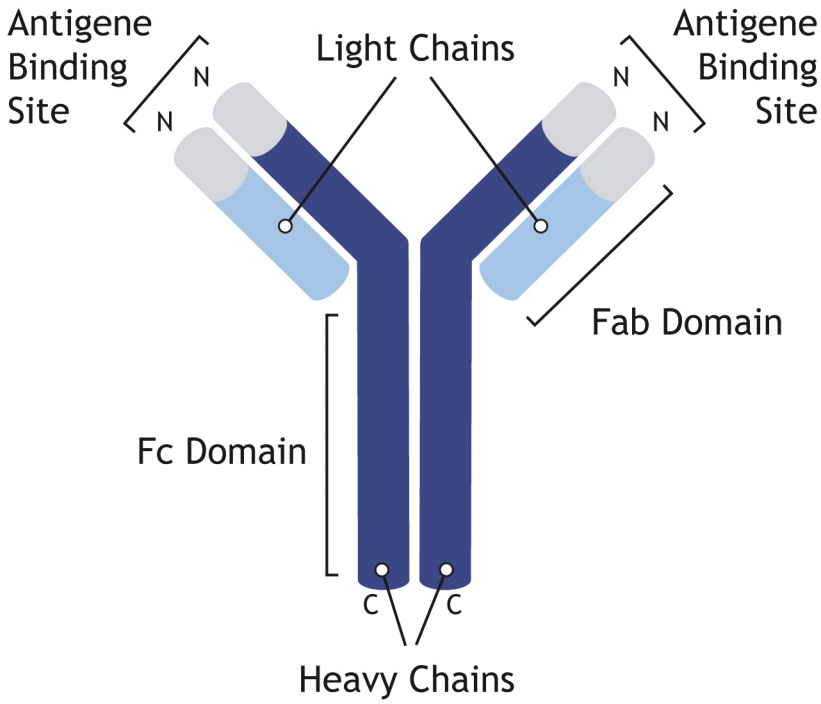
We are committed to investing in our platforms, generating new therapeutics and developing them into products that address significant unmet medical needs.

We have an internationally-trained, multi-cultural team of more than 300 employees and consultants, including a research and development team of approximately 260 scientists, clinicians and support staff. Our management team and senior experts have deep experience and capabilities in biology, chemistry, product discovery and clinical development.

## BACKGROUND ON ANTIBODIES AS THERAPEUTIC AGENTS

Antibodies, also known as immunoglobulins (Ig), are large, Y-shaped complex proteins that the immune system uses to neutralize pathogens. Antibodies recognize and bind to foreign entities, such as bacteria and viruses, and remove them from the bloodstream. Antibodies are essential to human life and between one and two billion antibodies are continuously flowing throughout our bloodstream, fighting infections and diseases.

The antibody molecule itself has two distict functions: Firstly, antibodies have the ability to recognize and attach themselves to pathogenic, or disease-causing, foreign molecules; and secondly, in recognizing and attaching themselves to these pathogenic molecules, antibodies act as markers, signaling to other parts of the bodies' own immune system to attack and eliminate the pathogen.




As illustrated above, an IgG antibody, for example, consists of four polypeptide chains, two identical heavy chains and two identical light chains, joined by chemical linkages known as disulfide bridges. The antigen-binding fragment, or Fab, is a region on an antibody that binds to antigens. It is composed of one constant and one variable region of each of the heavy and the light chain. The variable region acts as the "business" end of the antibody for recognizing pathogens. The specific structure recognized by the variable region of an antibody, whether a portion of a protein, another biological molecule or a unique molecule of a pathogen, is known as an antigen. An antibody and the antigen that it recognizes fit together like a lock and key.

The Fc region, which resides at the other end of the antibody, interacts with the effector cells of the immune system, and provides the signal that activates these cells to attack the pathogen. When an antigen is detected, several types of immune system cells work together to recognize and respond to it. These responses include the stimulation of B cells to produce additional antibodies and the stimulation of effector cells, including T cells and natural killer, or NK, cells that act to eliminate the pathogen or foreign molecule.

The first methods for producing specific single defined antibodies that recognize a single antigen, or monoclonal antibodies, in order to use them as therapeutics were developed approximately 40 years ago. While cancer and inflammatory conditions have been the two largest disease areas for therapeutic antibody discovery, the broad applicability of antibodies has led to a rapid expansion of their use in other indications, including infectious

diseases, metabolic conditions and neurodegenerative diseases. As a result, more than 50 antibodies are currently approved for marketing in various clinical applications. Amongst these are therapeutic antibodies which label and/or block the activity of cell surface receptors or signaling molecules, stimulate the activity of cells or lead to their elimination by effector cells, and bind toxic substances from the bloodstream to accelerate their elimination.

Initially, monoclonal antibodies were derived from mice. However, antibodies derived from mice are of limited use as therapeutic agents since the human immune system recognizes such antibodies as foreign molecules and may trigger a defense reaction against them. Technological advances over the last three decades have allowed the modification of antibody structures to make them more "human-like", culminating in the creation of fully human antibodies. Currently, it is possible to generate fully human antibodies from transgenic mice. With our Human Combinatorial Antibody Library (HuCal), we have developed a technology for the *in vitro* generation of highly specific and fully human antibodies. Ylanthia, which is our most recent antibody technology platform, comprises more than 100 billion distinct, different, fully human antibodies.

With our acquisition of Lanthio Pharma B.V. in 2015, we gained full access to Lanthio Pharma's proprietary LanthioPep technology, which is focused on the generation and development of lanthipeptides. Our lanthipeptide platform opens up new possibilities for discovering product candidates based on highly specific and stable peptides, which are intended to bind and activate only one target receptor subtype. The newest addition to the technology portfolio is our proprietary Helix-Turn-Helix (HTH) peptide technology. In contrast to the lanthipeptides that are stabilized by amino acid modifications, the HTH peptides are stabilized by their structure. MorphoSys's peptide technology aims at generating a novel class of structured and eminently stable peptides enabling highly selective and high affinity target binding. Potential applications of peptides include the use as stand-alone drugs, as fusion partners to proteins, or as agents that are chemically modified or fused to toxins. This approach is intended to enable targeting of novel epitopes and to open up new target space.

Please see "Our Technology Platforms" for a more detailed description of our antibody technologies.

## PROPRIETARY DEVELOPMENT

The Proprietary Development segment focuses on developing therapeutic agents based on our proprietary technology platforms, candidates in-licensed from other companies and programs co-developed with a partner. During clinical development, we determine whether and at which point to pursue a partnership for later development and commercialization. The drug candidate can then be either completely out-licensed or developed further in cooperation with a pharmaceutical or biotechnology company (co-development). Alternatively, individual projects may be developed on a proprietary basis until they reach the market, with MorphoSys commercializing a product in selected regions. The most advanced programs in our Partnered Development segment are discussed below.

| Program | Partner | Target | Disease area | Preclinical | Phase 1 | Phase 2 | Phase 3 |
|---|---|---|---|---|---|---|---|
| MOR208 | - | CD19 | ▪ DLBCL (B-MIND)<br>▪ DLBCL (L-MIND)<br>▪ CLL (COSMOS) | | | | |
| MOR202 | I-Mab Biopharma* | CD38 | Multiple myeloma | | | | |
| MOR106 | Novartis/ Galapagos | IL-17C | ▪ Atopic dermatitis (iv)<br>▪ Atopic dermatitis (sc) | | | | |
| MOR103/ GSK3196165 | GSK | GM-CSF | Inflammation | | | | |
| MOR107** | - | AT2-R | Oncology under investigation | | | | |

6 proprietary or co-developed programs in discovery

Proprietary Development Programs
Out-licensed Proprietary Development Programs

* For Development in China, Hong Kong, Macao, Taiwan
** A phase 1 study in healthy volunteers was completed; currently in preclinical investigation

### MOR208

#### OVERVIEW

MOR208 (formerly known as XmAb5574) is an investigational, humanized Fc-engineered monoclonal antibody directed against the antigen CD19, which is broadly expressed on the surface of B cells, a type of white blood cell, and is thus a target against B cell malignancies. We are currently investigating MOR208 for the treatment of various B cell malignancies, including diffuse large B-cell lymphoma (DLBCL) and chronic lymphocytic leukemia (CLL). The main focus of the current MOR208 development program is on relaped/refractory (r/r) DLBCL, and we have two studies - L-MIND (phase 2) and B-MIND (p2/3) ongoing in that indication. Information on the most recent developments with MOR208 can be found in Section 4a – Group Management Report – Operations and Business Environment.

We are developing MOR208 pursuant to a collaboration and license agreement that we entered into in June 2010 with Xencor, Inc. (Xencor), and are responsible for all ongoing and future development and commercialization activities in connection with MOR208. For more information on this agreement, please refer to Collaboration and License Agreements – Collaboration and License Agreement with Xencor. We currently intend to commercialize MOR208 ourselves in the U.S.

In October 2017, based on preliminary data from the ongoing L-MIND study, the FDA granted breakthrough therapy designation (BTD) for MOR208 in combination with lenalidomide (LEN), for the treatment of patients

with r/r DLBCL who are not eligible for high-dose chemotherapy and autologous stem cell transplantation. The FDA grants this designation to a product candidate intended alone or in combination with one or more other drugs to treat a serious or life-threatening disease or condition when preliminary data indicate that the product candidate may demonstrate substantial improvement over existing therapies on one or more clinically-significant endpoints, such as substantial treatment effects observed early in clinical development. The FDA's grant of breakthrough therapy designation is intended to expedite the development and review of product candidates.

In 2014, we were granted fast track designation for MOR208 by the FDA for the treatment of r/r DLBCL. The FDA's fast track program is designed to facilitate the development and expedite the review of product candidates intended, alone or in combination with one or more other drugs, for the treatment of a serious or life-threatening disease or condition, and that demonstrates the potential to meet an unmet medical need for such diseases or conditions. Also, the FDA and the European Commission have granted orphan drug designation (in 2014) and orphan medicinal product status (in 2015), respectively, for MOR208 for DLBCL and CLL/small lymphocytic lymphoma (SLL).

## TREATMENT OF B CELL MALIGNANCIES AND DLBCL

B cell malignancies include lymphomas such as Non-Hodgkin's Lymphoma, or NHL, including Diffuse Large B-cell lymphoma (DLBCL), and leukemias such as CLL and Acute Lymphoblastic Leukemia (ALL).

First-line treatment of B cell malignancies, including DLBCL, most commonly consists of a combination chemotherapy regimen plus rituximab (Rituxan®), also referred to commonly as R-CHOP (R, rituximab; CHOP, cyclophosphamide, doxorubicin, vincristine and the corticosteroid prednisone). There is a scientific rationale for the replacement of a CD20-targeting approach such as with rituximab (Rituxan®) with a CD19 targeting antibody. First of all, CD19 has been shown to be expressed earlier and more broadly during B cell development than CD20. Secondly, in clinical practice an anti-CD20 approach is often applied by physicians in the relapsed or refractory (r/r) setting, even though patients have already shown a relapse to a prior therapy containing an anti-CD20 antibody. In DLBCL, despite the therapeutic success of first-line R-CHOP, up to 40% of patients become refractory to or relapse after initial treatment with fast progression of disease.

DLBCL patients who are refractory or relapse after R-CHOP have a poor prognosis and few therapeutic options. Treatment options for r/r DLBCL are currently curative high-dose chemotherapy (HDCT) and subsequent autologous stem cell transplantation (ASCT), if the patients are relatively fit. In late 2017, a first chimeric antigen receptor-T cell (CAR-T) therapy (Yescarta®) was approved for the treatment of r/r DLBCL. It remains to be seen what proportion of r/r patients will be considered to be eligible for such therapies, and how broadly such therapies will be available for the foreseeable future. For those DLBCL patients who are not eligible for HDCT and ASCT, or for CAR-T treatments, current treatments options are limited. For more information on approved products and products in development, please refer to Competition – MOR 208.

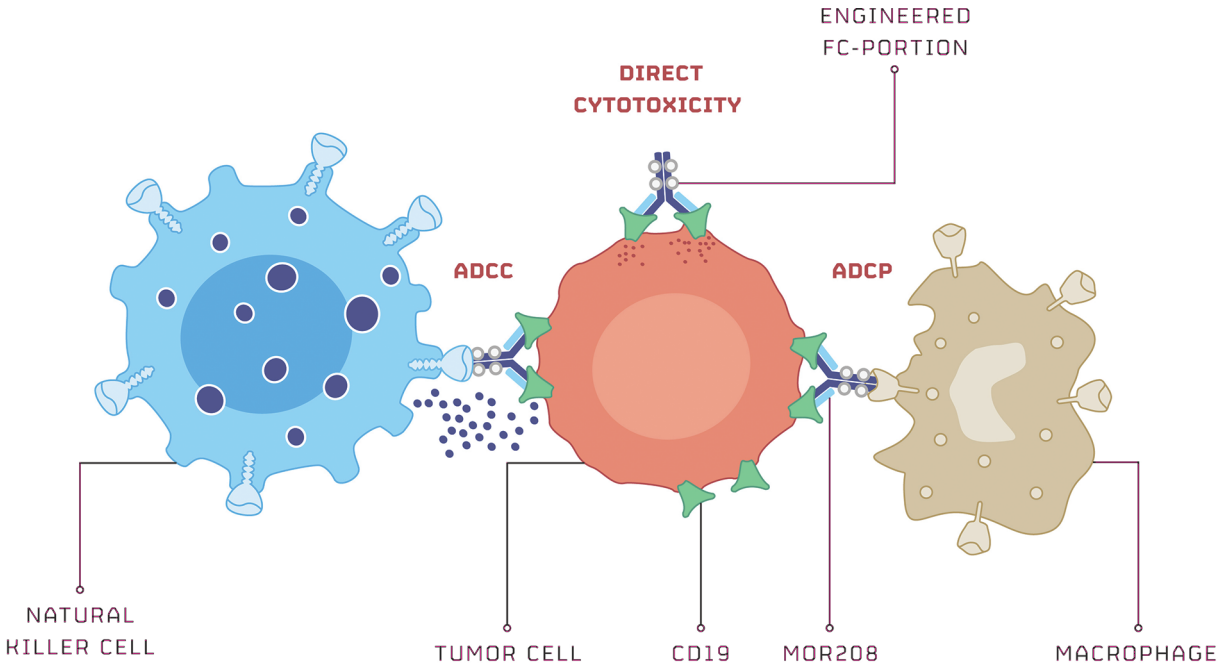
In r/r DLBCL, approximately half of patients are eligible for HDCT followed by ASCT. Of those r/r DLBCL patients who can be transplanted, about 50% suffer a further relapse. Therefore, the vast majority of DLBCL patients relapsing after first-line treatment will ultimately be treated in a palliative setting, utilizing such regimens as rituximab plus bendamustine. There remains a high unmet need for novel therapies in r/r patients, especially in those not able to undergo HDCT and ASCT.

## MOR208 FOR TREATMENT OF B CELL MALIGNANCIES, INCLUDING DLBCL

### MOR208 – MECHANISM OF ACTION

MOR208 binds to the CD19 antigen, which is broadly and homogeneously expressed across various B cell-derived blood cancers. According to preclinical findings, CD19 is able to enhance B cell receptor signalling, which is important for B cell survival and is considered an important therapeutic target for the treatment of B cell-related lymphomas and leukemias.

The suggested mechanism of action of MOR208 is as follows: The Fc-engineered antibody MOR208 binds to the CD19 antigen on the surface of blood cancer cells. This attracts the immune system's natural killer cells, and/or macrophages. Natural killer cells and macrophages attach themselves to the cancer cells by way of the MOR208 antibody and kill them through the processes of antibody-dependent cell-mediated cytotoxicity (ADCC) and antibody-dependent cellular phagocytosis (ADCP). MOR208's engineered Fc region is designed to designed to increase the effectiveness of the body's immune reaction to cancer cells. In addition to its immune-mediated functions, the binding of MOR208 to CD19 may also lead to the direct killing of the tumor cells, or direct cytotoxicity. The below figure depicts the suggested mechanisms of action of MOR208:




We believe that, if approved by the authorities, MOR208 may offer a differentiated therapeutic approach in DLBCL. In particular for r/r DLBCL patients who are ineligible for or not willing to undergo HDCT and ASCT, available treatment options are limited. It is our goal to further clinically investigate MOR208 in this patient segment who are in need of more treatment options.

**DEVELOPMENT OF MOR208**

MOR208 has been or is being investigated in seven clinical trials in the following indications: DLBCL, NHL, CLL/SLL and B cell acute lymphoblastic leukemia (B-ALL). A phase 1 trial in CLL/SLL and a phase 2 trial in B-ALL were completed in 2013 and 2015, respectively. A phase 2 trial in NHL (including r/r DLBCL, mantle cell lymphoma (MCL), follicular lymphoma (FL), and other indolent NHL) and an investigator-initiated phase 2 trial in CLL/SLL are currently ongoing. Three additional trials (two in DLBCL and one in CLL) in combination with other therapies are also currently ongoing.

The main focus of the current MOR208 development program is on r/r DLBCL. Our L-MIND and B-MIND trials are being conducted in this indication. Both trials are focusing on r/r DLBCL patients who are not eligible for high-dose chemotherapy and subsequent autologous stem cell transplantation. Following its review of preliminary data from the L-MIND study, in October 2017 the FDA awarded breakthrough therapy designation for MOR208, in combination with LEN for the treatment of non-transplant eligible patients with r/r DLBCL.

**ACTIVE CLINICAL COMBINATION TRIALS**

Currently three clinical combination studies with MOR208 are ongoing – L-MIND, B-MIND and COSMOS.

L-MIND: The L-MIND study is a phase 2 trial initiated in April 2016 to evaluate MOR208 in combination with LEN in patients suffering from r/r DLBCL. The trial was designed as an open-label, single-arm study with the primary endpoint being overall response rate (ORR) by independent review committee, with multiple secondary endpoints, including progression-free survival (PFS), overall survival (OS) and time to progression (TTP). We completed the safety run-in phase of the L-MIND trial in August 2016. No unexpected safety signals have been detected and the trial was continued as planned. The trial enrolled patients with r/r DLBCL after up to three prior lines of therapy, with at least one prior therapy including an anti-CD20 targeting therapy, such as rituximab (Rituxan®). Patients enrolled could not be candidates for HDCT and ASCT. Patient enrollment was completed in November 2017. The 81 patients enrolled had a median age of 72 years; 40/81 (49%) were in advanced Ann Arbor stage III/IV; had a median of two prior lines of therapy; 32/81 (40%) were refractory to the previous therapy line and 30/81 (37%) were rituximab-refractory in any line. The latest data from the L-MIND study of all 81 enrolled patients were presented at the American Society for Hematology (ASH) Annual Meeting in December 2018. Details of these results can be found in Section 4a – Group Management Report – Operations and Business Environment.We are continuing our discussions with the FDA to evaluate possible paths to market, including the possibility of an expedited regulatory submission and potential approval based primarily on the L-MIND study.

B-MIND: The B-MIND trial is a phase 2/3 randomized, multicenter study in which patients are randomized in a one-to-one fashion to receive either MOR208 in combination with bendamustine or rituximab (Rituxan®) in combination with bendamustine. The study was initiated in September 2016 at 180 centers across Europe, the Asia/Pacific region and the United States and aims to enroll patients suffering from r/r DLBCL. Patients must have been treated previously with at least one but not more than three prior lines of therapy, including one anti-CD20 targeted therapy, such as rituximab (Rituxan®). Patients must not be candidates for HDCT and ASCT. In June 2017, the phase 3 part of B-MIND commenced. Prior to that, the Independent Data Monitoring Committee of the trial had supported its continuation as per protocol and the transition of the study into its phase 3 part based on the available data from the phase 2 safety evaluation. In Q1 2019, in agreement with the FDA the Company implemented an amendment of the B-MIND study by introducing a co-primary endpoint based on a biomarker. Discussions with the FDA regarding the biomarker assay are planned and are expected to take mid-2019.

COSMOS: In addition to the two trials in r/r DLBCL described above, we are currently evaluating MOR208 in a phase 2 trial in CLL and SLL. The trial, named COSMOS, is a two-cohort open-label, multicenter study evaluating the preliminary safety and efficacy of MOR208 combined with idelalisib (cohort A) or venetoclax (cohort B) in patients with r/r CLL or SLL previously treated with Bruton's Tyrosine Kinase inhibitor (BTKi) ibrutinib.

Preliminary safety and efficacy data on all 11 patients enrolled in cohort A were presented at the European Hematological Association (EHA) Annual Congress in June 2018, and preliminary safety and efficacy data on all 13 patients enrolled into cohort B were presented at the ASH Annual Meeting in December 2018. More detailed information on these results can be found in Section 4a – Group Management Report – Operations and Business Environment.

**Completed Clinical Trials**

**Phase 2a Clinical Trial with MOR208 as a single agent in r/r NHL including DLBCL**

We conducted an open-label, phase 2a, multicenter study to assess the activity and safety of weekly doses of 12 mg/kg MOR208 as a single agent in 92 pre-treated patients with various subtypes of r/r NHL, including DLBCL, MCL, and other indolent NHL (iNHL), including FL. Seventy-six of the 92 patients were evaluable for post-baseline response assessment (with 16 patients discontinuing or being withdrawn from the study prior to any post-baseline radiological assessment). The ORR was 36% in the DLBCL subgroup and 30% in iNHL patients

(both based on evaluable patients). Based on all patients with DLBCL and iNHL in the study, the ORR was 26% and 29%, respectively. In addition to patients achieving a partial or complete response (PR, CR), a clinical benefit was also observed in other patients treated with MOR208. The majority of patients (5/6 DLBCL and 12/16 iNHL) with stable disease also had a reduction in the size of the target lesions. This resulted in a disease control rate of 40% in DLBCL and 73% in iNHL patients. Moreover, PFS with MOR208 therapy was observed to be comparable in rituximab-refractory and non-refractory NHL patients. Median PFS was 2.7 months (95% CI 2.1–15.4) in patients with DLBCL, 8.8 months (95% CI 5.3–27.1) in patients with FL and not reached (95% CI 2.0–NA) in patients with other iNHLs. Nine patients treated with MOR208 were still in remission, the longest responses were ongoing for 26 months at data cut-off. Of the 16 patients who discontinued the study or were withdrawn from the study prior to any post-baseline radiological assessment, three patients discontinued or were withdrawn as a result of adverse events: one for dyspnea and one for thrombocytopenia – both considered treatment related by the investigator; one for cytomegalovirus infection – not considered treatment related by the investigator; four discontinued or were withdrawn as a result of death – none of these deaths were considered treatment related by the investigator; one discontinued or was withdrawn as a result of protocol violation; and eight discontinued or were withdrawn as a result of clinical progression or at the investigator's decision without confirmation by imaging (CT or PET-CT).

According to data reported at the ASH 2016 Annual Meeting, the most common adverse events were infusion-related reactions occurring in 12% (11/92) of the patients and neutropenia occurring in 12% (11/92) of patients. The incidence of MOR208 treatment-related serious adverse events was 6% (2/35) in DLBCL and 4% (2/45) in iNHL patients. No treatment-related deaths were reported.

A total of 28 patients (30%) experienced an aggregate of 35 serious adverse events (SAEs), during the course of the study as set forth below. SAEs were experienced in System Organ Classes of general disorders and administration site conditions (eleven patients (12%) experienced twelve SAEs); infections and infestations (seven patients (8%) experienced seven SAEs); blood and lymphatic system disorders (three patients (3%) experienced five SAEs); gastrointestinal disorders (three patients (3%) experienced three SAEs); renal disorders (two patients (2%) experienced two SAEs); respiratory disorders (two patients (2%) experienced two SAEs); cardiac disorders (one patient (1%) experienced one SAE); injury and infestations (one patient (1%) experienced one SAE); hepatobiliary disorders (one patient (1%) experienced one SAE) and neoplasms (one patient (1%) experienced one SAE).

A causal relationship to the administration of MOR208 was suspected in four patients (4%). All of these SAEs occurred in patients with an FL subtype (two patients (6%) experienced two SAEs) and a DLBCL subtype (two patients (6%) experienced two SAEs). These four SAEs included myelodysplastic syndrome, genital herpes, dyspnea, and febrile neutropenia. An SAE of myelodysplastic syndrome was reported for one patient approximately one year after the start of therapy with MOR208. According to the investigator, the event was attributed to previous anti-lymphoma treatment (eight cycles of R-CHOP administered during 2008), in addition to the MOR208 therapy. The sponsor's assessment of the SAE also revealed a family history of cancer and prior exposure to chemotherapeutic agents which are a commonly reported cause of therapy-induced myelodysplastic syndrome, and the chromosomal abnormalities in this patient were consistent with those reported after exposure to alkylating agents with or without rituximab.

**Phase 2 Investigator-Sponsored Trial with MOR208 in CLL (OSU-13031)**

In an investigator-sponsored trial presented in December 2016, investigators evaluated MOR208 in combination with LEN in three cohorts of patients with CLL: previously untreated CLL patients, r/r CLL patients and patients with Richter's Transformation. The trial also included a fourth cohort of ibrutinib-treated CLL patients with identified resistance mutations to ibrutinib in the tumors (molecular relapse) but no confirmed clinical relapse, where MOR208 was added to ibrutinib therapy. Historical data had generally shown poor clinical outcomes in patients who relapse after treatment with the BTKi ibrutinib and whose leukemia cells carry a mutation in the BTK gene prior to relapse.

According to the data presented by investigators at the time, 34 patients had been enrolled in the study, 27 receiving MOR208 in combination with LEN (eleven of whom were in the previously untreated cohort, eleven in the r/r cohort, five in the Richter's Transformation cohort) and seven receiving MOR208 plus ibrutinib.

Ten out of 34 patients (safety cut-off May 31, 2016) (29%) experienced an aggregate of 19 SAEs across all cohorts. SAEs were most frequently reported in the System Organ Classes of metabolism and nutrition disorders (three patients (9%) experienced five SAEs); infections and infestations (three patients (9%) experienced four SAEs); respiratory, thoracic and mediastinal disorders (two patients (6%) experienced two SAEs); general disorders and administration site conditions (two patients (6%) experienced two SAEs) and investigations (two patients (6%) experienced two SAEs). By Preferred Term, the most frequently reported SAEs were dyspnea (two patients (6%) experienced two SAEs) and hypercalcaemia (one patient (3%) experienced two SAEs). All other reported SAEs were single occurrences, including clostridium difficile colitis, metapneumovirus infection, pneumocystis jirovecii pneumonia, sepsis, dehydration, fluid retention, hyponatraemia, confusional state, cholelithiasis, renal failure, death (related to progression of underlying disease), systemic inflammatory response syndrome, blood lactate dehydrogenase increase, weight decrease and infusion-related reaction.

A causal relationship to the administration of MOR208 was suspected in two patients (6%). These two SAEs included an infusion-related reaction with symptoms of feeling warm, facial flushing, nausea, vomiting and dizziness, and one dyspnea.

The most frequent hematological adverse event over all cohorts was thrombocytopenia in 47% of patients (6% grade 3 or higher) and neutropenia in 35% (21% grade 3 or higher). There were no unexpected SAEs reported, and no patient had developed progressive disease at the time of the abstract cut-off date. All enrolled patients were evaluable per protocol. In the cohorts of patients with treatment-naive or relapsed disease, six out of ten evaluable patients achieved partial response as best response. Importantly, responses generally deepened over time in both cohorts. In addition, preliminary evidence of activity against CLL cells with BTK C481S was observed in the cohort of patients with molecular progression on ibrutinib. BTK C481S variant allele frequency decreased or at least stabilized in six out of seven patients.

In total 41 patients were enrolled as of 15 November 2018, thereof 40 received at least the first dose (1 mg/kg) of MOR00208. All patients discontinued MOR208 treatment as per protocol. According to clinicaltrials.gov, the status of the study is active, not recruiting. MorphoSys expects that the preparation of the clinical study report will start in 2019.

**Phase 2 Trial with MOR208 as single agent in ALL**

In 2013, we initiated a phase 2 clinical trial of MOR208 in B cell acute lymphoblastic leukemia (B-ALL). The U.S.-based open-label, multicenter, single-arm clinical trial was designed to assess the efficacy of MOR208 in patients suffering from r/r B-ALL. Secondary outcome measures included response duration, safety and pharmacokinetics of MOR208. A total of 22 patients were treated in this study, and responses to MOR208 therapy were observed in two patients (one CR, and one CR with incomplete hematologic recovery), yielding an ORR of 9.1%. Recruitment was stopped after 22 patients had entered the treatment period.

**CLL Phase 1 and Preclinical Development**

In preclinical studies conducted by Xencor, MOR208 demonstrated FcγR-dependent anti-tumor activity against multiple human B cell lymphomas *in vitro* and anti-tumor effects in mouse lymphoma models. Xencor also demonstrated favorable half-life and B cell depletion in monkey models. Xencor submitted the IND for MOR208 to the FDA in February 2010.

In January 2013, Xencor completed a phase 1 clinical trial of MOR208 in patients with high-risk, heavily-pretreated CLL. Twenty-seven patients were enrolled and were evaluable for response. Dose levels from 0.3 to

12 mg/kg were tested. The trial protocol was amended to include a period of extended dosing for a total of eight patients at the 12 mg/kg dose to study the effect of longer duration of exposure on safety and response rate. The primary endpoints for this clinical trial were safety, pharmacokinetics and immunogenicity. The secondary endpoints for this trial included clinical responses assessed according to International Working Group on CLL (IWCLL) 2008 and 1996 Guidelines. ORR by IWCLL 2008 criteria was 29.6% (eight partial responses in 27 evaluable patients). Using IWCLL 1996 response criteria resulted in a response rate of 66.7% (18 partial responses).

## MOR202

### OVERVIEW

MOR202 is a recombinant human IgG1 HuCAL monoclonal antibody directed against the target molecule CD38. CD38 is a highly expressed and clinically validated target in multiple myeloma (MM). Scientific research suggests that an anti-CD38 antibody also may have therapeutic activity in solid tumors or autoimmune and other diseases driven by autoantibodies, such as light chain amyloidosis or systemic lupus erythematosus.

We are currently conducting a phase 1/2a trial in MM. Data from this study were presented at the ASH Annual Meeting in December 2018 and details can be found in Section 4a – Group Management Report – Operations and Business Environment. During 2018, we announced our decision not to continue development of MOR202 in MM beyond completion of the currently ongoing trial. This is in line with previous announcements that we would not continue to develop MOR202 in MM without having a suitable partner. However, we continue to support our partner I-Mab's development of MOR202 and the planned start of a pivotal clinical trial in MM with the aim to gain approval in MM for the greater Chinese market as planned.

Also during 2018, we made the decision not to start clinical development of MOR202 in NSCLC what we had originally planned. This was due to Genmab and Janssen discontinuing a clinical study of the anti-CD38 antibody daratumumab in combination with a checkpoint inhibitor for the treatment of NSCLC based on an analysis of clinical interim data which identified serious safety issues.

We are continuing to evaluate the development of MOR202 in other indications outside of cancer, including certain autoimmune diseases. We have an exclusive regional licensing agreement for MOR202 with I-Mab Biopharma. Under the terms of the agreement signed in November 2017, I-Mab has the exclusive rights to develop and commercialize MOR202 in China, Taiwan, Hong Kong and Macao. At signing, MorphoSys received an immediate upfront payment of US$ 20 million. We are also entitled to receive additional success-based clinical and commercial milestone payments from I-Mab of up to US$ 100 million, as well as tiered double-digit royalties on net sales of MOR202 in the agreed regions.

### DESCRIPTION OF MULTIPLE MYELOMA AND CURRENT TREATMENT

According to the National Cancer Institute SEER database, MM has an estimated annual U.S. incidence of 30,280. MM causes cancer cells to accumulate in the bone marrow, where they displace and suppress healthy blood progenitor cell populations. MM is also characterized by destructive lytic bone lesions (rounded, punched-out areas of bone), diffuse osteoporosis, bone pain, and the production of abnormal proteins, which accumulate in the urine. Anemia is also present in most MM patients at the time of diagnosis and during follow-up. Anemia in MM is multifactorial and is secondary to bone marrow replacement by malignant plasma cells, chronic inflammation, relative erythropoietin deficiency, and vitamin deficiency.

There is currently no standard multiple myeloma treatment. A patient's individual treatment plan is based on such factors as age and general health, results of laboratory and cytogenetic (genomic) tests, symptoms and disease complications, prior myeloma treatment, patient lifestyle, goals, views on quality of life, and personal preferences. In addition, many cancer centers have developed their own guidelines for treating myeloma.

MM drug therapies consist of two categories. The primary treatment regimens are cytoreductive chemotherapies in combination with stem cell transplantation, aimed at achieving a cure, if possible. In addition, myeloma patients require substantial supportive therapy aimed at managing the complications of the disease (such as bone damage) and ameliorating the side effects of treatment. There are a number of drug classes for the treatment of multiple myeloma: monoclonal antibodies, immunomodulatory drugs (IMiDs), proteasome inhibitors, chemotherapy, histone deacetylase inhibitor, and steroids.

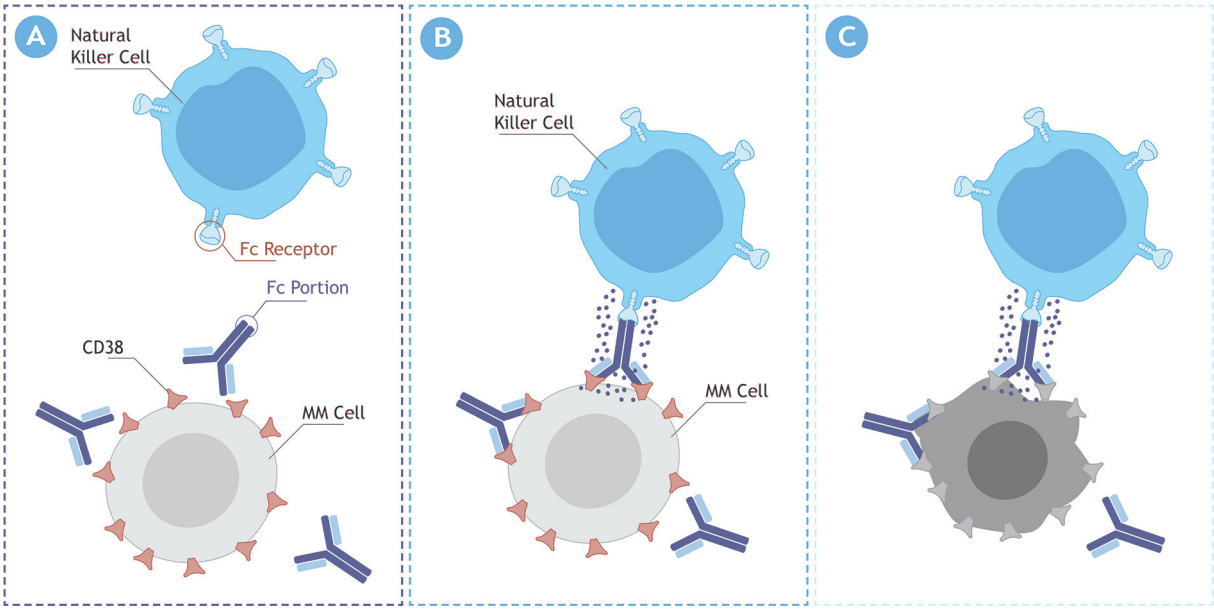
The introduction of CD38 monoclonal antibodies to the treatment landscape of MM, highlighted by the approval of daratumumab, might be transformative. Based on their distinct mechanisms of action, a generally favorable toxicity profile, and single agent activity, CD38 antibodies are considered as attractive partners in combination regimens. Deep responses and prolonged PFS have been achieved in r/r MM patients when CD38 antibodies were combined with immunomodulatory agents or proteasome inhibitors. For more information on the treatment landscape for MM, please see the Competition – MOR 202 section.

## MOR202 FOR THE TREATMENT OF MM

### MOR202 – MECHANISM OF ACTION

MOR202 is our anti-CD38 antibody candidate, which is currently being developed in MM. This antibody recognizes a unique epitope on CD38. Its key activities are ADCC and ADCP. It does not involve complement-dependent cytotoxicity (CDC), an additional mechanism involved in tumor cell killing. In addition, preclinical data point to a low level of NK-cell depletion.

The figure below depicts the suggested mechanism of action of MOR202:




One of the key features of MOR202 is a low frequency of infusion-related reactions, leading to a short infusion time of two hours or less.

## DEVELOPMENT OF MOR202

We are currently investigating MOR202 alone and in combination with immunomodulatory drugs in a phase 1/2a clinical trial program in patients with r/r MM. However, we have made the decision to not develop MOR202 further in MM once this trial is completed. We will continue to support our partner, I-Mab Biopharma, in their development efforts. We filed an IND-equivalent in Germany and Austria to evaluate MOR202 in 2011.

### ACTIVE CLINICAL TRIALS

A phase 1/2a trial in patients with r/r MM is currently ongoing. The dose escalation trial comprises three arms: MOR202, MOR202 in combination with the immunomodulatory drug (IMiD) lenalidomide (LEN), and MOR202 in combination with the IMiD pomalidomide (POM), in each case with low-dose dexamethasone (DEX). Enrollment in the study completed in August 2017 and primary completion analysis was performed at a data cut-off at December 31, 2017, a primary completion clinical study report was compiled and issued in August 2018.

The primary endpoints of the trial are safety, tolerability and recommended dose for MOR202 alone and in combination with immunomodulatory drugs. Secondary outcome measures are pharmacokinetics and preliminary efficacy based on ORR, duration of response, TTP, and PFS.

In the trial, MOR202 was administered as a two-hour or shorter infusion up to the highest planned dose of 16 mg/kg. The latest data were presented at the ASH Annual Meeting in December 2018. Details of these results can be found in Section 4a – Group Management Report – Operations and Business Environment.

### PRECLINICAL DEVELOPMENT

*In vitro* binding studies showed that the binding affinity of MOR202 to CD38 is in the low nanomolar range. The *in vivo* efficacy of MOR202 was demonstrated in MM and lymphoma xenograft models in severe combined immunodeficient (SCID) mice. MOR202 reduced tumor growth, increased survival and decreased bone lysis induced by MM cells inoculated into the tibiae of SCID mice. *In vitro* combination studies of MOR202 with LEN enhanced cytotoxicity on MM cell lines. *In vivo*, the combination of MOR202 with LEN showed synergistic effects on survival and inhibition of MM cell-induced bone lysis.

## MOR106

### OVERVIEW

MOR106 is an investigational fully human IgG1 monoclonal antibody derived from our Ylanthia library and designed to selectively target IL-17C. MOR106 came from the strategic discovery and co-development alliance between Galapagos and MorphoSys, in which both companies contributed their core technologies and expertise. It is the first publicly disclosed monoclonal antibody targeting IL-17C in clinical development worldwide. In preclinical studies, MOR106 has been shown to inhibit the binding of IL-17C to its receptor thus abolishing its biological activity. Results from rodent inflammatory skin models of atopic dermatitis (AD) and psoriasis support clinical development of MOR106 for the treatment of inflammatory diseases. In July 2018, we announced with Galapagos that we had entered in a worldwide exclusive development and commercialization agreement with Novartis Pharma AG (Novartis) for MOR106. More details about this agreement can be found in the Collaborations and License Agreements section.

### DESCRIPTION OF ATOPIC DERMATITIS AND CURRENT TREATMENTS

AD, the most severe and common type of eczema, is a chronic relapsing inflammatory skin disease that causes severe itching, dry skin and rashes, predominantly on the face, inner side of the elbows and knees, and on hands and feet. Scratching of the afflicted skin leads to a vicious cycle causing redness, swelling, cracking, scaling of the skin and an increased risk of bacterial infection. Lichenification, thickening of the skin, is characteristic in older children and adults. The National Eczema Association estimates that atopic dermatitis affects over 30 million Americans or up to 25% of children and 2-3% of adults. 60% of AD patients are diagnosed in the first year of life, and 90% of patients have a disease onset before age five. Symptoms commonly fade during childhood; however, approximately 10-30% of patients will suffer from AD for life. A smaller %age first develop symptoms as adults.

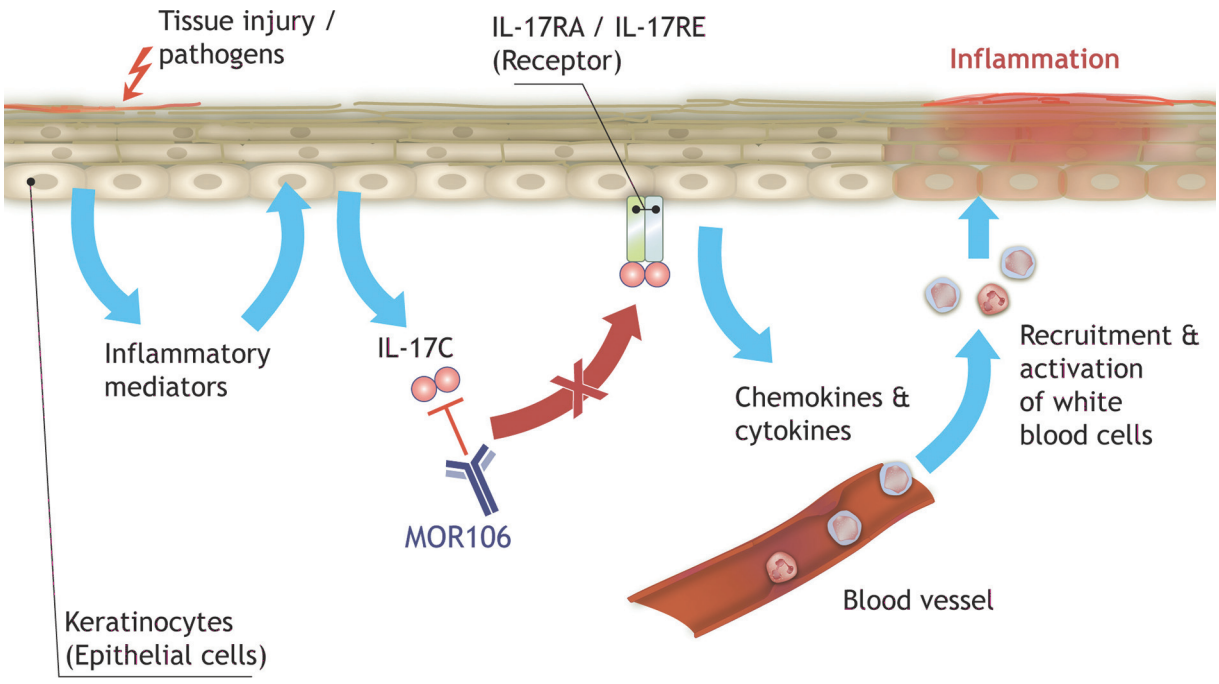
An array of treatment options is used to moisturize skin, reduce inflammation, clear eczema, alleviate itch, and maximize restful sleep in AD patients, including over-the-counter emollients, pharmacotherapy orUV phototherapy. Topical pharmacotherapies like topical corticosteroids (TCS), topical calcineurin-inhibitors (TCI) or topical PDE4-inhibitors are mainly used to treat mild-to-moderate cases of AD. In moderate-to-severe cases of AD, which cannot be controlled by topical agents alone, oral or parenteral systemic therapies are employed. Current systemic therapies for moderate-to-severe, topical treatment-refractory patients comprise immunosuppressants such as systemic corticosteroids, cyclosporine A, mycophenolate mofetil, methotrexate and azathioprine.A targeted biologic agent applied as subcutaneous injection—Sanofi/Regeneron's anti-IL-4 receptor alpha antibody dupilumab (Dupixent®), was launched in 2017.

## MOR106 FOR TREATMENT OF ATOPIC DERMATITIS

### MOR106 MECHANISM OF ACTION

To our knowledge, MOR106 is the first antibody in clinical development worldwide targeting the IL-17C antigen. The cytokine IL-17C represents a novel target, which is up-regulated in inflammatory skin disorders such as psoriasis and AD. Based on findings from preclinical animal models, IL-17C is expected to play an important pro-inflammatory role in such skin disorders. Importantly, IL-17C has been shown to be clearly distinct from other members of the IL-17 cytokine family, not only its protein sequence, but also with regards to its site of origin, its biological function, and its signalling pathway.

In inflammatory skin disorders, IL-17C has been identified as an important pro-inflammatory mediator. IL-17C is the only known IL-17 family member primarily expressed by epithelial cells, such as skin keratinocytes. IL-17Cbinds to its receptor consisting of the subunits IL-17-RA and IL-17-RE. Intracellular signalling occurs via the unique IL-17-RE receptor chain, which is not targeted by any other IL-17 family member. Binding of IL-17C to its receptor is assumed to trigger an inflammatory cascade that plays a promoting role in skin diseases. MOR106 is designed to block this interaction by specifically binding to the cytokine, thereby neutralizing IL-17C's biological activity. The figure below depicts the suggested mechanism of action of MOR106:



### DEVELOPMENT OF MOR106

We kept on filing clinical trial applications in various European countries in 2017 to evaluate MOR106 in clinical studies. We have investigated MOR106 in a phase 1 clinical trial in healthy volunteers and patients with AD and initiated several additional clinical studies with our co-development partner Galapagos in 2018.

### ACTIVE CLINICAL TRIALS

We reported results from a p1 study in September 2017, with more detailed results presented in February 2018, investigating the safety, tolerability and pharmacokinetic profile of MOR106 when administered intravenously, or IV, in single ascending doses in healthy volunteers as well as in multiple ascending doses in patients suffering from atopic dermatitis. The primary objective of the phase 1 study was to evaluate the safety and tolerability of MOR106. The study's secondary objective was to characterize the pharmacokinetic profile of MOR106 in healthy volunteers as well as AD patients. Exploratory objectives included the measurement of early signs of efficacy. In the single ascending dose part of the study, 56 healthy volunteers received an infusion (MOR106 (n=42); placebo (n=14)), followed by a 7-week follow up period. In the multiple ascending dose part of the study, 25 patients diagnosed with moderate-to-severe AD (MOR106 (n=18); placebo (n=7)), received four infusions, once a week for four weeks, followed by a 10-week follow-up period. Patients received either placebo or MOR106 in a one-to-three ratio of placebo and three different dose levels of MOR106, 1, 4, and 10 mg/kg body weight. Detailed information on the results of this study can be found in Section 4a – Group Management Report – Operations and Business Environment.

In 2018, we initiated with Galapagos two clinical trials with MOR106 – the IGUANA phase 2 study in AD and a phase 1 bridging study testing a subcutaneous formulation of MOR 106. More details on these trials can be found in Section 4a – Group Management Report – Operations and Business Environment. Preclinical Development

*In vitro*, MOR106 inhibits the binding of human IL-17C to its specific receptor subunit IL-17-RE and inhibits the biological activity of IL-17C as determined in an NF-κB reporter gene assay in mouse NIH3T3 cells and in a more physiological assay using primary human keratinocytes endogenously expressing IL-17-RE/RA. In these functional assays, MOR106 inhibits the activity of cynomolgus monkey and mouse IL-17C with similar potencies as human IL-17C (Vandeghinste *et al*., 2018).

MOR106 prevented the occurrence of an AD-like skin inflammation in the MC903 (calcipotriol-induced) mouse model, with a significant impact on epidermal and dermal thickening, inflammation and type 2 T helper cell (Th2)-like gene expression. A therapeutic effect of MOR106 administration was also shown in the flaky tail mutant mouse, which exhibits a defective skin barrier function and spontaneously develops atopy evolving into a progressive overt AD-like dermatitis, reproducing cardinal features of AD in man. Beyond models of AD, MOR106 also displayed a protective effect in the IL-23-induced psoriasis-like skin inflammation mouse model with a significant impact on ear thickness, epidermal thickening and IL-23-induced gene expression (Vandeghinste *et al*., 2018)..

For the non-clinical safety assessment of MOR106, mouse and cynomolgus monkey were identified as pharmacologically relevant animal species. The results of the *in vivo* toxicity studies demonstrated that MOR106 was well tolerated in mouse and cynomolgus monkey up to the highest dose tested.

## MOR103/GSK3196165

### OVERVIEW

MOR103/GSK3196165 is a fully human HuCAL antibody directed against the granulocyte-macrophage colony-stimulating factor (GM-CSF). We discovered and advanced MOR103/GSK3196165 into clinical development and our partner, GlaxoSmithKline (GSK) is now developing the antibody in the area of inflammatory diseases. Due to its diverse functions in the immune system, GM-CSF can be considered a target for a broad spectrum of anti-inflammatory therapies. GSK acquired the rights to MOR103/GSK3196165 pursuant to an exclusive worldwide development and license agreement that was entered into in June 2013.

We were responsible for completing a phase 1b/2a clinical trial of MOR103/GSK3196165 in rheumatoid arthritis (RA), which was completed in September 2012, and in multiple sclerosis (MS), which was completed in September 2014. GSK is solely responsible, at its own cost, for all other development and commercialization activities. GSK is currently evaluating this antibody for the treatment of RA.GSK conducted a phase 2b study in patients with RA and a phase 2a study in patients with inflammatory hand OA. The corresponding study data were presented at the 2018 American College of Rheumatology (ACR) Annual Meeting in October 2018. More detailed information on the RA study results can be found in Section 4a – Group Management Report – Operations and Business Environment. GSK has announced that it does not intend to pursue further development in hand OA.

## DESCRIPTION OF GM-CSF AND RHEUMATOID ARTHRITIS AND CURRENT TREATMENTS

### GM-CSF

GM-CSF stimulates stem cells to produce granulocytes and macrophages and can subsequently activate these differentiated immune cells. GM-CSF is part of the natural immune and inflammatory cascade but has also been identified as an inflammatory mediator in autoimmune disorders like RA, leading toincreased production of pro-inflammatory cytokines, chemokines and proteases and thereby ultimately to articular destruction.

GM-CSF can act as a pro-inflammatory cytokine mainly by inducing the activation, maturation and differentiation of macrophages and dendritic cells, which are essential for the initiation and propagation of cell-mediated immune responses.

### RHEUMATOID ARTHRITIS

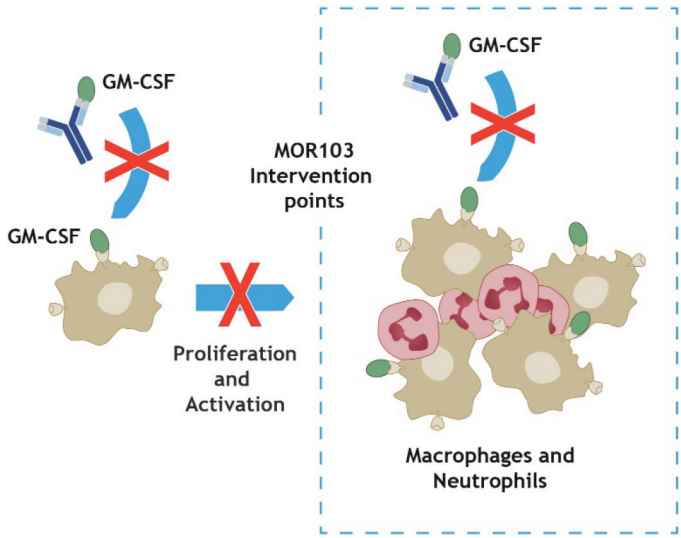
RA is a disabling and painful inflammatory condition which can lead to substantial loss of mobility. The disease affects approximately four to six million people worldwide. In patients with RA, white blood cells move from the bloodstream into the synovium, where they cause inflammation.

Disease-modifying anti-rheumatic drugs (DMARDs) are routinely prescribed as first-line therapies for RA and have become the cornerstone of treatment, often prescribed to patients at all levels of disease severity. For patients not responding to conventional DMARD treatment, TNF-α inhibitors are universally accepted as first-line biologic agents owing to their efficacy and to physician familiarity and comfort with these agents' long-term post-marketing experience. Multiple treatment options with different mechanisms of action are available for patients for whom TNF-α antibodies are contraindicated or who are not responding to TNF-α inhibitor treatment. The availability of Jak inhibitors (Xeljanz®, Olumiant®), an oral class of agents with efficacy comparable to that of established biologic agents, is also expanding.

## MOR103/GSK3196165 FOR TREATMENT OF ANTI-INFLAMMATORY DISEASES

### MOR103/GSK3196165 - MECHANISM OF ACTION

MOR103/GSK3196165 is a fully human HuCAL antibody directed against GM-CSF. GM-CSF levels are significantly elevated in several inflammatory disorders and in the joints of RA patients. By neutralizing GM-CSF, MOR103/GSK3196165 has demonstrated its ability to reduce GM-CSF induced proliferation and activation of inflammatory cells and to intervene in several pathophysiological pathways in preclinical models of RA. The figure below depicts the suggested mechanism of action of MOR103/GSK3196165:




### DEVELOPMENT OF MOR103/GSK3196165

MOR103/GSK3196165 has been investigated in various clinical trials addressing RA, OA and MS. Phase 1/2 trials conducted by MorphoSys in RA and MS were completed in 2012 and 2014, respectively. GSK has investigated MOR103/GSK3196165 for the treatment of RA and OA in phase 2 studies.

During their Full-Year 2018 Earnings Call on February 6, 2019. GSK announced plans to start a pivotal study with MOR103/GSK3196165 in the second half of 2019.

### PHASE 2B CLINICAL TRIAL IN RA

In 2015, GSK announced the start of a phase 2b clinical study to investigate MOR103/GSK3196165 in RA. The primary objective of the randomized, dose-adaptive, multicenter, double-blind, parallel group, placebo-controlled study was to assess the efficacy of MOR103/GSK3196165, in combination with methotrexate in 210 patients with active moderate-severe RA despite treatment with methotrexate. Data from this study were presented at the 2018 American College of Rheumatology (ACR) Annual Meeting in October 2018. More detailed information on the results can be found in Section 4a – Group Management Report – Operations and Business Environment.

### PHASE 2A CLINICAL TRIAL IN HAND OA

In April 2016, GSK initiated a phase 2a clinical study to investigate the effectiveness and safety of MOR103/GSK3196165 in patients with inflammatory hand OA. The goal of the European multi-center double-blind, placebo-controlled study was to investigate the efficacy and safety of subcutaneous injections of MOR103/GSK3196165 in adult subjects with inflammatory hand OA. The main objective of the study was to assess the efficacy potential of MOR103/GSK3196165 on pain in inflammatory hand OA. Secondary objectives

included the safety and pharmacokinetics. Study data were presented at the 2018 American College of Rheumatology (ACR) Annual Meeting in October 2018. GSK has announced that it does not intend to pursue further development in hand OA.

**Phase 1b/2a Clinical Trial in RA**

In a randomized, double-blind, placebo-controlled phase 1b/2a trial in 96 mild-to-moderate RA patients that has been completed by MorphoSys in 2012, MOR103/GSK3196165 was administered in four weekly doses of 0.3 mg/kg, 1.0 mg/kg or 1.5 mg/kg. The primary aim of the trial was to determine the safety and tolerability of multiple doses of MOR103/GSK3196165 in patients with active RA. Secondary outcome measures were pharmacokinetics, immunogenicity, and the product's potential to improve clinical signs and symptoms of RA as measured by Disease Activity Score in 28 joints, or DAS28, American College of Rheumatology score measuring 20% / 50% / 70% improvement, or ACR20/50/70, and other criteria.

The best response was achieved in the 1.0 mg/kg dose cohort with an ACR20 score of 68% at week four, which was significantly higher than in the control arm. Of particular importance was the fast onset of action observed: within two weeks, up to 40% of patients achieved an ACR20 score. Improvement of DAS28 scores was rapid and significant over the treatment period of the study. ACR20/50 scores at week four are depicted in the table below.

| **Results at week four (Majority of patients were on stable regimen of DMARDS)** | **Placebo** | **MOR103 [0.3 mg/kg]** | **MOR103 [1.0 mg/kg]** | **MOR103 [1.5 mg/kg]** |
|---|---|---|---|---|
| Number of patients | 27 | 24 | 22 | 23 |
| Proportion of patients achieving ACR20 | 7% | 25% | 68% | 30% |
| Proportion of patients achieving ACR50 | 4% | 4% | 23% | 9% |

A total of 144 treatment-emergent adverse effects were reported in 54 (56.3%) subjects (42 subjects (60.9%) in the MOR103/GSK3196165 groups and 12 (44.4%) in the pooled placebo group). The most common treatment-emergent adverse event by preferred term in the active and placebo groups was nasopharyngitis. The incidences of fatigue, cough and adverse events related to RA (worsening or flares) in the MOR103/GSK3196165 group were more than four percentage points higher than in the placebo group. None of the adverse events were considered to be probably or definitely related to treatment. Adverse events possibly related to treatment were reported in seven placebo (14 adverse events) and ten MOR103/GSK3196165 subjects (19 adverse events). Only three adverse events (fatigue, scalingia and decreased diffusion capacity of the lung for carbon monoxide) were considered possibly related to treatment in more than one subject. All adverse events were judged to be of mild or moderate intensity except for one severe adverse event of hospitalization due to paronychia in the placebo group.

**Phase 1b Clinical Trial in MS**

In September 2014, we concluded a phase 1b clinical trial of MOR103/GSK3196165 in patients with relapsing-remitting MS or secondary progressive MS with relapses. In this 20-week, double-blind, placebo-controlled, phase 1b dose escalation study, patients received an intravenous infusion of placebo or 0.5 mg/kg, 1 mg/kg or 2 mg/kg MOR103/GSK3196165 every two weeks for ten weeks. Thirty-one patients received treatment. The primary endpoint was safety assessed by adverse events, physical examinations, vital signs, clinical laboratory data, electrocardiograms, pulmonary function tests, and MS relapses.

A total of 184 treatment-associated adverse events were reported in 31 (96.8%) patients, with no overall indication of increased adverse event frequencies in the MOR103/GSK3196165 groups compared with placebo. The most common adverse events in all groups were nasopharyngitis, headache, and MS exacerbation. No cases of infusion-related reaction were reported. Eleven MS exacerbation events occurred in nine patients. MS exacerbation occurred in three (50.0%), five (62.5%), one (12.5%), and zero (0%) patients in the placebo, MOR103/GSK3196165 0.5, 1.0, and 2.0 mg/kg groups, respectively. Events occurred in both the treatment and

follow-up periods in the placebo and MOR103/GSK3196165 0.5 mg/kg groups and during follow-up in the MOR103/GSK3196165 1.0 mg/kg group. All events either resolved/recovered or were resolving/recovering at the end of the follow-up period; recovery with sequelae was reported for three exacerbations.

A total of 71 adverse events considered to be possibly, probably, or definitely related to treatment, were reported in 18 (58.1%) patients. Adverse events were generally of mild or moderate intensity. There were two severe adverse events (urinary tract infection, placebo group; decreased vibratory sense in right lower limb, MOR103/GSK3196165 2.0 mg/kg group) both of which were considered unlikely to be related to treatment. No adverse events led to death or trial discontinuation.

## MOR107

## OVERVIEW

MOR107 is a lanthipeptide based on our proprietary technology platform and a selective agonist of the angiotensin II receptor type 2, or $AT_2R$. Lanthipeptides are a novel class of therapeutics with potential high target molecule selectivity and high *in vivo* stability. Lanthipeptides can be designed to combine agonistic or antagonistic activity. After we had successfully completed a first-in-human phase 1 study in healthy volunteers in 2017, we continued our preclinical investigations with MOR107 during 2018, focusing on oncology indications.

### DEVELOPMENT OF MOR107

### CLINICAL TRIALS

In February 2017, we initiated a first-in-human phase 1 study of MOR107 in healthy male volunteers. Twenty-four participants were dosed. The study was conducted by Quotient Clinical (now Quotient Sciences) at their phase 1 unit in Nottingham, United Kingdom. The primary endpoint of the single-center randomized, double-blind, placebo-controlled study was to assess safety and tolerability of subcutaneously administered single ascending doses of MOR107 in healthy male volunteers. The secondary endpoint of the study was to assess the pharmacokinetics and pharmacodynamics of subcutaneously administered single ascending doses of MOR107.

MOR107 is formulated as a solution that is administered by subcutaneous injection. In May 2017, the first part of the clinical study in healthy volunteers was completed. The trial included three dose cohorts of MOR107. MOR107 was well tolerated following single doses of 0.001, 0.01 and 0.1 mg. Following single subcutaneous administration MOR107 demonstrated a rapid absorption from the subcutaneous injection site and exposure increased in an apparent dose-proportional manner. There were no deaths or SAEs, and no subject was withdrawn from the safety follow up as a result of an AE. The incidence of AEs was low. For each MOR107 dose group, one AE was reported by one participant (16.7%). All AEs were classed as mild in severity. No laboratory test result, vital sign measurement, ECG measurement, physical examination or injection site assessment was considered clinically significant.

### PRECLINICAL DEVELOPMENT

In preclinical *in vivo* studies, MOR107 has demonstrated $AT_2R$-dependent activity.

Three *in vivo* and one *in vitro* safety pharmacology studies that investigated potential physiological effects of MOR107 on the central nervous system, respiratory and cardiovascular systems did not reveal any detrimental effects over the dose range tested. Dose ranging toxicology studies using both the intravenous and subcutaneous routes in rat and dog were carried out but no maximum tolerated dose has yet been identified. Based on initial anti-tumor data, MOR107 is currently in preclinical investigation with a focus on oncology indications.

## ADDITIONAL PRECLINICAL PROJECTS

Since mid-2016, MorphoSys and the University of Texas MD Anderson Cancer Center have been working together in a strategic alliance. The partners plan to jointly identify and validate novel anti-cancer antibodies and

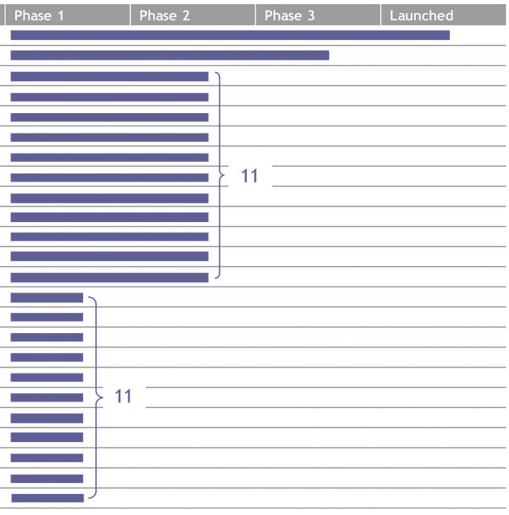
to develop them further until they reach the clinical proof-of-concept in the respective oncology indications. To accomplish this, MorphoSys is applying its Ylanthia technology platform. The alliance continued in the reporting year and is expected to encompass multiple target molecules and programs. Current programs are focused on HLA peptide complexes in the area of hematological diseases.

## PARTNERED DISCOVERY PROGRAMS

In our Partnered Discovery programs, we apply technologies for the research, development and optimization of therapeutic antibodies as product candidates in partnership with pharmaceutical and biotechnology companies.

The table below sets forth the clinical pipeline for our Partnered Discovery programs. In addition, we have 55 partnered product candidates that are in the discovery phase and 24 partnered product candidates that are in preclinical development.

| Program | Partner | Target | Disease area | Phase 1 | Phase 2 | Phase 3 | Launched |
|---|---|---|---|---|---|---|---|
| Tremfya® (guselkumab ) | Janssen | IL-23p19 | Psoriasis | | | | |
| Gantenerumab | Roche | Amyloid-ß | Alzheimer's disease | | | | |
| Anetumab ravtansine (BAY94-9343) | Bayer | Mesothelin (ADC) | Solid tumors | | | | |
| BAY1093884 | Bayer | TFPI | Hemophilia | | | | |
| BHQ880 | Novartis | DKK-1 | Multiple myeloma | | | | |
| Bimagrumab (BYM338) | Novartis | ActRIIB | Musculoskeletal diseases | | | | |
| CNTO6785 | Janssen | - | Inflammation | | | | |
| Ianalumab (VAY736) | Novartis | BAFF-R | Inflammation | | | | |
| NOV-12 (MAA868) | Novartis | Factor XI | Prevention of thrombosis | | | | |
| Setrusumab (BPS804) | Mereo/Novartis | Sclerostin | Brittle bone syndrome | | | | |
| Tesidolumab (LFG316) | Novartis | C5 | Eye diseases | | | | |
| Utomilumab (PF-05082566) | Pfizer | 4-1BB | Cancer | | | | |
| Xentuzumab (BI-836845) | BI | IGF-1 | Solid tumors | | | | |
| BAY2287411 | Bayer | Mesothelin | Cancer | | | | |
| Elgemtumab (LJM716) | Novartis | HER3 | Cancer | | | | |
| NOV-7 (CLG561) | Novartis | - | Eye diseases | | | | |
| NOV-8 | Novartis | - | Inflammation | | | | |
| NOV-9 (LKA651) | Novartis | - | Diabetic eye diseases | | | | |
| NOV-10 (PCA062) | Novartis | - | Cancer | | | | |
| NOV-11 | Novartis | - | Blood disorders | | | | |
| NOV-13 (HKT288) | Novartis | - | Cancer | | | | |
| NOV-14 | Novartis | - | Asthma | | | | |
| PRV-300 (CNTO3157) | ProventionBio | TLR-3 | Inflammation | | | | |
| Vantictumab (OMP-18R5) | OncoMed | Fzd 7 | Solid tumors | | | | |




## GUSELKUMAB (TREMFYA®)

### OVERVIEW

Guselkumab (Tremfya®) is a human HuCAL antibody targeting IL-23 that is being developed and commercialized by Janssen. It is the first commercial product based on our proprietary technology. It is approved in the United States, Canada, the European Union, and several other countries for the treatment of moderate-to-severe plaque psoriasis and in Japan for the treatment of various forms of psoriasis, psoriatic arthritis, and palmoplantar pustulosis. IL-23 is a pro-inflammatory protein which has been identified as a cytokine in autoimmune diseases and is found in the skin of patients with psoriasis and other inflammatory diseases. It is therefore considered to be a potential treatment target for inflammatory diseases. The antibody binds to the so-called p19 subunit unique to IL-23. Antibodies that bind to IL-23's p40 subunit will also neutralize IL-12 and are therefore less specific. Guselkumab (Tremfya®) is the first approved antibody binding the p19 subunit of IL-23.

In July 2017, Janssen announced it had received U.S. market approval from the FDA for guselkumab (Tremfya®) for the treatment of adult patients suffering from moderate-to-severe plaque psoriasis. We received a milestone payment from Janssen related to the approval. In November 2017, the EU Commission granted European approval of guselkumab (Tremfya®) for the treatment of patients with moderate-to-severe plaque psoriasis. Also in November 2017, Janssen announced that it had received Health Canada approval in Canada for guselkumab (Tremfya®) for the treatment of adult patients suffering from moderate-to-severe plaque psoriasis. Janssen reported several other marketing approvals in various countries during 2018, and more details can be found in Section 4a – Group Management Report – Operations and Business Environment.

In addition to plaque psoriasis, Janssen is developing guselkumab (Tremfya®) for the treatment of pustular psoriasis, pediatric psoriasis, psoriatic arthritis, Crohn's disease, hidradenitis suppurativa and ulcerative colitis.

MorphoSys is eligible to certain milestone payments and receives royalties on net sales of guselkumab (Tremfya®).

## TREATMENT OF PSORIASIS AND PSORIATIC ARTHRITIS

Psoriasis is an inflammatory autoimmune disease of the skin. The associated inflamed skin patches may vary in severity from small and localized to complete body coverage. There are five main types of psoriasis: plaque, guttate, inverse, pustular, and erythrodermic. Plaque psoriasis, also known as psoriasis vulgaris, makes up about 90% of cases. It typically presents with red, itchy and scaly patches with white scales on top (plaques). Psoriasis is usually chronic and has a high morbidity and negative impact on patients' quality of life. It is estimated that more than 7.5 million Americans live with the disease. Approximately 80% of those affected with psoriasis have mild-to-moderate disease, while 20% have moderate-to-severe plaque psoriasis.

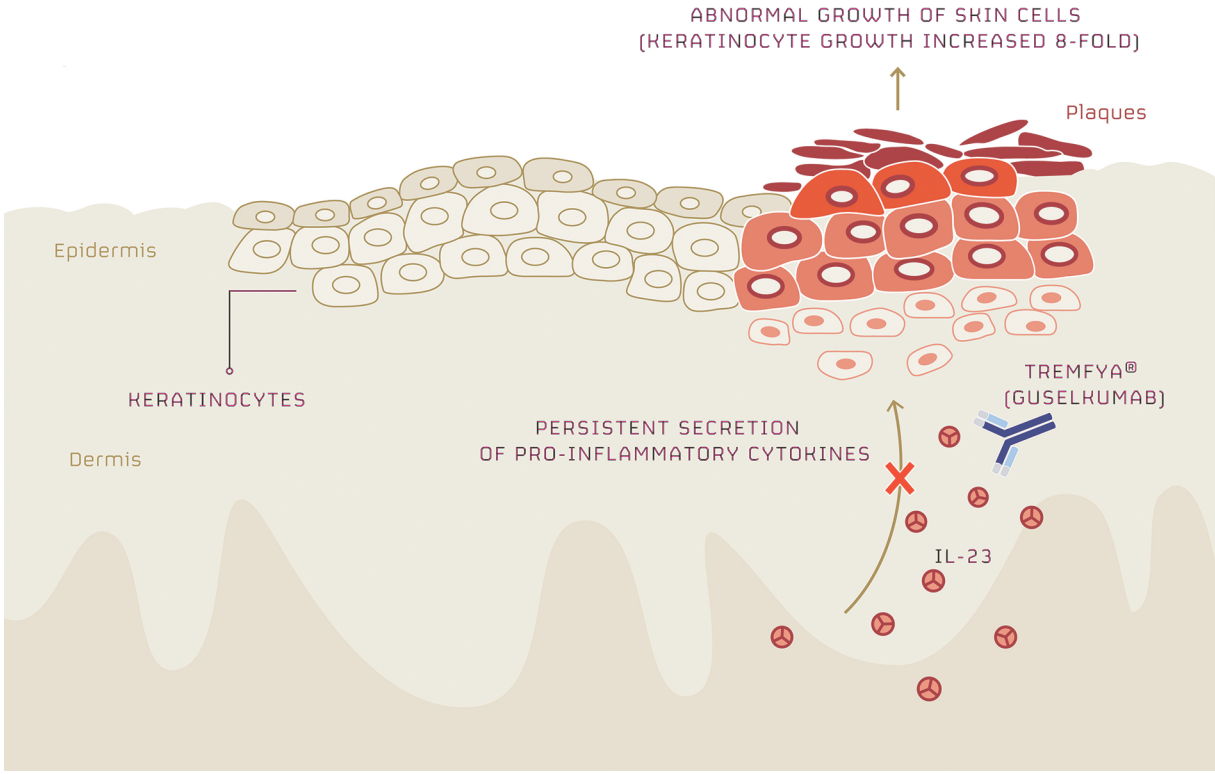
Psoriatic arthritis is a chronic immune-mediated inflammatory disease characterized by both joint inflammation and the skin lesions associated with psoriasis. It is estimated that one third of the 125 million people living with psoriasis worldwide will also develop psoriatic arthritis. The disease causes pain, stiffness and swelling in and around the joints and commonly appears between the ages of 30 and 50 but can develop at any time. While the exact cause of psoriatic arthritis is unknown, genes, the immune system and environmental factors are all believed to play a role in the onset of the disease.

For information on the competitive environment for guselkumab (Tremfya®), please refer to Competition – Guselkumab (Tremfya®).

## GUSELKUMAB (TREMFYA®) MECHANISM OF ACTION

Guselkumab (Tremfya®) is a fully human monoclonal antibody directed against the p19 subunit of interleukin (IL)-23. IL-23 is a pro-inflammatory protein which has been identified as a cytokine in autoimmune diseases and IL-23 levels are elevated in the skin of patients with psoriasis and in other inflammatory diseases. By binding to IL-23, the antibody prevents the cytokine from binding to its receptor, thereby silencing ongoing autoimmune responses. The figure below illustrates the suggested mechanism of action of guselkumab (Tremfya®):

## CLINICAL DEVELOPMENT OF GUSELKUMAB (TREMFYA®) OVERVIEW




To date, Janssen has conducted a total of 26 clinical trials evaluating guselkumab (Tremfya®); 15 have been completed and 11 are still ongoing. One of the trials has been announced already, but is not yet recruiting. Three completed studies were phase 1 studies in healthy volunteers to assess the safety and pharmacokinetics of the antibody.

The majority of the studies were initiated in patients with moderate-to-severe plaque-type psoriasis (plaque psoriasis), of which several have been completed. In this indication, three phase 1 trials analyzing either guselkumab (Tremfya®) alone or in combination with P450 enzyme inhibitors, and one phase 2 trial were completed. The remaining phase 3 studies either evaluated guselkumab (Tremfya®) versus a placebo and/or an active comparator drug: VOYAGE-1 and VOYAGE-2 compared guselkumab (Tremfya®) to adalimumab (Humira®); NAVIGATE compared guselkumab (Tremfya®) to ustekinumab (Stelara®) and ECLIPSE is a head-to-head comparison trial to secukinumab (Cosentyx®).POLARIS a phase 3 trial is still active and compares guselkumab (Tremfya®) to fumaric acid esters.

Two phase 3 trials investigating guselkumab (Tremfya®) versus placebo in pustular psoriasis and a phase 2 trial in palmoplantar pustulosis have been completed, respectively.

In addition, Janssen has conducted three trials in psoriatic arthritis. One phase 2 trial has been completed, while two phase 3 trials are currently ongoing and recruiting patients.

During 2018 and early 2019, Janssen initiated several trials in various indications – a pivotal phase 2/3 clinical program in patients with Crohn's disease (GALAXI), a phase 3 trial in pediatric patients with plaque psoriasis (PROTOSTAR); a phase 2 trial in hidradentitis suppurativa (NOVA) and a phase 2a trial in patients with ulcerative colitis (VEGA). More information on these trials can be found in Section 4a – Group Management Report – Operations and Business Environment.

## CLINICAL DEVELOPMENT OF GUSELKUMAB (TREMFYA®) IN PSORIASIS

In October 2016, Janssen reported results from its phase 3 clinical VOYAGE-1 trial in 837 patients with moderate-to-severe plaque psoriasis. In the study, the efficacy and safety of guselkumab (Tremfya®) were compared with placebo and with adalimumab (Humira®). The data presented by Janssen showed that guselkumab (Tremfya®) exhibited significantly better efficacy than placebo and superiority over adalimumab (Humira®). According to Janssen, the study met both the primary endpoints and all major secondary endpoints. For the primary endpoints, it was assessed whether signs and symptoms of psoriasis were improved, while delivering clear or almost clear skin (investigator global assessment score (IGA) 0 or 1 and PASI 90) at week 16, in patients receiving guselkumab (Tremfya®) compared to those receiving placebo. An IGA of 0 or 1 means a patient has either achieved completely clear skin (IGA 0) or almost completely clear skin (IGA 1). PASI 90 means that 90% of the psoriatic lesions have disappeared. For the secondary endpoints it was assessed in what percentage of patients the signs and symptoms of psoriasis were improved under treatment with guselkumab (Tremfya®) compared to patients receiving adalimumab (Humira®).

Long-term data from this trial were presented during 2018. Details can be found in Section 4a – Group Management Report – Operations and Business Environment.

In March 2017, Janssen presented results from two other phase 3 studies, VOYAGE-2 and NAVIGATE, in patients with moderate-to-severe plaque psoriasis. Both studies met all primary endpoints, according to the abstracts submitted by Janssen to the American Academy of Dermatology 2017 meeting. According to Janssen, data from the VOYAGE-2 study showed that patients treated with guselkumab (Tremfya®) experienced significant improvements in skin clearance and other measures of disease activity compared with placebo, and significantly greater improvements compared with adalimumab (Humira®). Data from Janssen's NAVIGATE study showed that patients who had an inadequate response following treatment with the IL-12/23 monoclonal antibody ustekinumab (STELARA®) and who then switched to guselkumab (Tremfya®), showed significantly greater improvements in skin clearance compared with patients who continued to receive ustekinumab (STELARA®). Long-term data from the VOYAGE-2 study were presented during 2018; detailed information on these results can be found in Section 4a – Group Management Report – Operations and Business Environment.

In May 2017, Janssen announced plans for new phase 3 clinical studies with guselkumab (Tremfya®), which include a phase 3 study to evaluate the comparative efficacy of guselkumab (Tremfya®) versus secukinumab (Cosentyx®) for the treatment of moderate-to-severe plaque psoriasis (ECLIPSE study). Janssen initiated the ECLIPSE study in the first half of 2017 and announced results from the study in December 2018. For information on these results, please see Section 4a – Group Management Report – Operations and Business Environment.

At the end of February 2019, Janssen announced that it had received U.S. FDA approval for Tremfya® One-Press, a single-dose, patient-controlled injector for adults with moderate-to-severe plaque psoriasis. This is a device that allows patients to administer the drug subcutaneously by themselves and is thus intended to provide a higher convenience to psoriasis patients with respect to the treatment of their chronic disease.

In Janssen's phase 3, multicenter and randomized ORION study, patient experience with One-Press was assessed through a validated Self-Injection Assessment Questionnaire (SIAQ), which evaluated patient experience at weeks zero, four and twelve on a scale of 0 (worst) to 10 (best) across six domains (feelings about injections, self-image, self-confidence, pain and skin reactions during or after the injection, ease of use of the self-injection device and satisfaction with self-injection). The mean score for "Satisfaction with Self Injection" was 9.18 (with 10 indicating "very satisfied") and the mean score for "Ease of Use" was 9.24 (with 10 indicating "very easy").

The efficacy and safety of Tremfya® administered with One-Press in patients with moderate to severe plaque psoriasis was also evaluated in the double-blind, placebo-controlled ORION study. In the study, a greater proportion of subjects in the Tremfya® group achieved an IGA score of 0 or 1 or a PASI 90 response at week 16

(81 percent and 76 percent, respectively) than in the placebo group (0 percent for both endpoints). The proportion of subjects who achieved an IGA score of 0 at week 16 was higher in the Tremfya® group compared to the placebo group (56 percent vs. 0 percent). The proportion of subjects who achieved a PASI 100 response at week 16 was higher in the Tremfya® group compared to the placebo group (50 percent vs. 0 percent). The majority of injection-site reaction symptoms with One-Press were mild and transient in nature.

Various other phase 2 and phase 3 studies with Tremfya® in patients with plaque psoriasis or other forms of psoriasis have been conducted or are still ongoing.

### CLINICAL DEVELOPMENT OF GUSELKUMAB (TREMFYA®) IN PSORIATIC ARTHRITIS AND CROHN'S DISEASE

In November 2016, Janssen presented positive results from a phase 2a clinical study evaluating guselkumab (Tremfya®) in patients with psoriatic arthritis. The data published by Janssen showed that a substantially higher percentage of patients receiving guselkumab (Tremfya®) achieved at least a 20% improvement in signs and symptoms of the disease (ACR 20) at week 24, the study's primary endpoint, compared to patients receiving placebo.

In September 2017, Janssen initiated two phase 3 studies evaluating the efficacy and safety of guselkumab (Tremfya®) in psoriatic arthritis. Janssen made a milestone payment to us in connection with the initiation of these phase 3 studies.

In July 2018, we announced that Janssen had initiated a phase 2/3 program in Crohn's disease. More details on this program can be found in Section 4a – Group Management Report – Operations and Business Environment.

### COMMERCIALIZATION OF GUSELKUMAB (TREMFYA®)

Under a collaboration agreement, Janssen is responsible for the global development and commercialization of guselkumab (Tremfya®). We have received technology license fees, research and development funding, development and commercial milestone payments as well as royalty payments. We are eligible to receive additional milestone payments for certain defined clinical and/or regulatory milestones related to the product and royalties on net sales. For more information, see Collaborations and License Agreements – Research and License Agreement with Janssen (formerly Centocor).

Guselkumab (Tremfya®) has been available to patients with plaque psoriasis in the U.S. since the end of July 2017, and we received our first royalty payment soon thereafter. Following approvals in Canada and the EU, guselkumab (Tremfya®) has also been made available to patients in Canada and in the EU. We received milestone payments from Janssen together with the FDA approval in July 2017 as well with Janssen's filing for U.S. approval announced in November 2016. We also received milestone payments from Janssen due to the start of clinical development of guselkumab (Tremfya®) in additional indications.

## GANTENERUMAB

Gantenerumab is a HuCAL antibody directed against amyloid beta (Aß) that is being developed by Roche for the treatment of Alzheimer's disease. Aß denotes a group of peptides that are crucially involved in Alzheimer's disease as the main component of the amyloid plaques found in the brains of Alzheimer's patients. In phase 1 clinical trials, gantenerumab has been shown to reduce brain amyloid in mild-to-moderate Alzheimer's disease patients. Gantenerumab is being investigated in several clinical studies to see if there is a positive effect from intervening at an early stage in the disease's progression. There are currently no drugs available that fundamentally improve the course of Alzheimer's disease.

## TREATMENT OF ALZHEIMER'S DISEASE

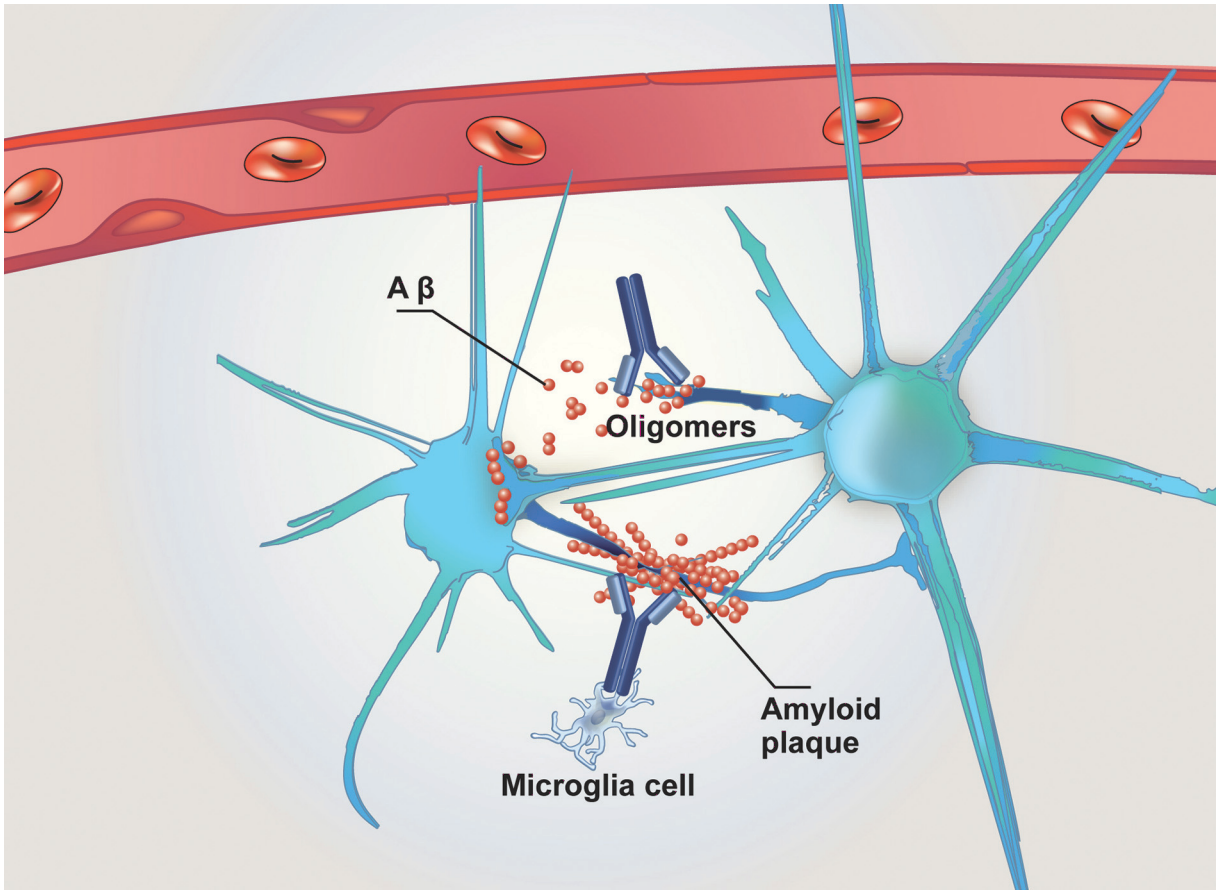
Eight cognitive domains are commonly impaired in Alzheimer's disease: memory, language, reception, attention, constructive ability, orientation, problem solving, and functional ability. Cognitive impairments in Alzheimer's disease are progressive, and decline is inexorable. No product currently available can stop, prevent, or modify the progression of Alzheimer's disease; instead, currently available therapies are prescribed with the goal of improving the quality of life of both patients and their caregivers, who must cope with the significant burden of this disease. These products provide only marginal, transient benefits, highlighting the need for new, more effective therapies. For more information, please see Competition – Gantenerumab.

## GANTENERUMAB FOR TREATMENT OF ALZHEIMER'S DISEASE

### MECHANISM OF ACTION

Gantenerumab is an IgG1 antibody derived from a Partnered Discovery project with Hoffmann La Roche. The HuCAL antibody is directed against Aß and binds the N-terminus and a section in the middle of the Aß peptide. On binding, the antibody seems to neutralize and disrupt the formation of amyloid plaque and amyloid oligomers or might dissolve existing ones. In phase 1 clinical trials, gantenerumab has been shown to reduce brain amyloid in mild-to-moderate Alzheimer's disease patients. Load and location of brain Aß were determined by using positron emission tomography (PET) imaging. After treatment with infusions of intravenous gantenerumab or placebo, PET imaging was done using a radioactive Carbon-11 labelled tracer. Using this method, a dose-dependent reduction of brain amyloid level was measured.

The figure below depicts the suggested mechanism of action of gantenerumab:



### CLINICAL DEVELOPMENT OF GANTENERUMAB

Gantenerumab has been studied by Roche in several clinical trials in patients with Alzheimer's disease, including two phase 3 studies.

In 2014, we announced that gantenerumab had failed a futility analysis in the first phase 3 trial. In a later analysis, however, it was established that gantenerumab had been dosed significantly lower when compared to clinical trials conducted with aducanumab, an antibody against Aß developed by Biogen with similar characteristics (e.g., epitope, affinity or IgG subtype) as compared to gantenerumab. Aducanumab is the first antibody to show dose-dependent amyloid plaque reduction in combination with a clinical benefit measured by various patient readouts. At the same time, aducanumab showed an acceptable side effect profile at the doses tested.

In March 2018, data with gantenerumab were presented in which the antibody was evaluated with considerably higher doses in an open label extension study part than previously tested. Details on these results can be found in Section 4a – Group Management Report – Operations and Business Environment.

In June 2018, we announced that Roche had initiated a new phase 3 development program in patients with Alzheimer's disease. The program consists of two phase 3 trials – GRADUATE-1 and GRADUATE-2. Details on this phase 3 program can be found in Section 4a – Group Management Report – Operations and Business Environment.

### COMMERCIALIZATION OF GANTENERUMAB

We are entitled to further milestone payments from Roche for certain defined clinical and/or regulatory milestones related to the product candidate. In addition, in the event of a future approval and commercialization of the antibody, we are entitled to receive from Roche tiered royalties of between 5.5% and 7% of the net sales generated with gantenerumab.

## KEY PARTNERED DISCOVERY PROGRAMS IN CLINICAL DEVELOPMENT

### ANETUMAB RAVTANSINE

Anetumab ravtansine is an antibody-drug conjugate directed against mesothelin and is based on an antibody developed using our HuCAL technology. The mesothelin antigen targeted by anetumab ravtansine is expressed on various cancer types, including malignant pleural mesothelioma pancreatic and ovarian cancer.

In July 2017, our partner Bayer reported that a phase 2 clinical study examining anetumab ravtansine in patients with malignant pleural mesothelioma did not meet its primary endpoint of progression-free survival in comparison to vinorelbine. The phase 2 clinical trial was a randomized, open-label, active-controlled, multicenter superiority study evaluating the safety and efficacy of anetumab ravtansine as second-line treatment in 248 patients with advanced or metastatic mesothelin-positive malignant pleural mesothelioma whose disease had progressed after treatment with first-line platinum/pemetrexed-based chemotherapy.

Bayer reported further that anetumab ravtansine is currently being investigated in additional studies, as monotherapy and in combination, including a phase 1b multi-indication study in six different types of advanced solid tumors, as well as a phase 1b combination-study in patients with recurrent platinum-resistant ovarian cancer. Bayer has stated that, based on available data, the company remains committed to further evaluating the utility and safety of anetumab ravtansine across multiple tumor types with significant unmet medical need. Bayer further announced that, in the trial reported, the safety and tolerability of anetumab ravtansine were consistent with earlier clinical findings and that detailed study results are expected to be presented at an upcoming medical meeting.

**XENTUZUMAB (BI-836845)**

Xentuzumab (BI-836845) is a HuCAL antibody directed against IGF1-R which we identified in collaboration with Boehringer Ingelheim. The antibody is currently in phase 1b/2 clinical development in solid tumors including metastatic breast cancer and lung cancer.

Clinical studies with xentuzumab (BI-836845) include:

- a phase 1b open label trial of once daily oral treatment of afatinib plus weekly intravenous infusion of xentuzumab (BI-836845) in patients with epidermal growth factor receptor (EGFR) mutant non-small cell lung cancer with progression following prior EGFR tyrosine kinase inhibitors. According to clinicaltrials.gov, the study has been completed in April 2018.
- a phase 1b study in patients with solid tumors to determine a safe dose of xentuzumab (BI-836845) in combination with abemaciclib with or without hormonal therapies. The study is also evaluating the efficacy of these combinations in patients with lung or breast cancer; and
- a phase 1b/2 randomized study of xentuzumab (BI-836845) in combination with exemestane and everolimus versus exemestane and everolimus alone in women with locally advanced or metastatic breast cancer.

**BIMAGRUMAB (BYM338)**

Bimagrumab is a HuCAL antibody directed against Activin receptor IIB (ActRIIB).

In April 2016, Novartis confirmed that a phase 2b/3 study investigating bimagrumab (BYM338) in the rare disease sporadic inclusion body myositis (sIBM) did not meet its primary endpoint. All three of the phase 3 studies in this indication were discontinued.

Two phase 2 clinical trials in sarcopenia, a form of age-related muscle loss, and a phase 2 trial in muscular atrophy after hip surgery have been completed in 2018, as listed on clinicaltrials.gov

At the end of January 2019, Novartis announced that it would discontinue development in these indications

According to clinicaltrials.gov, a randomized, double-blind, placebo-controlled phase 2 study to assess the safety, pharmacokinetics and efficacy of intravenous bimagrumab (BYM338) in overweight and obese patients with Type 2 diabetes is ongoing.

**SETRUSUMAB (FORMERLY BPS804)**

Setrusumab is a HuCAL antibody directed against sclerostin (SOST), which we identified in collaboration with Novartis. The antibody was out-licensed from Novartis to Mereo Biopharma, which is developing setrusumab for the treatment of osteogenesis imperfecta (brittle bone disease, OI).

OI is a rare genetic disorder that is characterized by fragile bones and reduced bone mass resulting in bones that fracture easily, loose joints and weakened teeth. In severe cases, patients may experience hundreds of fractures in a lifetime. In addition, OI patients often suffer muscle weakness, early hearing loss, fatigue, curved bones, scoliosis, respiratory problems and short stature. The majority of cases of OI (estimated at 85-90%) are caused by a dominant mutation in a gene coding for type I collagen, a key component of healthy bone. Current treatment of OI is supportive, focusing on minimizing fractures and maximizing mobility, but to date, there are no EMA or FDA approved treatments.

A phase 2b, multicenter, multinational, placebo-controlled, double-blind, dose-finding study (ASTEROID study) in 140 adult patients with type I, III or IV OI is currently ongoing.

In November 2017, Mereo announced that the EMA granted PRIME designation to setrusumab for the treatment of OI. The PRIME initiative is a program launched by the EMA to enhance the EMA's support for the development of treatments in diseases of high unmet medical need which may offer a significant therapeutic benefit over existing treatment options or address a disease where there are currently no treatment options. PRIME is designed to accelerate availability of these new treatment options to patients by appointing a Committee for Medicinal Products for Human Use (CHMP) rapporteur before submission of a marketing authorization application, offering early dialogue and scientific advice at key development milestones and the potential to qualify products for accelerated review earlier in the application process.

**UTOMILUMAB (PF-05082566)**

Utomilumab (PF-05082566) is an antibody derived from a partnered discovery project with Pfizer against solid and liquid tumors. The antibody targets CD137 (4-1BB), which is expressed by cell types of the hemato-poietic lineage, including T cells, B cells, NK cells and dendritic cells. By binding to its target, the antibody is supposed to trigger different effects such as induction of proliferation, up-regulation of anti-apoptotic pathways, induction of maturation and upregulation of co-stimulatory molecules and production of pro-inflammatory cytokines, enhancing the immune system and anti-tumoral immune responses.

Utomilumab (PF-05082566) is currently tested in combination with various agents in several clinical studies, amongst others a phase 2 combination study in advanced breast cancer (AVIATOR) and a phase 1b/2 (JAVELIN Medley) including the triplet combination of avelumab, utomilumab and PF-04518600 (OX40 agonist).

Moreover, Utomilumab (PF-05082566) is currently in clinical development in a phase 1/2 combination study with Axicabtagene Ciloleucel (ZUMA-11; NCT03704298) and in a phase 1 study in follicular lymphoma (NCT03636503).

The results of the ongoing studies will further inform next steps for utomilumab.

**OTHER PARTNERED DISCOVERY PROGRAMS IN CLINICAL DEVELOPMENT**

*BHQ880*—BHQ880 is an antibody directed against DKK-1 developed for Novartis. It has been tested in phase 2 trials in multiple myeloma (renal insufficiency) and smoldering multiple myeloma, both of which have been completed as stated on clinicaltrials.gov.

*CNTO6785*—CNTO6785 is an antibody directed against an undisclosed target developed for Janssen /Johnson & Johnson. It has been tested in phase 2 trials in chronic obstructive pulmonary disease and rheumatoid arthritis that have been completed meanwhile.

*Elgemtumab (LJM716)*—Elgemtumab (LJM716) is an antibody directed against HER3 developed for Novartis. It has been tested in a phase 2 trial in esophageal squamous cell carcinomas with trastuzumab. Currently ongoing is a phase 1 trail with Elgemtumab (LJM716) in combination with BYL719 in HER2 positive cancer in combination with trastuzumab.

*Tesidolumab (LFG316)*—Tesidolumab (LFG316) is an antibody directed against C5 developed for Novartis. It has been tested in phase 2 trials in age-related geographic atrophy (single-agent and in combination with CLG561), in panuveitis and in paroxysmal nocturnal hemoglobinuria (PNH). Tesidolumab (LFG316) has also been tested in a phase 1 trial in patients with renal disease awaiting kidney transplant. Currently ongoing is only the phase 2 study in patients with PNH; the others are either completed or have been withdrawn.

*Ianalumab (VAY736)*—Ianalumab (VAY736) is an antibody targeting BAFF-R developed for Novartis. It is currently being tested in phase 2 trials in idiopathic pulmonary fibrosis, systemic lupus erythematosus (SLE), autoimmune hepatitis, pemphigus vulgaris, and primary Sjögren's syndrome. Two pahse 1 trials are ongoing in rheumatoid arthritis using ADCC-mediated B cell depletion and BAFF-R blockade and chronic lymphatic leukemia (CLL).

*BAY1093884*—BAY1093884 is an antibody targeting tissue factor pathway inhibitor developed for Bayer. It is currently being tested in a clinical phase 1 and a phase 2 trial in hemophilia.

*BAY2287411*—BAY2287411 is a thorium-227 radiolabeled antibody conjugate directed against the target molecule mesothelin developed for Bayer. In June 2018, Bayer initiated a first-in-human phase 1 clinical trial in patients with solid tumors known to express mesothelin in order to evaluate the safety, tolerability, pharmacokinetics and anti-tumor activity of this compound.

*NOV-7* through *NOV 14*—We have a number of early-stage product candidates directed against undisclosed targets being developed by Novartis. Each of the product candidates is currently being tested in clinical phase 1 trials and are being developed in eye disease, diabetic eye disease, inflammation, cancer, blood disorders, thrombosis, and asthma.

*PRV-300 (CNTO3157)*—PRV-300 (CNTO3157) is an antibody targeting TLR-3 that has been developed for Janssen/Johnson & Johnson and was out-licensed to Provention Bio in 2017. In October 2018, Provention Bio announced that it had completed enrollment of a phase 1b clinical trial of PRV-300 (CNTO3157), enrolling a total of 37 patients with moderate-to-severe ulcerative colitis.

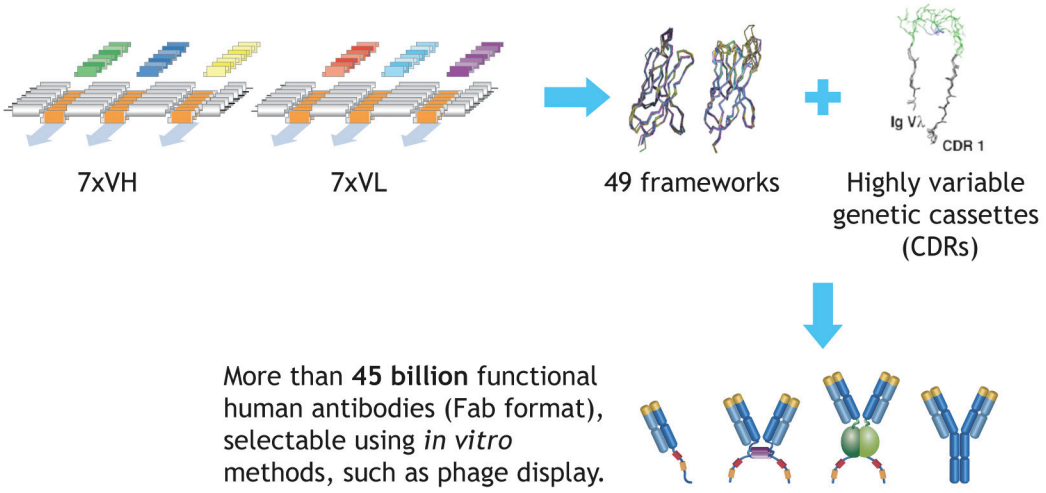
*Vantictumab (OMP-18R5)*—Vantictumab (OMP-18R5) is an antibody targeting Fzd7 that has been developed for OncoMed /Bayer. It has been tested in clinical phase 1 trials in breast cancer (combination with paclitaxel), pancreatic cancer (combination with nap-paclitaxel and gemcitabine) an solid tumors (in combination with docetaxel).

## OUR TECHNOLOGY PLATFORMS

Our core technology platforms are HuCAL, Ylanthia, Helix-turn-Helix peptides and Lanthipeptides. HuCAL was our first-generation antibody platform. Its successor, Ylanthia, is based on our engineering know-how and experience in development of over 100 therapeutic antibody projects.

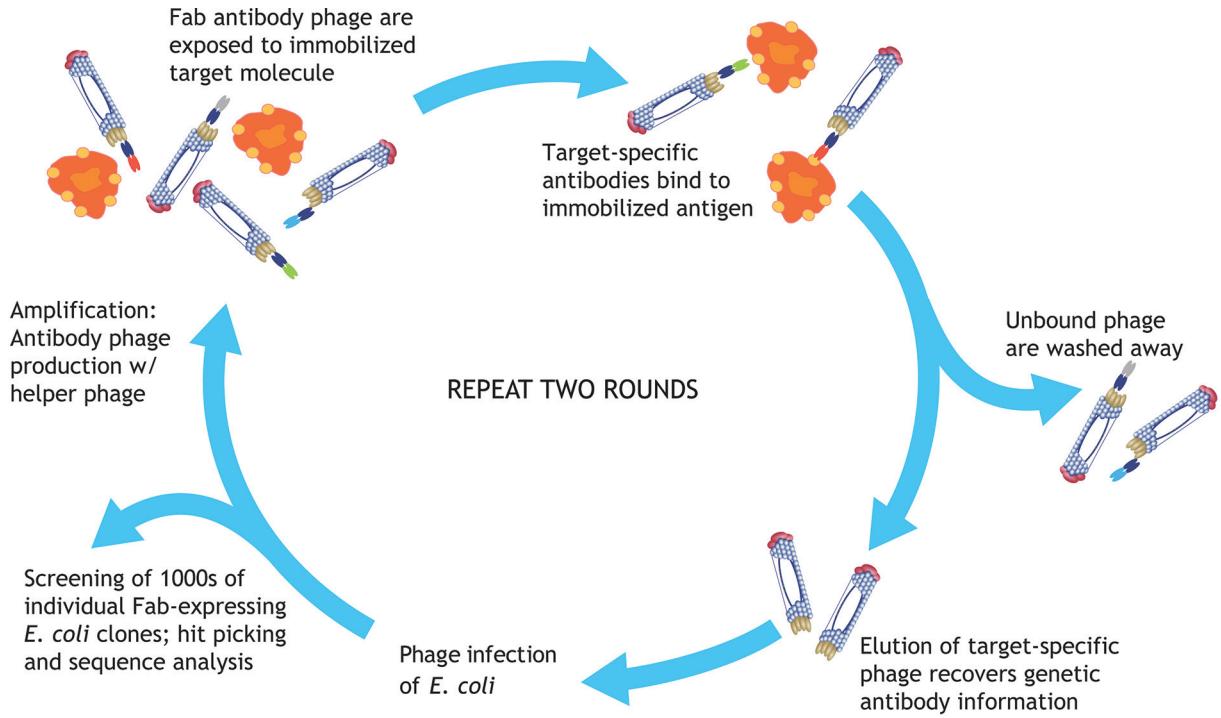
## HUMAN COMBINATORIAL ANTIBODY LIBRARY (HUCAL)

Our HuCAL technology permits the *in vitro* generation of highly diverse, fully human antibodies. The structural diversity of the human antibody repertoire is approximately 95% composed of seven variable heavy chain, or VH, and seven variable light chain, or VL, region genes. The combination of these genes gives rise to 49 frameworks in the HuCAL master library, which form the scaffolds for several billion distinct fully human antibodies. The seven VH and seven VL HuCAL library is then combined with a highly variable genetic "cassette" using our trinucleotide mutagenesis technology to permit any combination of amino acids at each single position of the CDR region in a ratio reflecting the one found in humans.



A laboratory technique critical for the identification and eventual production of therapeutic antibodies aimed at specific antigens is known as “phage display”. Phage display enables the selection of specifically binding antibodies out of libraries containing billions of different antibodies.

Phage display utilizes bacteriophages (viruses that infect bacteria) to connect proteins with the genetic information that encodes them. In traditional phage display as applied to antibody production, the gene encoding the antibody’s Fab fragment is inserted into a phage coat protein gene, causing the phage to “display” the Fab fragment on its outside while containing the gene for the Fab fragment. Displaying phages can be screened against the epitope(s) of interest which has been immobilized to the surface of a microtiter plate or is presented on the surface of a cell, and those phages displaying the Fab fragment of interest will bind to the surface. Those phages displaying other Fab sequences will be removed by washing. Phages that remain can be removed via the process of elution, and used to produce more phage by re-infection of bacteria, resulting in a phage mixture enriched for the Fab fragment of interest. The repetition of these cycles to create an increasingly purified phage mixture is known as the process of ‘panning’ (comparable to the original method of searching for gold in the beds of rivers). The ease of attachment and detachment of phages from the microtiter surface, and the overall speed of each cycle, can have a profound impact on the efficiency of antibody isolation and production.




Unlike conventional phage display technologies, in HuCAL, the antibody Fab fragment is not genetically fused to the phage coat protein. Instead, the Fab fragment forms a disulfide bond with an engineered gene III protein on the phage surface. This disulfide bond is sensitive to reducing agents, which allows for an efficient elution protocol to be used to recover phage displaying antibody fragments. Through this proprietary process, we are able to identify antibodies with high affinity for the antigen of interest in a highly efficient manner.

Generating antibodies using HuCAL technology involves seven steps: antigen immobilization, phage display selection, subcloning, primary screening, sequencing, expression and purification, and antibody quality control. The HuCAL process of production of monoclonal antibodies takes approximately eight weeks, in comparison to four to nine months for traditional conventional monoclonal discovery techniques. In addition, the antibodies produced are highly specific, maintain high production yields, exhibit a high degree of product purity and are capable of being produced in a number of formats, including monovalent or human immunoglobulin G.

Another key advantage of HuCAL phage display is the enhanced control of the selection process. The design of the selection process permits rapid identification of antibodies against specific antigens, the elimination or enhancement of cross reactivity against other antigens (as desired) and the generation of mouse cross-reactive antibodies for use in murine models. The modular design of HuCAL allows straightforward enhancement of affinities and switching among different antibody formats (such as ones which activate the immune system or are immunologically silent).

Today, thousands of antibodies have been made using the HuCAL technology, and over 20 HuCAL antibodies are in clinical trials.

## YLANTHIA

The Ylanthia antibody library is based on a concept that incorporates desirable antibody characteristics in its design through selection of optimal framework pairs and design of the complementary determining regions. Ylanthia is a new platform that provides fully human antibody candidates with optimized biophysical properties. This feature, called "developability", is crucial for modern biologics development and production. In contrast to small molecules, the production of protein-based therapeutics (biologics) is a highly complex process. Final formulation requirements, including the production of proteins soluble at high concentrations in small volumes for subcutaneous injections, further raise the bar for success. Multiple biologics have failed in their development due to a poor "developability" profile. In Ylanthia, properties such as production yield, solubility, monomeric content, lack of immunogenicity, and absence of post-translational modifications have been optimized by the design of the library using 25 years of our protein engineering know-how. The size, sequence correctness and structural diversity also reflects the lessons we learned in modern biologics development in over 100 therapeutic antibody projects.

Key distinguishing and industry leading features of Ylanthia include:

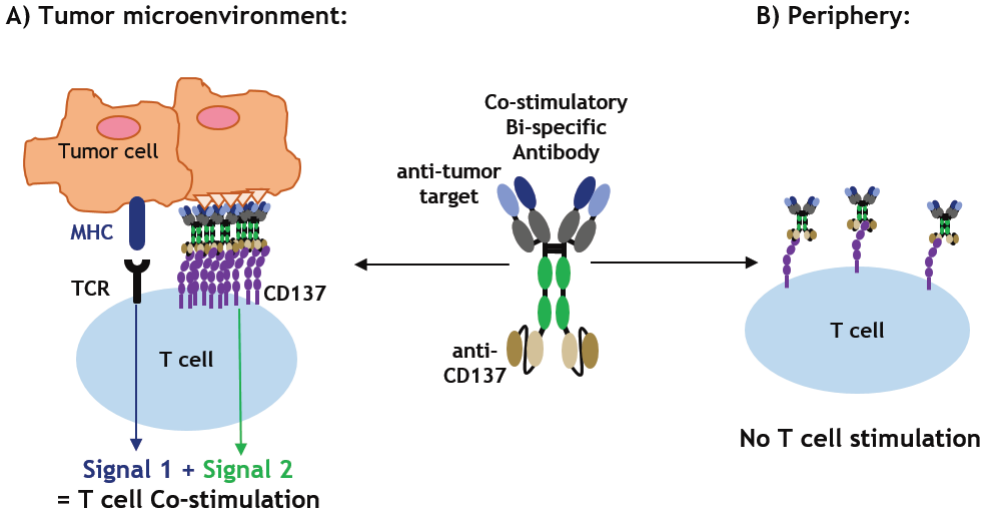
- Size and heavy/light chain pairing: Ylanthia is one of the industry's largest known antibody Fab library, comprising over 100 billion distinct, fully human antibodies. Ylanthia uses 36 fixed, naturally-occurring heavy and light chain framework combinations, which translates into extensive structural diversity. The library's diversity delivers antibodies against previously inaccessible target molecules and unique epitope coverage.
- Enhanced biophysical properties: Antibody frameworks were pre-selected for expression levels, stability and aggregation behavior. A shift towards higher stability and stress tolerance will increase shelf life and serum stability of resulting antibody products, making them more cost-effective to produce and administer. A higher solubility in turn opens up the path for more convenient formulations for patients, such as subcutaneous administration. These features obviate the need to engineer Ylanthia antibodies, which is common practice with other technologies. By avoiding engineering steps, development timelines are shortened and the risk that Ylanthia antibodies fail in the manufacturing and formulation process is reduced.
- Ability to address antigens that are difficult to target with antibodies, such as G-protein coupled receptors, or GPCRs, which are a very important product target class. This target class is notoriously difficult to address using other antibody technologies. GPCRs are proteins that are embedded in the cellular membrane with only small protruding portions (domains) are accessible to the antibody. Ylanthia was designed in a way that these small domains can also be targeted.
- Rapid, highly efficient optimization: When needed, antibodies from the Ylanthia library are optimized using our Slonomics technology. Slonomics is a fully automated DNA synthesis platform that utilizes sets of double stranded DNA triplets in the controlled fabrication of highly diverse combinatorial gene libraries. With Slonomics, Ylanthia distinguishes itself from HuCAL, which relies on a modular gene design and pre-formed cassettes for antibody optimization.

- Ylanthia demonstrated its ability to deliver drug-quality antibodies when MOR106 became the first Ylanthia antibody to enter clinical trials.
- Ylanthia is used in all of our ongoing proprietary discovery projects.

One goal using Ylanthia is to enhance the efficacy of direct tumor targeting using bi-specific antibodies that activate T cells, which are expected to kill the tumor cells. This approach is intended to allow for a binding of a bi-specific antibody to T cells via CD137 (4-1BB) and to the antigen present on the tumor cell, thereby enhancing T cell recruitment to the tumor as well as co-stimulation of tumor-specific effector T cells. Consequently, this is intended to result in enhanced activation of T cells and tumor cell killing.

CD137 is a validated, co-stimulatory checkpoint target expressed on T cells. First signs of efficacy with monospecific antibodies against CD137 (such as Utomilumab) in patients with advanced solid cancer have been shown. Furthermore, a bi-specific approach against CD137 and a tumor target is meant to increase efficacy and the therapeutic window by co-stimulation of tumor-specific effector T cells in the tumor microenvironment. Additionally, a potential advantage of this approach is reduced toxicity compared to a CD3-based bi-specific antibody due to the fact that no activation of T cells will occur in the periphery. Moreover, the approach might offer a combination potential with further checkpoint modulators such as PD-1, PD-L1, CTLA-4 and others.

The figure below depicts the suggested mode of action of a bi-specific anti-CD137 antibody within the tumor microenvironment in a schematic overview:




A) Tumor microenvironment: An antibody binding to both the tumor cell and CD137 is intended to induce activation of tumor-specific effector T cells and subsequent enhancement of tumor cell killing.

B) In the periphery, binding of the bi-specific antibody to the T cell does not lead to T cell stimulation due to the absence of the tumor cell antigen.

Today, proprietary Ylanthia anti-CD137 antibodies have been generated that are equipotent to a competitor reference antibody as analyzed in relevant *in vitro* assays and a bi-specific, bi-valent effector-format with IgG-like properties has been established.

## HELIX-TURN-HELIX PEPTIDE TECHNOLOGY

Our helix-turn-helix peptide technology aims at generating a novel class of structured and eminently stable peptides enabling highly selective and high affinity target binding, thus combining small molecule-like properties

with antibody-like specificities. Several libraries based on the stable helix-turn-helix scaffold with different diversification design were generated and guarantee selection of high diversity of specific peptides via a tailored selection process based on phage display. The peptides are amenable to chemical synthesis as well as recombinant expression. Potential applications of peptides include the use as stand-alone drugs, as fusion partners to proteins, or as agents that are chemically modified or fused to toxins. This approach is intended to enable targeting of novel epitopes and to open up new target space.

## LANTHIPEPTIDES

With our acquisition of Lanthio Pharma B.V. in 2015, we gained full access to Lanthio Pharma's proprietary LanthioPep technology. We believe this technology may be used to generate novel peptide products with therapeutic potential. We have subsequently developed a proprietary platform which permits phage display of lanthipeptides. This platform synergistically combines our expertise in phage display and library diversification of monoclonal antibodies with Lanthio Pharma's knowledge of lanthipeptide biosynthesis.

As natural ligands to many targets, peptides may have agonistic or antagonistic activity with low toxicity risk and can be applied to disease targets, where small molecules or antibody-based products cannot be used. Furthermore, they can be chemically produced and alternative routes for drug delivery (such as inhalation) may be possible. However, the number of therapeutic peptide products is limited by properties that are inherent to many natural (wild-type) peptides, for example, that they often bind to multiple receptor subtypes and that the time they remain active in the body is usually very short. Our lanthipeptides offer the potential to overcome these problems and make it possible to discover highly target-selective peptides, which only bind and activate one specific target subtype. The following sets forth some of the benefits of our lanthipeptide technology:

- A peptide can have different structural conformations, which can allow it to bind to several different receptors. One conformation is often optimal for binding to one specific receptor. Our technology can be used to make lanthipeptides that are selective for one specific receptor by constraining them in the optimal structural conformation for binding to that receptor. In this way we have identified several selective and highly active agonistic peptides for various GPCR targets.
- In addition, our technology not only constrains peptides in their optimal target binding conformation, but through the introduction of lanthionines, we have also developed protection against peptidase degradation. We have also established phage display of lanthipeptides, enabling the creation of lanthipeptide libraries from which lead molecules can be selected. We completed a clinical phase 1 trial in the first synthetic lanthipeptide, MOR107, in 2017.

## COLLABORATION AND LICENSE AGREEMENTS

A core component of our business model, and key aspect of our heritage as an antibody discovery and development company, is the entry into collaboration and licenses or partnership agreements with leading global pharmaceutical and biotechnology companies. Many of these research and development, collaboration and license agreements are entered into in the ordinary course of our business and may or may not become significant or material to us, depending primarily on the development of the underlying product candidates.

Generally, our collaboration and license agreements may be for a specific therapeutic program or may be for multiple therapeutic programs across diseases. For programs that we out-license, we may participate in the development and generation of an antibody for a specified target and will have limited preclinical and clinical research and development obligations, with the licensee being primarily responsible for clinical development and commercialization. In general, pursuant to the collaboration agreements we enter into for programs that we out-license, most of our partners have the first right to prosecute, maintain and enforce patents for antibodies (and other patentable technology) developed with our technology. In the event that our partners determine to relinquish any such patent right, we generally have a first right to obtain ownership of such patents. We are generally entitled to milestone payments during the course of development of the therapeutic product and to

royalty payments (generally a mid single-digit to low-teens percentage rate) upon commercial sale of the products. The royalty term generally will be on a product-by-product and country-by-country basis starting on the first commercial sale and ending on the later of: (i) the expiration of certain specified patent rights, (ii) a certain defined period of years following the first commercial sale, or (iii) the expiration of regulatory exclusivity. The agreements will generally terminate or expire once the obligation of the licensee to pay royalties has ceased.

Below is a description of our current significant, or material, collaboration and license agreements.

## COLLABORATION AND LICENSE AGREEMENT WITH XENCOR

In June 2010, we entered into a collaboration and license agreement with Xencor which was subsequently amended in March 2012 (which we refer to, as amended, as the Xencor Collaboration Agreement). Under the Xencor Collaboration Agreement, Xencor granted us an exclusive, worldwide license, including the right to sublicense under certain conditions.

Under the terms of the agreement, Xencor initiated and sponsored a phase 1 clinical trial for MOR208 in patients with CLL which was completed in January 2013. Since the completion of such clinical trial, we have been responsible for all additional clinical development of MOR208.

Xencor already received an upfront payment of US$ 13 million and received US$ 15.5 million for development milestones under the Xencor Collaboration Agreement and is entitled to receive up to an additional US$ 286.5 million in aggregated milestone payments upon the achievement of certain development events including US$ 50 million in the aggregate with respect to sales of licensed antibody products. Furthermore, Xencor will also be eligible to receive tiered royalty payments upon commercialization of MOR208 in the mid single-digit to sub-teen double-digit percent range based upon net sales of licensed antibody sold by us or our licensees. Our royalty obligations continue on a product-by-product and country-by-country basis until the later to occur of the expiration of the last valid claim in the licensed patent covering a licensed product in such country, or 11 years after the first sale of a licensed product following marketing authorization in such country.

Under the Xencor Collaboration Agreement, Xencor retained the rights to prosecute, maintain and enforce certain patents licensed to us, including those patents licensed to us that were already filed as of the effective date of the Xencor Collaboration Agreement and whose claims cover MOR208 and certain other antibodies. We retain the rights to prosecute, maintain and enforce patents that cover MOR208 and no other antibody. Furthermore, Xencor retained the rights to prosecute, maintain and enforce certain patents directed to inventions developed under the Xencor Collaboration Agreement that were solely invented by or on behalf of Xencor.

The term of the Xencor Collaboration Agreement will continue until all of our royalty payment obligations have expired, unless terminated earlier. The Xencor Collaboration Agreement may be terminated by either party upon written notice to the other party immediately in the event of the other party's insolvency or upon 120 days' written notice for the other party's uncured material breach (or upon 30 days' written notice in the case of a breach of a payment obligation). Moreover, we may terminate the Xencor Collaboration Agreement without cause upon 90 days' advance written notice to Xencor. In the event that (i) we terminate this agreement for convenience or (ii) Xencor terminates due to our material breach, our challenge of Xencor's licensed patents or our insolvency, worldwide rights to develop, manufacture and commercialize licensed products, including MOR208, revert back to Xencor.

## RESEARCH AND LICENSE AGREEMENT WITH JANSSEN (FORMERLY CENTOCOR)

In December 2000, we entered into a research and license agreement with Centocor (now Janssen), which was amended and restated in December 2004 (which we refer to as the Janssen Collaboration Agreement). Under the Janssen Collaboration Agreement, we obtained technology license fees and research and development funding

and are now eligible to receive milestone payments, including up to € 21.5 million in aggregated development and commercial milestone payments for therapeutic products, on a per target basis. In addition, we are eligible to receive tiered royalty payments in the mid single-digit percent range, on a product-by-product and country-by-country basis, until the later of (i) the expiration of the last licensed patent in such country having a valid claim covering such product and (ii) twelve years beginning from the first commercial sale of such product in such country.

Under the Janssen Collaboration Agreement, we shared certain research and development responsibilities with Janssen to generate and develop HuCAL antibodies. Janssen provided funding for our research costs in support of the collaboration at a predetermined fee per full-time equivalent employee involved in research at our facilities. All of our research and development responsibilities have now ceased. Janssen is solely responsible for the further research, development, manufacturing, and commercialization of the products.

Either party may terminate the Janssen Collaboration Agreement for the other party's uncured material breach or bankruptcy. We may terminate certain of Janssen's commercial licenses if Janssen fails to diligently pursue the development of at least one therapeutic antibody product under such licenses, and Janssen may terminate its commercial licenses under the agreement at its sole discretion at any time, in each case after a certain notice period to the other party. Unless earlier terminated, the Janssen Collaboration Agreement will expire when all of Janssen's obligations to pay royalties to us have ceased.

## INTELLECTUAL PROPERTY

Our commercial success depends in part on our ability to obtain and maintain proprietary or intellectual property protection for our product candidates and our core technologies and other know-how to operate without infringing, misappropriating or otherwise violating the proprietary rights of others and to prevent others from infringing, misappropriating or otherwise violating our proprietary or intellectual property rights. We protect our proprietary and intellectual property position by, among other methods, licensing or filing of patent applications covering our proprietary technologies and products in our home country and all major markets, with a particular emphasis on the United States. We also rely on trade secrets, know-how and continuing technological innovation to develop and maintain our proprietary and intellectual property position, which we generally seek to protect through contractual obligations with third parties.

Information on intellectual property as a non-financial key performance indicator and its use for internal management control can be found in Section 4e.

## PATENTS

For information on events related to our patents that occurred during 2018, please refer to Section 4a of this report.

Patents, patent applications and other intellectual property rights are important in the sector in which we operate. We consider on a case-by-case basis filing patent applications with a view to protecting certain innovative technologies, products, processes, and methods of treatment. We may also license or acquire rights to patents, patent applications or other intellectual property rights owned by third parties, academic partners or commercial companies, which are of interest to us or necessary for our business.

As with other biotechnology and pharmaceutical companies, our ability to maintain and solidify our proprietary and intellectual property position for our product candidates and technologies will depend on our success in obtaining effective patent claims and enforcing those claims if granted. However, our pending patent applications, and any patent applications that we may in the future file or license from third parties may not result in the issuance of patents. We also cannot predict the breadth of claims that may be allowed or enforced in our patents or whether the claims of any issued patent will provide sufficient proprietary protection from competitors.

Any issued patents that we may receive or license in the future may be challenged, invalidated or circumvented. For example, we cannot be certain of the priority of our patents and patent applications over third-party patents and patent applications. In addition, because of the extensive time required for clinical development and regulatory review of a product candidate we may develop, it is possible that, before any of our product candidates can be commercialized, any related patent may expire or remain in force for only a short period following commercialization, thereby limiting the protection such patent would afford the respective product and any competitive advantage such patent may provide. For more information regarding the risks related to our intellectual property, please see "Risk factors—Risks related to intellectual property".

**HUCAL**

Our HuCAL platform patent portfolio is wholly owned and the platform is protected by several patent families. The basic HuCAL patents, based on WO97/08320, expired in August 2016. These patents covered the composition of the library, methods to isolate antibodies from the library and methods to diversify antibodies isolated from the library. At least four additional patent families protecting other technological aspects of the library, such as the specific CDR design (based on WO2008/053275) and certain display methods used with the library (based on WO2001/05950) as well as improvements of this method (based on WO2009/024593) are still in force in all major jurisdictions, including Australia, Canada, China, the European Union (EP2190987), Israel, Japan, New Zealand, South Africa and the United States. The last U.S. patent (US9062097) expires on February 18, 2030. Patents in other jurisdictions expire in August 2028. The HuCAL library is also protected by considerable know-how proprietary to us.

**YLANTHIA**

Our Ylanthia antibody library patent portfolio is wholly owned and the platform is protected by two key patent families covering the composition of the library and nucleic acid collections encoding the library. Patent applications (based on WO2010/136598 and WO2012/066129) are filed in all major jurisdictions, including Australia, Canada, China, the European Union, Hong Kong, India, Israel, Japan, Mexico, New Zealand, Russia, Singapore, South Africa, South Korea and the United States. The patent term is expected to last at least until November 2031 (EP2640742 and US8367586, both granted). One material U.S. patent, US9541559, expires on May 6, 2032. Certain patent protected ancillary technologies are used as well, including the Slonomics technology. Like the HuCAL antibody library, the Ylanthia library encompasses considerable know-how proprietary to us.

**SLONOMICS**

Our Slonomics technology is protected by five patent families. The patent family covering the key technology, being a method used for the generation of diversified libraries, such as antibody libraries, has an expiry date of at least March 2029. The most relevant U.S. patent, US9115352, has an expiry date of December 6, 2030. Counterparts in the European Union (EP2110435) and Japan expire in March 2029.

**MOR208**

Our MOR208 patent portfolio is fully owned and/or exclusively licensed from Xencor and the program is currently protected by at least ten different patent families covering various aspects of the molecule, its compositions, methods of use, combination treatments, and formulation, as well as other aspects. The basic composition-of-matter patent was in-licensed from Xencor and was filed in Australia, Canada, the European Union, Hong Kong, India, Japan and the United States. The expiry date for the composition of matter patent is August 2029 for the United States and August 2027 for the other countries, not including any potential patent term extensions.

Other patent families were filed and are prosecuted in Australia, Brazil, Canada, China, the European Union, Israel, India, Japan, Mexico, New Zealand, Qatar, Russia, Singapore, South Africa, South Korea and the United States.

**MOR202**

Our MOR202 patent portfolio is fully owned and the program is currently protected by about ten different patent families covering various aspects of the molecule, its compositions, combination treatments, dosage regimens, radioconjugates, as well as assays utilized in clinical development. The basic composition-of-matter patent expires in October 2026, outside the United States, and in January 2028, in the United States, in both cases not including any potential patent term extensions. Patent were filed and are prosecuted in Argentina, Australia, Brazil, Canada, China, the European Union, Hong Kong, Israel, India, Japan, Mexico, New Zealand, Russia, Singapore, South Africa, South Korea, Taiwan and the United States. Rights to the Greater Chinese territory were exclusively licensed to I-Mab.

**MOR103/GSK3196165**

Our MOR103 patent portfolio is fully owned and exclusively licensed to GSK. The patent portfolio related to MOR103 consists of at least eight patent families covering various aspects of the program (composition-of-matter, indications, combination therapy, aspects of patient selection, as well as assays utilized in clinical development). Some of the patents were in-licensed from the University of Melbourne. The expiry date of the composition-of-matter patent is May 2026, not including any patent term adjustments or potential patent term extensions. Composition-of-matter patents were filed and are prosecuted in Argentina, Australia, Brazil, Canada, China, the European Union, Hong Kong, India, Israel, Japan, Mexico, New Zealand, Russia, Singapore, South Korea, Taiwan and the United States. Certain additional aspects were filed and are prosecuted in additional jurisdictions.

**MOR106**

The MOR106 patent portfolio is co-owned by us and Galapagos. The program is currently protected by about ten different patent families covering various aspects of the molecule, its composition, indications, methods of use, as well as other aspects. The basic composition-of-matter patent is prosecuted in more than 30 jurisdictions worldwide. The projected expiry date for the composition of matter patent is February 2037, not including any potential patent term extensions. Other patent families were filed and are being prosecuted in Australia, Canada, China, the European Union, Hong Kong, Israel, India, Japan, Korea, Mexico, New Zealand, Russia, Singapore, United States and South Africa. Pursuant to the Exclusive License Agreement among Galapagos NV, MorphoSys AG and Novartis Pharma AG, as of July 19, 2018, Novartis has a first right to file, prosecute and enforce patent rights related to MOR106.

**PATENT TERM**

The term of an individual patent depends upon the legal term for patents in the countries in which such patent is granted. In most countries, including the United States, the patent term is generally 20 years from the date on which the application for the patent was filed or, if the patent claims priority to an earlier filed application or applications, 20 years from the filing date of the earliest filed application where priority was claimed. In the United States, a patent's term may, in certain cases, be lengthened by patent term adjustment, which compensates a patentee for administrative delays by the USPTO in examining and granting a patent, or may be shortened if a patent is terminally disclaimed over a commonly owned patent or a patent naming a common inventor and having an earlier expiration date. The Hatch-Waxman Act permits a patent term extension of up to five years beyond the expiration date of a U.S. patent as partial compensation for the length of time the product is under regulatory review while the patent is in force. The length of the patent term extension is related to the length of time the product is under regulatory review. Patent term extension cannot extend the remaining term of a patent beyond a total of 14 years from the date of product approval and only one patent applicable to an approved product may be extended. Similar provisions are available in other jurisdictions to extend the term of a patent that covers an approved product, or to offer similar protection for an extended period, as is the case in the European Union. In the future, if and when our product candidates receive approval from the FDA or other

regulatory authorities, we expect to apply for patent term extensions on patents covering those products where such extensions are available; however there is no guarantee that the applicable authorities, including the FDA, will agree with our assessment of whether such extensions should be granted and, even if granted, the length of such extensions.

## TRADE SECRETS

In addition to patents, we rely upon unpatented trade secrets and know-how and continuing technological innovation to develop and maintain our competitive position. However, trade secrets and know-how can be difficult to protect. We seek to protect our proprietary information, in part, by executing confidentiality agreements with our partners, collaborators, scientific advisors, employees, consultants and other third parties, and invention assignment agreements with our consultants and employees. We have also executed agreements requiring assignment of inventions with selected scientific advisors and collaborators. The confidentiality agreements we enter into are designed to protect our proprietary information and the agreements or clauses requiring assignment of inventions to us are designed to provide mechanisms to grant us ownership of technologies that are developed through our relationship with the respective counterparty. We cannot guarantee that we have entered into such agreements with each party that may have or have had access to our trade secrets or proprietary technology and processes or that these agreements will afford us adequate protection of our intellectual property and proprietary information rights. If any of the partners, collaborators, scientific advisors, employees and consultants who are parties to these agreements breaches or violates the terms of any of these agreements or otherwise discloses our proprietary information, we may not have adequate remedies for any such breach or violation, and we could lose our trade secrets as a result.

## TRADEMARKS AND DOMAIN NAMES

We conduct our business using trademarks with various forms of the “MorphoSys” brand and numerous additional trademarks, as well as domain names incorporating some or all of these trademarks. Key trademarks are protected in all major jurisdictions, including the United States, the European Union, Switzerland, Canada, Australia and Japan. Additionally we have protected the possible brandname of MOR208 in all key jurisdictions worldwide. Such protection includes the filing of trademarks, as well as the registration of domain names.

## MANUFACTURING

We have adopted a manufacturing strategy of contracting with third parties in accordance with cGMP for the manufacture of drug substance and product. Additional contract manufacturers are used to fill, label, package and distribute investigational drug products. This allows us to maintain a more flexible infrastructure while focusing our expertise on developing our products. We will ultimately depend on contract manufacturers, or CMOs, for the manufacture of our products for commercial sale, as well as for process development. CMOs are subject to extensive governmental regulation. We currently rely on single source CMOs for each of MOR208, MOR202, MOR106 and MOR107. Although multiple potential CMOs are available as additional or alternative manufacturing partners for these product candidates, any such change in CMO would likely result in a delay in the development process of such product candidate.

We are able to internally manufacture the quantities of our product candidates required for relatively short non-GLP animal studies. We believe that this allows us to accelerate the product development process by not having to rely on third parties for all of our manufacturing needs. However, we do rely and expect to rely on a number of CMOs to produce sufficient quantities of our product candidates for use in lengthier non-GLP or GLP preclinical research.

## COMPETITION

We compete in an industry that is characterized by rapidly advancing technologies, intense competition and a strong emphasis on proprietary products. Our competitors include pharmaceutical companies, biotechnology

companies, academic institutions and other research organizations. We compete with these parties for promising targets for antibody-based therapeutics, new technology for optimizing antibodies and in recruiting highly qualified personnel. Many competitors and potential competitors have substantially greater scientific, research and product development capabilities as well as greater financial, marketing and sales and human resources than we do. In addition, many specialized biotechnology firms have formed collaborations with large, established companies to support the research, development and commercialization of products that may be competitive with ours. Accordingly, our competitors may be more successful than we may be in developing, commercializing and achieving widespread market acceptance. In addition, our competitors' products may be more effective or more effectively marketed and sold than any treatment we or our development partners may commercialize and may render our product candidates obsolete or noncompetitive before we can recover the expenses related to developing and commercializing any of our product candidates.

Below is a description of competition in certain of our products and product candidates.

### MOR208

DLBCL is curable in 60-70% of patients with the current standard treatment, a combination of chemotherapy and Roche's monoclonal antibody rituximab (Rituxan®). The most widely used treatment is R-CHOP (rituximab plus a chemotherapeutic regimen consisting of cyclophosphamide, doxorubicin, vincristine, and prednisone). High-dose chemotherapy coupled with stem cell transplantation can be used as a potentially curative treatment in patients with DLBCL whose disease is refractory or relapsed following initial therapy. However, fewer than half of the patients relapsing after frontline therapy will eventually receive a stem cell transplant and fewer than half of those actually obtain a lasting remission.

Relapsed or refractory DLBCL (r/r DLBCL) patients who are not candidates for stem cell transplantation, or who choose not to have a stem cell transplant, may be treated with various combination chemotherapy regimens with or without rituximab or lenalidomide with or without rituximab, although none of these agents or regimens have been approved in r/r DLBCL. In October 2017, a first CD19-directed CAR-T (Chimeric antigen receptor-T cell) therapy, axicabtagene ciloleucel (Yescarta®), developed by Kite (now Gilead), received accelerated FDA approval for DLBCL patients that were refractory to at least two prior lines of treatment. With tisagenlecleucel (Kymriah®), another CAR-T approach directed against CD19 was approved in r/r DLBCL in 2018, Other clinical programs directed against the same target molecule use alternative approaches to increase the antibody's efficacy, for example by coupling with toxic substances or changing the antibody's glycosylation pattern. Alternative approaches using small molecules are also being developed in the field of B cell malignancies.

In addition to MOR208, several novel individual and combination therapies are being tested in clinical trials for the treatment of patients with both newly diagnosed and r/r DLBCL.

In frontline DLBCL, therapies currently investigated in pivotal clinical include: combination therapies of R-CHOP with targeted agents lenalidomide (an immune modulating agent from Celgene) or treatment with polatuzumab vedotin (an antibody drug conjugate targeting CD79b from Roche). For r/r DLBCL patients ineligible for stem cell transplantation, other important pivotal trials are ongoing with combination regimens: with polatuzumab, bendamustine plus rituximab, with the checkpoint inhibitors avelumab and/or utomilumab (both from Pfizer) plus rituximab plus chemotherapy, and with the TG Therapeutics compounds umbralisib (a PI3K inhibitor) plus ublituximab (a CD20 antibody) in combination with bendamustine.

In many combination regimens, the CD20 antibody rituximab (Rituxan®) serves as a backbone therapy, meaning it is a therapeutic that can be combined with many other therapies for the treatment of the indication and has value for the overall efficacy of the treatment regimen. Other CD20 targeting antibodies obinutuzumab (Gazyva®) and ofatumumab (Arzerra®) have not been successful in showing superiority to rituximab in the treatment of DLBCL.

CD19 also serves as a target for: antibody drug conjugates (ADCs), bispecific antibodies and CAR-T cells. ADCs are antibodies that carry a cytotoxic payload that kills the cells upon internalization of the drug and release of the toxin (e.g. loncastuximab tesirine from ADC Therapeutics). The bispecific antibody blinatumomab (Blincyto®) induces killing of tumor cells by linking cytotoxic T cells via its CD3 binding moiety to the B cell derived tumor cells via its CD19 binding arm. It is approved in r/r ALL and is in phase 2 development in DLBCL. Various CAR-T approaches with T cells collected from the patient and engineered to express a CD19 binding antibody fragment on their surface are also in clinical trials. Two of these therapies, Yescarta® and Kymriah recently obtained accelerated approval for treatment of refractory non-transplant-eligible DLBCL patients who did not respond to at least two prior therapies. Despite showing promising efficacies in patients with an extremely dismal prognosis, CAR-T therapies have to date been associated with severe toxicities, as well as significant and costly manufacturing.

### MOR202

There is no curative treatment for r/r MM. Products approved for the treatment of r/r MM include: Darzalex® (daratumumab; Janssen Biotech/Genmab), Empliciti® (elotuzumab, Bristol-Meyers Squibb/AbbVie), Revlimid® (lenalidomide, Celgene), Pomalyst®(pomalidomide, Celgene), Thalomid® (thalidomide, Celgene), Ninlaro® (ixazomib, Takeda), Velcade® (bortezomib, Takeda), Kyprolis® (carfilzomib, Amgen), Farydak® (panobinostat, Novartis), Benda® (bendamustine, Teva, Mundipharma, Symbio Pharmaceuticals, Eisai, InnoPharmax). There are multiple treatments and various combinations in clinical development for different lines of multiple myeloma therapy. Products in clinical development for the treatment of multiple myeloma include: the CD38 antibody isatuximab, CC-4047, siltuximab, atezolizumab, pembrolizumab, nivolumab, durvalumab, venetoclax, amrubicin, filanesib, various BCMA-CAR T cell constructs, oprozomib, ricolinostat, selinexor, and plitidepsin.

Among monoclonal antibodies, Empliciti® (elotumumab) is a monoclonal antibody developed by Bristol-Myers Squibb and AbbVie against an antigen called SLAM7 and was the first monoclonal antibody approved for use in multiple myeloma. The anti-CD38 antibody Darzalex® (daratumumab), developed by Janssen and Genmab, was first approved for use in multiple myeloma in 2015. Among IMiDs® are Revlimid® (lenalidomide), an oral medication that is effective across the spectrum of myeloma disease and Pomalyst® (pomalidomide), both developed by Celgene. Proteasome inhibitors include Ninlaro® (ixazomib) or Velcade® (bortezomib) and Kyprolis® (carfilzomib). Steroids (corticosteroids) such as dexamethasone and prednisone have been used for decades to treat myeloma throughout the spectrum of disease. They are currently used in combination with other myeloma drugs.

Another application for MOR202 would be the treatment of autoimmune diseases via depletion of auto-antibody producing diseased plasma cells. Other biologics used in such settings include the anti-CD20 antibody Rituxan®/ Mabthera® (rituximab, Roche) and Soliris® (eculizumab, Alexion). Biologics in clinical development include anti-FcRn targeting agents such as e.g. Efgartigimod (Argenx), M281 (Momenta).

### MOR103/GSK3196165

Rheumatoid arthritis, RA, is an autoimmune disease characterized by inflammation of the joints, bone and cartilage erosion, and joint deformity. Additionally, the condition manifests itself in multiple joints in the body. Although the disease primarily affects the joints, it can also affect other organs, including the skin, eyes, lungs, heart, and blood vessels. Despite the many advances in both the understanding and the treatment of RA, it remains largely incurable, and its causes are still unknown. The disease can lead to premature mortality, disability, and decreased quality of life. Methotrexate and other conventional synthetic disease-modifying anti-rheumatic drugs, DMARDs, such as hydroxychloroquine, leflunomide, minocycline, and sulfasalazine are frequently used prior to the introduction of a biologic. Within most markets, the first-generation anti-TNFs (etanercept, adalimumab and infliximab) are frequently favored as a first line of therapy when the decision to introduce a biologic is made. The second-generation anti-TNFs (certolizumab pegol and golimumab) are popular as a second or third line of therapy. Other approved products are rituximab (CD20), tocilizumab (IL-6 receptor),

sarilumab (IL-6), abatacept (CD80), anakinra (IL-1 receptor antagonist) and tofacitinib (JAK3/1). In addition, to several biosimilars also several novel JAK inhibitors and antibodies are currently in phase 3 development.

## GUSELKUMAB (TREMFYA®)

Psoriasis is a chronic disease and currently there are no curative treatments available. Topical therapies are largely used to treat mild psoriasis, and more-potent systemic therapies (such as methotrexate or biologics) are often prescribed concomitantly with topical agents for moderate to severe disease. In general, topical corticosteroids are well tolerated when used for short courses in the appropriate areas and have a fast onset of action. Other topical therapies include vitamin D3 analogues and the combination therapy of a vitamin D3 analogue and topical corticosteroid, calcipotriene/betamethasone dipropionate.

Systemic therapies are divided into conventional systemic therapies—which include oral drugs and phototherapies—and biological agents. Nine biologics are approved for psoriasis: the TNF-α inhibitors etanercept (Enbrel®), infliximab (Remicade®), and adalimumab (Humira®); the IL-12/23 inhibitor ustekinumab (STELARA®); the specific IL-23 inhibitor guselkumab (Tremfya®) and tildrakizumab (Ilumetri®); the IL-17A inhibitors secukinumab (Cosentyx®), ixekizumab (Taltz®) and the IL-17A receptor antagonist brodalumab (Kyntheum®). An oral treatment with a further mechanism of action—apremilast (Otezla®)—is also available for the treatment of psoriasis. Phototherapy is a non-pharmaceutical therapy for moderate-to-severe psoriasis that involves exposure of the skin to ultraviolet light.

Currently, there is one further on-target competitor to guselkumab (Tremfya®) under review for approval, namelyrisankizumab. There are also various TNF-α biosimilars currently in development.

Since the first regulatory approval, guselkumab (Tremfya®) received further regulatory approval in a number of territories worldwide, including Europe, Brazil, Japan, Australia, South Korea and Canada to treat patients suffering from moderate-to-severe plaque psoriasis and additionally, psoriatic arthritis, pustular psoriasis and erythrodermic psoriasis in Japan.

Guselkumab (Tremfya®) is also being investigated for treatment of PsA, which is closely related to psoriasis and also a chronic disease. NSAIDs, selective COX-2 inhibitors, and intra-articular corticosteroids provide symptomatic relief to cutaneous or articular pain and inflammation. The cDMARDs (such as, methotrexate, sulfasalazine, leflunomide), bDMARDs (such as, TNF-α inhibitors: adalimumab (Humira®), etanercept (Enbrel®), infliximab (Remicade®); IL-12/23 inhibitor: ustekinumab (STELARA®); IL-17 inhibitors: secukinumab (Cosentyx®), ixekizumab (Taltz®), brodalumab (Kyntheum®); JAK inhibitor: tofacitinib (Xeljanz®)), and tsDMARDs (apremilast; Otezla®) are used to improve the signs and symptoms of PsA. Most agents now used for PsA were extrapolated from rheumatoid arthritis and psoriasis.

Further ongoing trials are in Crohn's Disease (phase 2/3), Hidradenitis Suppurativa (phase 2) and Ulcerative Colitis (phase 2). Crohn's disease as the most advanced of the mentioned further trials is an inflammatory bowel disease (IBD). It causes inflammation of the patient's digestive tract, which can lead to abdominal pain, severe diarrhea, fatigue, weight loss and malnutrition. Inflammation caused by Crohn's disease can involve different areas of the digestive tract in different people. There is currently no known cure for Crohn's disease available. Next to several small molecules (e.g. mesalazine, budesonide and methrotraxte) also infliximab (Remicade®), adalimumab (Humira®), and ustekinumab (STELARA®) are approved in Crohn's Disease.

## GANTENERUMAB

Alzheimer's disease is a progressive neurodegenerative disease that is characterized by memory loss, cognitive impairment, and functional decline. During the early stages of the disease, sleep disturbances and forgetfulness are generally the first presenting symptoms. The currently available therapies for Alzheimer's disease provide only symptomatic relief and will not cure the disease or prevent it from worsening over time. Since Alzheimer's

disease is multifarious, with various etiologies, it is unlikely that any one treatment or approach will be able to cure it. Most prescribed products are cholinesterase inhibitors (donepezil hydrochloride, rivastigmine and galantamine), N-methyl-D-aspartate receptor antagonists (memantine hydrochloride) and psychotropics (risperidone). Currently there are two on-target competitors to gantenerumab in phase 3 and phase 2 development, respectively: aducanumab by Biogen and BAN2401 developed by Biogen together with Eisai Inc. The phase 3 development of Crenezumab, an antibody developed by Roche also targeting amyloid beta, was stopped beginning of 2019 due to data of an interim analysis. Innovative treatment options are in demand given the very high unmet medical need in this indication.

## 6. GOVERNMENT REGULATION

Government authorities in the United States, at the federal, state and local level, and in the European Union and other countries and jurisdictions, extensively regulate, among other things, the research, development, testing, manufacture, quality control, approval, packaging, storage, recordkeeping, labeling, advertising, promotion, distribution, marketing, post-approval monitoring and reporting, and import and export of pharmaceutical products, including biological products. In addition, some jurisdictions regulate the pricing of pharmaceutical products. The processes for obtaining marketing approvals in the United States and in foreign countries and jurisdictions, along with subsequent compliance with applicable statutes and regulations and other requirements of regulatory authorities, require the expenditure of substantial time and financial resources.

### REGULATION AND PROCEDURES GOVERNING APPROVAL OF BIOLOGICAL PRODUCTS IN THE UNITED STATES

In the United States, our product candidates are regulated as biological products, or biologics, under the Public Health Service Act, or PHSA, and the Federal Food, Drug, and Cosmetic Act and their implementing regulations. The failure to comply with the applicable U.S. requirements at any time during the product development process, including during nonclinical testing, clinical testing, the approval process or post-approval process, may subject an applicant to delays in the conduct of a study or regulatory review and approval, and/or to administrative or judicial sanctions and adverse publicity. Sanctions may include, but are not limited to, the FDA's refusal to allow an applicant to proceed with clinical testing, refusal to approve pending applications, withdrawal of an approval, warning or untitled letters, product recalls, product seizures, total or partial suspension of production or distribution, injunctions, fines, debarment, disgorgement of profits and civil or criminal investigations and penalties brought by the FDA or the Department of Justice or other governmental entities.

An applicant seeking approval to market and distribute a new biologic in the United States generally must satisfactorily complete each of the following steps:

- nonclinical laboratory tests, animal studies and formulation studies all performed in accordance with applicable regulations, including the FDA's good laboratory practices, or GLP, regulations;
- submission to the FDA of an IND application for human clinical testing, which must become effective before human clinical trials may begin;
- approval by an IRB representing each clinical site before each clinical trial may be initiated;
- performance of adequate and well-controlled human clinical trials to establish the safety, potency and purity of the product candidate for each proposed indication, in accordance applicable regulations, including with Good Clinical Practices, or GCP, regulations;
- preparation and submission to the FDA of a BLA for a biologic product requesting marketing approval for one or more proposed indications, including submission of detailed information on the manufacture and composition of the product in clinical development, evidence of safety, purity and potency from nonclinical testing and clinical trials, and proposed labeling;
- review of the product by an FDA advisory committee, if applicable;

- satisfactory completion of one or more FDA inspections of the manufacturing facility or facilities, including those of third parties, at which the product, or components thereof, are produced to assess compliance with current Good Manufacturing Practices, or cGMP, requirements and to assure that the facilities, methods and controls are adequate to preserve the product's identity, strength, quality and purity;
- satisfactory completion of any FDA audits of the clinical study sites to assure compliance with GCPs, and the integrity of clinical data in support of the BLA;
- payment of user fees and securing FDA approval of the BLA; and
- compliance with any post-approval requirements, including the potential requirement to implement a REMS and to conduct any post-approval studies required by the FDA.

## NONCLINICAL STUDIES AND INVESTIGATIONAL NEW DRUG APPLICATION

Before testing any biologic product candidate in humans, the product candidate must undergo nonclinical testing. Nonclinical tests include laboratory evaluations of product chemistry, formulation and stability, as well as animal studies to evaluate the potential for activity and toxicity. The conduct of the nonclinical tests and formulation of the compounds for testing must comply with federal regulations and requirements. The results of the nonclinical tests, together with manufacturing information, analytical data, any available clinical data or literature and a proposed clinical protocol, are submitted to the FDA as part of an IND application. The IND automatically becomes effective 30 days after receipt by the FDA, unless before that time the FDA raises concerns or questions about the product or conduct of the proposed clinical trial, including concerns that human research subjects will be exposed to unreasonable health risks, and places the trial on a clinical hold. In that case, the IND sponsor and the FDA must resolve any outstanding FDA concerns before the clinical trial can begin.

As a result, submission of the IND may result in the FDA not allowing the trial to commence or not be conducted on the terms originally specified by the sponsor in the IND. If the FDA raises concerns or questions either during this initial 30-day period, or at any time during the IND process, it may choose to impose a partial or complete clinical hold. If the FDA imposes a clinical hold, trials may not recommence without FDA authorization and then only under terms authorized by the FDA. A clinical hold issued by the FDA may therefore delay either a proposed clinical study or cause suspension of an ongoing study, until all outstanding concerns have been adequately addressed and the FDA has notified the company that investigation may proceed. This could cause significant difficulties in completing planned clinical trials in a timely manner.

The FDA may impose clinical holds on a biologic product candidate at any time before or during clinical trials due to safety concerns or non-compliance.

## HUMAN CLINICAL TRIALS IN SUPPORT OF A BLA

Clinical trials involve the administration of the investigational product candidate to healthy volunteers or patients with the disease to be treated under the supervision of a qualified principal investigator in accordance with GCP requirements. Clinical trials are conducted under study protocols detailing, among other things, the objectives of the study, inclusion and exclusion criteria, the parameters to be used in monitoring safety, dosing procedures and the effectiveness criteria to be evaluated. A protocol for each clinical trial and any subsequent protocol amendments must be submitted to the FDA as part of the IND.

A sponsor who wishes to conduct a clinical trial outside the United States may, but need not, obtain FDA authorization to conduct the clinical trial under an IND. If a foreign clinical trial is not conducted under an IND, the sponsor may submit data from the clinical trial to the FDA in support of the BLA so long as the clinical trial is well-designed and well-conducted in accordance with GCP, including review and approval by an independent ethics committee, and the FDA is able to validate the study data through an onsite inspection, if necessary.

Further, each clinical trial must be reviewed and approved by an IRB either centrally or individually at each institution at which the clinical trial will be conducted. The IRB will consider, among other things, clinical trial

design, patient informed consent, ethical factors and the safety of human subjects. An IRB must operate in compliance with FDA regulations. The FDA, IRB, or the clinical trial sponsor may suspend or discontinue a clinical trial at any time for various reasons, including a finding that the clinical trial is not being conducted in accordance with FDA requirements or that the subjects or patients are being exposed to an unacceptable health risk. Clinical testing also must satisfy extensive GCP rules and the requirements for informed consent. The IRB also approves the form and content of the informed consent that must be signed by each clinical trial subject or his or her legal representative and must monitor the clinical trial until completed. Additionally, some clinical trials are overseen by an independent group of qualified experts organized by the clinical trial sponsor, known as a data safety monitoring board or committee. This group may recommend continuation of the study as planned, changes in study conduct, or cessation of the study at designated check points based on access to certain data from the study.

Clinical trials typically are conducted in three sequential phases, but the phases may overlap or be combined. Additional studies may be required after approval.

- Phase 1 clinical trials (or phase 1) are initially conducted in a limited population to test the product candidate for safety, including adverse effects, dose tolerance, absorption, metabolism, distribution, excretion and pharmacodynamics in healthy humans or, on occasion, in patients, such as in the case of some products for severe or life-threatening diseases, especially when the product may be too inherently toxic to ethically administer to healthy volunteers.
- Phase 2 clinical trials (or phase 2) are generally conducted in a limited patient population to identify possible adverse effects and safety risks, preliminarily evaluate the efficacy of the product candidate for specific targeted indications and determine dose tolerance and optimal dosage. Multiple phase 2 clinical trials may be conducted by the sponsor to obtain information prior to beginning larger phase 3 clinical trials.
- Phase 3 clinical trials (or phase 3) proceed if the phase 2 clinical trials demonstrate that a certain dose or dose range of the product candidate is potentially effective and has an acceptable safety profile. Phase 3 clinical trials are undertaken within an expanded patient population, often at geographically dispersed clinical trial sites, to gather additional information about safety and effectiveness necessary to evaluate the overall benefit-risk relationship of the product and to provide an adequate basis for physician labeling.

In some cases, the FDA may approve a BLA for a product candidate but require the sponsor to conduct additional clinical trials to further assess the product candidate's safety and effectiveness after approval. Such post-approval trials are typically referred to as phase 4 clinical trials (or phase 4). These studies may be used to gain additional experience from the treatment of patients in the intended therapeutic indication and to document a clinical benefit in the case of biologics approved under accelerated approval regulations. If the FDA approves a product while a company has ongoing clinical trials that were not necessary for approval, a company may be able to use the data from these clinical trials to meet all or part of any phase 4 clinical trial requirement or to request a change in the product labeling. Failure to exhibit due diligence with regard to conducting required phase 4 clinical trials could result in withdrawal of approval for products.

During all phases of clinical development, regulatory agencies require extensive monitoring and auditing of all clinical activities, clinical data, and clinical trial investigators. Annual progress reports detailing the results of the clinical trials must be submitted to the FDA. Written IND safety reports must be promptly submitted to the FDA and the investigators for serious and unexpected adverse events, any findings from other trials, tests in laboratory animals or *in vitro* testing that suggest a significant risk for human subjects, or any clinically important increase in the rate of a serious suspected adverse reaction over that listed in the protocol or investigator brochure. The sponsor must submit an IND safety report within 15 calendar days after the sponsor determines that the information qualifies for reporting. The sponsor also must notify the FDA of any unexpected fatal or life-threatening suspected adverse reaction within seven calendar days after the sponsor's initial receipt of the information. The FDA or the sponsor or its data safety monitoring board may suspend a clinical trial at any time on various grounds, including a finding that the research subjects or patients are being exposed to an

unacceptable health risk. Similarly, an IRB can suspend or terminate approval of a clinical trial at its institution if the clinical trial is not being conducted in accordance with the IRB's requirements or if the biological candidate has been associated with unexpected serious harm to patients.

There are also requirements governing the reporting of ongoing clinical trials and completed clinical trial results to public registries. Sponsors of clinical trials of FDA-regulated products, including biologics, are required to register and disclose certain clinical trial information, which is publicly available at www.clinicaltrials.gov. Information related to the product, patient population, phase of investigation, trial sites and investigators, and other aspects of the clinical trial is then made public as part of the registration. Sponsors are also obligated to discuss the results of their clinical trials after completion. Disclosure of the results of these trials can be delayed until the new product or new indication being studied has been approved.

## COMPLIANCE WITH CGMP REQUIREMENTS

Before approving a BLA, the FDA typically will inspect the facility or facilities where the product is manufactured. The FDA will not approve an application unless it determines that the manufacturing processes and facilities are in full compliance with cGMP requirements and adequate to assure consistent production of the product within required specifications. Among other things, the sponsor must develop methods for testing the identity, strength, quality, potency and purity of the final biological product. Additionally, appropriate packaging must be selected and tested and stability studies must be conducted to demonstrate that the biological product does not undergo unacceptable deterioration over its shelf life. The PHSA emphasizes the importance of manufacturing control for products like biologics whose attributes cannot be precisely defined.

Manufacturers and others involved in the manufacture and distribution of biological products must also register their establishments with the FDA and certain state agencies. Both domestic and foreign manufacturing establishments must register and provide additional information to the FDA upon their initial participation in the manufacturing process.

Establishments may be subject to periodic unannounced inspections by government authorities to ensure compliance with cGMPs and other laws. Manufacturers may have to provide, on request, electronic or physical records regarding their establishments. Delaying, denying, limiting, or refusing inspection by the FDA may lead to a product being deemed to be adulterated.

## REVIEW AND APPROVAL OF A BLA

The results of product candidate development, nonclinical testing and clinical trials, including negative or ambiguous results as well as positive findings, are submitted to the FDA as part of a BLA requesting a license to market the product. The BLA must contain extensive manufacturing information and detailed information on the composition of the product and proposed labeling. The FDA adjusts the Prescription Drug User Fee Act, or PDUFA, user fees on an annual basis. Fee waivers or reductions are available in certain circumstances, including a waiver of the application fee for the first application filed by a small business. Additionally, no user fees are assessed on BLAs for products designated as orphan drugs, unless the product also includes a non-orphan indication.

The FDA has 60 days after submission of the application to conduct an initial review to determine whether the BLA is sufficient to accept for filing based on the agency's threshold determination that it is substantially complete so as to permit substantive review. Once the submission has been accepted for filing, the FDA begins an in-depth review of the application. Under the goals and policies agreed to by the FDA under PDUFA, the FDA aims to complete its initial review of a standard application and respond to the applicant within ten months of the 60-day filing date, and for a priority review application within six months. The FDA does not always meet its PDUFA goal dates for standard and priority BLAs, and its review goals are subject to change from time to time. The review process may often be significantly extended by FDA requests for additional information or

clarification. The review process and the PDUFA goal date may also be extended by three months if the FDA requests or if the applicant otherwise provides additional information or clarification regarding information already provided in the submission within the last three months before the PDUFA goal date.

The FDA reviews a BLA to determine, among other things, whether the proposed product is safe and potent, or effective, for its intended use, and has an acceptable purity profile, and whether the product is being manufactured in accordance with cGMP requirements to assure and preserve the product's identity, safety, strength, quality, potency and purity. On the basis of the FDA's evaluation of the application and accompanying information, including the results of the inspection of the manufacturing facilities and any FDA audits of clinical trial sites to assure compliance with GCPs, the FDA may issue an approval letter, denial letter, or a complete response letter. An approval letter authorizes commercial marketing of the product with specific prescribing information for specific indications. Under the PHSA, the FDA may approve a BLA if it determines that the product is safe, pure and potent and the facility where the product will be manufactured meets standards designed to ensure that it continues to be safe, pure and potent. If the application is not approved, the FDA may issue a complete response letter, which will contain the conditions that must be met in order to secure final approval of the application, and when possible will outline recommended actions the sponsor might take to obtain approval of the application. If a complete response letter is issued, the applicant may either resubmit the BLA, addressing all of the deficiencies identified in the letter, or withdraw the application.

Sponsors that receive a complete response letter who elect to address the deficiencies may submit to the FDA information that represents a complete response to the issues identified by the FDA in the response letter. Such resubmissions are classified under PDUFA as either Class 1 or Class 2, based on the information submitted by an applicant in response to an action letter. Under the goals and policies agreed to by the FDA under PDUFA, the FDA aims to review and act on a Class 1 resubmission with two months of receipt and, with respect to a Class 2 resubmission, within six months of receipt. The FDA will not approve an application until issues identified in the complete response letter have been addressed.

The FDA may also refer the application to an advisory committee for review, evaluation and recommendation as to whether the application should be approved and under what conditions. In particular, the FDA may refer applications for novel biologic products or biologic products that present difficult questions of safety or efficacy to an advisory committee. Typically, an advisory committee is a panel of independent experts, including clinicians and other scientific experts. The FDA is not bound by the recommendations of an advisory committee, but it considers such recommendations carefully when making decisions.

If the FDA approves a new product, it may limit the approved indications for use of the product, or limit the approval to specific dosages. It may also require that certain contraindications, warnings or precautions be included in the product labeling. In addition, the FDA may call for post-approval studies, including phase 4 clinical trials, to further assess the product's safety after approval. The agency may also require testing and surveillance programs to monitor the product after commercialization, or impose other conditions, including distribution restrictions or other risk management mechanisms, including REMS, to help ensure that the benefits of the product outweigh the potential risks. REMS can include medication guides, communication plans for healthcare professionals, and elements to assure safe use, or ETASU. ETASU can include, but are not limited to, special training or certification for prescribing or dispensing, dispensing only under certain circumstances, special monitoring and the use of patent registries. If the FDA concludes a REMS is needed, the sponsor of the BLA must submit a proposed REMS; the FDA will not approve the BLA without a REMS, if required. The FDA may prevent or limit further marketing of a product based on the results of post-market studies or surveillance programs. After approval, many types of changes to the approved product, such as adding new indications, manufacturing changes and additional labeling claims, are subject to further testing requirements and FDA review and approval.

## FAST TRACK, BREAKTHROUGH THERAPY AND PRIORITY REVIEW DESIGNATIONS

The FDA may designate certain products for expedited review if they are intended to address an unmet medical need in the treatment of a serious or life-threatening disease or condition. These programs include fast track designation, breakthrough therapy designation and priority review designation.

The FDA may designate a product for fast track review if it is intended, whether alone or in combination with one or more other products, for the treatment of a serious or life-threatening disease or condition, and it demonstrates the potential to address unmet medical needs for such a disease or condition. Fast track designation applies to the combination of the product and the specific indication for which it is being studied. The sponsor of a new biologic may request that the FDA designate the biologic as a fast track product at any time during the clinical development of the product. For fast track products, sponsors may have greater interactions with the FDA and the FDA may initiate review of sections of a fast track product's application before the application is complete. This rolling review may be available if the FDA determines, after preliminary evaluation of clinical data submitted by the sponsor, that a fast track product may be effective. The sponsor must also provide, and the FDA must approve, a schedule for the submission of the remaining information and the sponsor must pay applicable user fees. However, the FDA's time period goal for reviewing a fast track application does not begin until the last section of the application is submitted. Fast track designation may be withdrawn by the FDA if the FDA believes that the designation is no longer supported by data emerging in the clinical trial process.

In 2012, Congress enacted the FDASIA. This law established a new regulatory scheme allowing for expedited review of products designated as "breakthrough therapies". A product may be designated as a breakthrough therapy if it is intended, either alone or in combination with one or more other products, to treat a serious or life-threatening disease or condition and preliminary clinical evidence indicates that the product may demonstrate substantial improvement over existing therapies on one or more clinically significant endpoints, such as substantial treatment effects observed early in clinical development. The FDA may take certain actions with respect to breakthrough therapies, including holding meetings with the sponsor throughout the development process; providing timely advice to the product sponsor regarding development and approval; involving more senior staff in the review process; assigning a cross-disciplinary project lead for the review team; and taking other steps to facilitate the design of clinical trials in an efficient manner.

The FDA may designate a product for priority review if it is a product that treats a serious condition and, if approved, would provide a significant improvement in safety or effectiveness. The FDA determines, on a case-by-case basis, whether the proposed product represents a significant improvement when compared with other available therapies. Significant improvement may be illustrated by evidence of increased effectiveness in the treatment of a condition, elimination or substantial reduction of a treatment-limiting product reaction, documented enhancement of patient compliance that may lead to improvement in serious outcomes and evidence of safety and effectiveness in a new subpopulation. A priority designation is intended to direct overall attention and resources to the evaluation of such applications, and to shorten the FDA's goal for taking action on a marketing application from ten months to six months.

Fast track designation, priority review and breakthrough therapy designation may expedite the development or approval process, but do not change the standards for approval.

## ACCELERATED APPROVAL PATHWAY

The FDA may grant accelerated approval to a product for a serious or life-threatening condition that provides meaningful therapeutic advantage to patients over existing treatments based upon a determination that the product has an effect on a surrogate endpoint that is reasonably likely to predict clinical benefit. The FDA may also grant accelerated approval for such a condition when the product has an effect on an intermediate clinical endpoint that can be measured earlier than an effect on irreversible morbidity or mortality, or IMM, and that is reasonably likely to predict an effect on IMM or other clinical benefit, taking into account the severity, rarity, or

prevalence of the condition and the availability or lack of alternative treatments. Products granted accelerated approval must meet the same statutory standards for safety and effectiveness as those granted traditional approval.

For the purposes of accelerated approval, a surrogate endpoint is a marker, such as a laboratory measurement, radiographic image, physical sign, or other measure that is thought to predict clinical benefit, but is not itself a measure of clinical benefit. Surrogate endpoints can often be measured more easily or more rapidly than clinical endpoints. An intermediate clinical endpoint is a measurement of a therapeutic effect that is considered reasonably likely to predict the clinical benefit of a product, such as an effect on IMM. The FDA has stated that although it has limited experience with accelerated approvals based on intermediate clinical endpoints, such endpoints generally may support accelerated approval where the therapeutic effect measured by the endpoint is not itself a clinical benefit and basis for traditional approval, if there is a basis for concluding that the therapeutic effect is reasonably likely to predict the ultimate clinical benefit of a product.

The accelerated approval pathway is most often used in settings in which the course of a disease is long and an extended period of time is required to measure the intended clinical benefit of a product. Thus, accelerated approval has been used extensively in the development and approval of products for treatment of a variety of cancers in which the goal of therapy is generally to improve survival or decrease morbidity and the duration of the typical disease course requires lengthy and sometimes large trials to demonstrate a clinical or survival benefit.

The accelerated approval pathway is usually contingent on a sponsor's agreement to conduct, in a diligent manner, additional post-approval confirmatory studies to verify and describe the product's clinical benefit. As a result, a product candidate approved on this basis is subject to rigorous post-marketing compliance requirements, including the completion of phase 4 or post-approval clinical trials to confirm the effect on the clinical endpoint. Failure to conduct required post-approval studies, or confirm a clinical benefit during post-marketing studies, may lead the FDA to withdraw the product from the market. All promotional materials for product candidates approved under accelerated regulations are subject to prior review by the FDA.

## POST-APPROVAL REGULATION

If regulatory approval for marketing of a product or for a new indication for an existing product is obtained, the sponsor will be required to comply with rigorous and extensive post-approval regulatory requirements as well as any post-approval requirements that the FDA has imposed on the particular product as part of the approval process. The sponsor will be required, among other things, to report certain adverse reactions and production problems to the FDA, provide updated safety and efficacy information and comply with requirements concerning advertising and promotional labeling. Manufacturers and certain of their subcontractors are required to register their establishments with the FDA and certain state agencies, and are subject to periodic unannounced inspections by the FDA and certain state agencies for compliance with ongoing regulatory requirements, including cGMP regulations, which impose certain procedural and documentation requirements upon manufacturers. Accordingly, the BLA-holder and its third-party manufacturers must continue to expend time, money and effort in the areas of production and quality control to maintain compliance with cGMP regulations and other regulatory requirements. In addition, changes to the manufacturing process or facility generally require prior FDA approval before being implemented, and other types of changes to the approved product, such as adding new indications and additional labeling claims, are also subject to further FDA review and approval.

Once an approval is granted, the FDA may withdraw the approval if compliance with regulatory requirements and standards is not maintained or if problems occur after the product reaches the market. Later discovery of previously unknown problems with a product, including adverse events of unanticipated severity or frequency, or with manufacturing processes, or failure to comply with regulatory requirements, may result in revisions to the approved labeling to add new safety information; imposition of post-market study requirements or clinical trial

requirements to assess new safety risks; or imposition of distribution restrictions or other restrictions under a REMS program. Other potential consequences include, among other things:

- restrictions on the marketing or manufacturing of the product, complete withdrawal of the product from the market or product recalls;
- fines, untitled letters or warning letters or holds on post-approval clinical trials;
- adverse publicity;
- refusal of the FDA to approve pending applications or supplements to approved applications, or suspension or revocation of product license approvals;
- product seizure or detention, or refusal to permit the import or export of products; or
- injunctions, fines, debarment, disgorgement of profits or the imposition of civil or criminal penalties.

The FDA strictly regulates marketing, labeling, advertising and promotion of products that are placed on the market. Pharmaceutical products may be promoted only for the approved indications and in accordance with the provisions of the approved label. The FDA and other agencies actively enforce the laws and regulations prohibiting the promotion of off-label uses, and a company that is found to have improperly promoted off-label uses may be subject to significant liability.

## ORPHAN DRUG DESIGNATION

Orphan drug designation in the United States is designed to encourage sponsors to develop products intended for rare diseases or conditions. In the United States, a rare disease or condition is statutorily defined as a disease or condition that affects fewer than 200,000 individuals in the United States or that affects more than 200,000 individuals in the United States but for which there is no reasonable expectation that the cost of developing and making available the product for the disease or condition will be recovered from sales of the product in the United States.

Orphan drug designation qualifies a company for certain financial incentives, including tax advantages and, if the product receives the first FDA approval for the indication for which it has orphan designation, market exclusivity for seven years following the date of the product's marketing approval. An application for designation as an orphan product can be made any time prior to the filing of an application for approval to market the product. Once a product receives orphan drug designation from the Office of Orphan Products Development at the FDA, the product must then go through the review and approval process like any other product.

In addition, a sponsor of a product that is otherwise the same product as an already approved orphan drug may seek and obtain orphan drug designation for the subsequent product for the same rare disease or condition if it can present a plausible hypothesis that its product may be clinically superior to the first product. More than one sponsor may receive orphan drug designation for the same product for the same rare disease or condition, but each sponsor seeking orphan drug designation must file a complete request for designation.

The period of exclusivity begins on the date that the marketing application is approved by the FDA and applies only to the indication for which the product has been designated. The FDA may approve a second application for the same product for a different use or a second application for a clinically superior version of the product for the same use. The FDA cannot, however, approve the same product made by another manufacturer for the same indication during the market exclusivity period unless it has the consent of the sponsor, the manufacturer makes a showing of clinical superiority over the product with orphan exclusivity, or the sponsor is unable to provide sufficient quantities.

Orphan product designation does not convey any advantage in or shorten the duration of the regulatory review and approval process.

## PEDIATRIC STUDIES AND EXCLUSIVITY

Under the Pediatric Research Equity Act of 2003, a BLA or supplement thereto must contain data that are adequate to assess the safety and effectiveness of the product for the claimed indications in all relevant pediatric subpopulations, and to support dosing and administration for each pediatric subpopulation for which the product is safe and effective. Sponsors who are planning to submit a marketing application for a biological product that includes a new active ingredient, new indication, new dosage form, new dosing regimen or new route of administration must also submit pediatric study plans prior to the assessment data, and no later than 60 calendar days following an end-of-phase 2 meeting with the FDA. Pediatric study plans must contain an outline of the proposed pediatric study or studies the sponsor plans to conduct, including study objectives and design, any deferral or waiver requests and other information required by regulation. The applicant, the FDA, and the FDA's internal review committee must then review the information submitted, consult with each other and agree upon a final plan. The FDA or the applicant may request an amendment to the plan at any time.

The FDA may, on its own initiative or at the request of the applicant, grant deferrals for submission of some or all pediatric data until after approval of the product for use in adults, or full or partial waivers from the pediatric data requirements. Additional requirements and procedures relating to deferral requests and requests for extension of deferrals are contained in FDASIA. Unless otherwise required by regulation, the pediatric data requirements do not apply to products with orphan designation.

Pediatric exclusivity is another type of non-patent marketing exclusivity in the United States and, if granted, provides for the attachment of an additional six months of marketing protection to the term of any existing regulatory exclusivity, including the non-patent and orphan exclusivity. This six-month exclusivity may be granted if a BLA sponsor submits pediatric data that fairly respond to a written request from the FDA for such data. The data do not need to show the product to be effective in the pediatric population studied; rather, if the clinical trial is deemed to fairly respond to the FDA's request, the additional protection is granted. If reports of requested pediatric studies are submitted to and accepted by the FDA within the statutory time limits, whatever statutory or regulatory periods of exclusivity or patent protection cover the product are extended by six months. This is not a patent term extension, but it effectively extends the regulatory period during which the FDA cannot approve another application.

## REGULATION OF COMBINATION PRODUCTS IN THE UNITED STATES

Certain products may be comprised of components that would normally be regulated under different types of regulatory authorities and frequently by different centers at the FDA. These products are known as combination products. Specifically, under regulations issued by the FDA, a combination product may be:

- A product comprised of two or more regulated components that are physically, chemically, or otherwise combined or mixed and produced as a single entity;
- Two or more separate products packaged together in a single package or as a unit and comprised of drug and device products, device and biological products, or biological and drug products;
- A drug, or device, or biological product packaged separately that according to its investigational plan or proposed labeling is intended for use only with an approved individually specified drug, or device, or biological product where both are required to achieve the intended use, indication, or effect and where upon approval of the proposed product the labeling of the approved product would need to be changed, e.g., to reflect a change in intended use, dosage form, strength, route of administration, or significant change in dose; or
- Any investigational drug, device, or biological product packaged separately that according to its proposed labeling is for use only with another individually specified investigational drug, device, or biological product where both are required to achieve the intended use, indication, or effect.

Under the United States Federal Food, Drug, and Cosmetic Act, the FDA is charged with assigning a center with primary jurisdiction, or a lead center, for review of a combination product. That determination is based on the

"primary mode of action" of the combination product. Thus, if the primary mode of action of a device-biologic combination product is attributable to the biologic product, the FDA center responsible for premarket review of the biologic product would have primary jurisdiction for the combination product. The FDA has also established an Office of Combination Products to address issues surrounding combination products and provide more certainty to the regulatory review process. That office serves as a focal point for combination product issues for agency reviewers and industry. It is also responsible for developing guidance and regulations to clarify the regulation of combination products, and for assignment of the FDA center that has primary jurisdiction for review of combination products where the jurisdiction is unclear or in dispute.

## REGULATION AND PROCEDURES GOVERNING APPROVAL OF MEDICINAL PRODUCTS IN THE EUROPEAN UNION

In order to market any product outside of the United States, a company also must comply with numerous and varying regulatory requirements of other countries and jurisdictions regarding quality, safety and efficacy and governing, among other things, clinical trials, marketing authorization, commercial sales and distribution of products. Whether or not it obtains FDA approval for a product, an applicant will need to obtain the necessary approvals by the comparable foreign regulatory authorities before it can initiate clinical trials or marketing of the product in those countries or jurisdictions. Specifically, the process governing approval of medicinal products in the European Union generally follows the same lines as in the United States. It entails satisfactory completion of pharmaceutical development, nonclinical studies and adequate and well-controlled clinical trials to establish the safety and efficacy of the medicinal product for each proposed indication. It also requires the submission to relevant competent authorities for clinical trials authorization for a marketing authorization application, or MAA, and granting of a marketing authorization by these authorities before the product can be marketed and sold in the European Union or its Member States.

## CLINICAL TRIAL APPROVAL

Pursuant to the currently applicable Clinical Trials Directive 2001/20/EC and the Directive 2005/28/EC on GCP, a system for the approval of clinical trials in the European Union has been implemented through national legislation of the Member States. Under this system, an applicant must obtain approval from the competent national authority of a European Union Member State in which the clinical trial is to be conducted or in multiple Member States if the clinical trial is to be conducted in a number of Member States. Furthermore, the applicant may only start a clinical trial at a specific study site after the independent ethics committee has issued a favorable opinion. The clinical trial application must be accompanied by an investigational medicinal product dossier with supporting information prescribed by Directive 2001/20/EC and Directive 2005/28/EC and corresponding national laws of the Member States and further detailed in applicable guidance documents.

In April 2014, the European Union adopted a new Clinical Trials Regulation (EU) No 536/2014, which is set to replace the current Clinical Trials Directive 2001/20/EC. It is expected that the new Clinical Trials Regulation will apply in the second half of 2019. It will overhaul the current system of approvals for clinical trials in the European Union. Specifically, the new regulation, which will be directly applicable in all Member States, aims at simplifying and streamlining the approval of clinical trials in the European Union. For instance, the new Clinical Trials Regulation provides for a streamlined application procedure using a single entry point and strictly defined deadlines for the assessment of clinical trial applications.

## MARKETING AUTHORIZATION

To obtain a marketing authorization for a product under the European Union regulatory system, an applicant must submit an MAA, either under a centralized procedure administered by the EMA or one of the procedures administered by competent authorities in European Union Member States (decentralized procedure, national procedure, or mutual recognition procedure). A marketing authorization may be granted only to an applicant established in the European Union. Regulation (EC) No. 1901/2006 on medicinal products for paediatric use

provides that prior to obtaining a marketing authorization in the European Union in the centralized procedure, an applicant must demonstrate compliance with all measures included in an EMA-approved Pediatric Investigation Plan covering all subsets of the pediatric population, unless the EMA has granted a product-specific waiver, class waiver, or a deferral for one or more of the measures included in the Pediatric Investigation Plan.

The centralized procedure provides for the grant of a single marketing authorization by the European Commission that is valid for all European Union Member States. Pursuant to Regulation (EC) No. 726/2004, the centralized procedure is compulsory for specific products, including for medicines produced by certain biotechnological processes, products designated as orphan medicinal products, advanced therapy products and products with a new active substance indicated for the treatment of certain diseases, including products for the treatment of cancer. For products with a new active substance indicated for the treatment of other diseases and products that are highly innovative or for which a centralized process is in the interest of patients, the centralized procedure may be optional.

Under the centralized procedure, the CHMP established at the EMA is responsible for conducting the assessment of a product to define its risk/benefit profile. Under the centralized procedure, the maximum timeframe for the evaluation of an MAA is 210 days, excluding clock stops when additional information or written or oral explanation is to be provided by the applicant in response to questions of the CHMP. Accelerated evaluation may be granted by the CHMP in exceptional cases, when a medicinal product is of major interest from the point of view of public health and, in particular, from the viewpoint of therapeutic innovation.

If the CHMP accepts such a request, the time limit of 210 days will be reduced to 150 days, but it is possible that the CHMP may revert to the standard time limit for the centralized procedure if it determines that it is no longer appropriate to conduct an accelerated assessment.

## PERIODS OF AUTHORIZATION AND RENEWALS

A marketing authorization is valid for five years, in principle, and it may be renewed after five years on the basis of a reevaluation of the risk benefit balance by the EMA or by the competent authority of the authorizing Member State. To that end, the marketing authorization holder must provide the EMA or the competent authority with a consolidated version of the file in respect of quality, safety and efficacy, including all variations introduced since the marketing authorization was granted, at least six months before the marketing authorization ceases to be valid. Once renewed, the marketing authorization is valid for an unlimited period, unless the European Commission or the competent authority decides, on justified grounds relating to pharmacovigilance, to proceed with one additional five-year renewal period. Any authorization that is not followed by the placement of the product on the European Union market (in the case of the centralized procedure) or on the market of the authorizing Member State within three years after authorization ceases to be valid.

## REGULATORY REQUIREMENTS AFTER MARKETING AUTHORIZATION

Following approval, the holder of the marketing authorization is required to comply with a range of requirements applicable to the manufacturing, marketing, promotion and sale of the medicinal product. These include compliance with the European Union's stringent pharmacovigilance or safety reporting rules, pursuant to which post-authorization studies and additional monitoring obligations can be imposed. In addition, the manufacturing of authorized products, for which a separate manufacturer's license is mandatory, must also be conducted in strict compliance with the EMA's cGMP requirements and comparable requirements of other regulatory bodies in the European Union, which mandate the methods, facilities and controls used in manufacturing, processing and packing of products to assure their safety and identity. Finally, the marketing and promotion of authorized products, including industry-sponsored continuing medical education and advertising directed toward the prescribers of products and/or the general public, are strictly regulated in the European Union under Directive 2001/83EC, as amended.

## ORPHAN DRUG DESIGNATION AND EXCLUSIVITY

Regulation (EC) No. 141/2000 and Regulation (EC) No. 847/2000 provide that a product can be designated as an orphan drug by the European Commission if its sponsor can establish: that the product is intended for the diagnosis, prevention or treatment of (1) a life-threatening or chronically debilitating condition affecting not more than five in ten thousand persons in the European Union when the application is made, or (2) a life-threatening, seriously debilitating or serious and chronic condition in the European Union and that without incentives it is unlikely that the marketing of the product in the European Union would generate sufficient return to justify the necessary investment. For either of these conditions, the applicant must demonstrate that there exists no satisfactory method of diagnosis, prevention, or treatment of the condition in question that has been authorized in the European Union or, if such method exists, the product has to be of significant benefit compared to products available for the condition.

An orphan drug designation provides a number of benefits, including fee reductions, regulatory assistance and the possibility to apply for a centralized European Union marketing authorization. Marketing authorization for an orphan drug leads to a ten-year period of market exclusivity. During this market exclusivity period, neither the EMA nor the European Commission or the Member States can accept an application or grant a marketing authorization for a "similar medicinal product". A "similar medicinal product" is defined as a medicinal product containing a similar active substance or substances as contained in an authorized orphan medicinal product, and which is intended for the same therapeutic indication. The market exclusivity period for the authorized therapeutic indication may, however, be reduced to six years if, at the end of the fifth year, it is established that the product no longer meets the criteria for orphan drug designation because, for example, the product is sufficiently profitable not to justify market exclusivity.

## COVERAGE, PRICING AND REIMBURSEMENT

Significant uncertainty exists as to the coverage and reimbursement status of any product candidates for which we may obtain regulatory approval. Even if our product candidates are approved for marketing, sales of such product candidates will depend, in part, on the extent to which third-party payors, including government health programs in the United States (such as Medicare and Medicaid), commercial health insurers, and managed care organizations, provide coverage and establish adequate reimbursement levels for such product candidates. In the United States, the Member States of the European Union and markets in other countries, patients who are prescribed treatments for their conditions and providers performing the prescribed services generally rely on third-party payors to reimburse all or part of the associated healthcare costs. Reimbursement rules and levels are not harmonized in the European Union and therefore differ from Member State to Member State. Patients are unlikely to use any product candidates we may develop unless coverage is provided and reimbursement is adequate to cover a significant portion of the cost of such product candidates. The process for determining whether a payor will provide coverage for a product may be separate from the process for setting the price or reimbursement rate that the payor will pay for the product once coverage is approved. Third-party payors are increasingly challenging the price and examining the medical necessity and cost-effectiveness of medical products and services and imposing controls to manage costs.

In order to secure coverage and reimbursement for any product that might be approved for sale, a company may need to conduct expensive pharmacoeconomic studies in order to demonstrate the medical necessity and cost-effectiveness of the product, and the cost of these studies would be in addition to the costs required to obtain FDA or other comparable marketing approvals. Even after pharmacoeconomic studies are conducted, product candidates may not be considered medically necessary or cost effective. A decision by a third-party payor not to cover any product candidates we may develop could reduce physician utilization of such product candidates once approved and have a material adverse effect on our sales, results of operations and financial condition. Additionally, a payor's decision to provide coverage for a product does not imply that an adequate reimbursement rate will be approved. For example, the payor may require co-payments that patients find unacceptably high. Further, one payor's determination to provide coverage for a product does not assure that

such coverage will continue or that other payors will also provide coverage and reimbursement for the product, and the level of coverage and reimbursement can differ significantly from payor to payor. Third-party reimbursement and coverage may not be adequate to enable us to maintain price levels sufficient to realize an appropriate return on our investment in product development. The insurance coverage and reimbursement status of newly approved products for orphan diseases is particularly uncertain, and failure to obtain or maintain adequate coverage and reimbursement for any such product candidates could limit a company's ability to generate revenue.

The containment of healthcare costs also has become a priority of federal, state and foreign governments as well as other third-party payors such as statutory health insurance funds and the prices of pharmaceuticals have been a focus in this effort. Governments have shown significant interest in implementing cost-containment programs, including price controls, restrictions on reimbursement and requirements for substitution of generic products. Adoption of price controls and cost-containment measures, and adoption of more restrictive policies in jurisdictions with existing controls and measures, could further limit a company's revenue from the sale of any approved products. Coverage policies and third-party reimbursement rates may change at any time. Even if favorable coverage and reimbursement status is attained for one or more products for which a company or its collaborators receive marketing approval, less favorable coverage policies and reimbursement rates may be implemented or coverage may be ended in the future.

Outside the United States, we will face challenges in ensuring obtaining adequate coverage and payment for any product candidates we may develop. Pricing of prescription pharmaceuticals is subject to governmental control in many countries. Pricing negotiations with governmental authorities or other third-party payors such as statutory health insurance funds can extend well beyond the receipt of regulatory marketing approval for a product and may require us to conduct a clinical trial that compares the cost effectiveness of any product candidates we may develop to other available therapies. The conduct of such a clinical trial could be expensive and result in delays in our commercialization efforts.

In the European Union, pricing and reimbursement schemes vary widely from country to country. Some countries provide that products may be marketed only after a reimbursement price has been agreed. Some countries may require the completion of additional studies that compare the cost effectiveness of a particular product candidate to currently available therapies (so called health technology assessments) in order to obtain reimbursement or pricing approval. For example, the European Union provides options for its Member States to restrict the range of products for which their national health insurance systems provide reimbursement and to control the prices of medicinal products for human use. European Union Member States may approve a specific price for a product or may instead adopt a system of direct or indirect controls on the profitability of the company placing the product on the market. Other Member States allow companies to fix their own prices for products, but monitor and control prescription volumes and issue guidance to physicians to limit prescriptions. Recently, many countries in the European Union have increased the amount of discounts required on pharmaceuticals and these efforts could continue as countries attempt to manage healthcare expenditures, especially in light of the severe fiscal and debt crises experienced by many countries in the European Union. The downward pressure on health care costs in general, particularly prescription products, has become intense. As a result, increasingly high barriers are being erected to the entry of new products. Political, economic and regulatory developments may further complicate pricing negotiations, and pricing negotiations may continue after reimbursement has been obtained. Reference pricing used by various European Union Member States and parallel trade (arbitrage between low-priced and high-priced Member States) can further reduce prices. Special pricing and reimbursement rules may apply to orphan drugs. Inclusion of orphan drugs in reimbursement systems tend to focus on the medical usefulness, need, quality and economic benefits to patients and the healthcare system as for any product. Acceptance of any medicinal product for reimbursement may come with cost, use and often volume restrictions, which again can vary by country. In addition, results based rules of reimbursement may apply. There can be no assurance that any country that has price controls or reimbursement limitations for pharmaceutical products will allow favorable reimbursement and pricing arrangements for any of our products, if approved in those countries.

## HEALTHCARE LAW AND REGULATION

Healthcare providers and third-party payors play a primary role in the recommendation and prescription of pharmaceutical products that are granted marketing approval. Our current and future arrangements with providers, researchers, consultants, third-party payors and customers are subject to broadly applicable federal and state fraud and abuse, anti-kickback, false claims, transparency and patient privacy laws and regulations and other healthcare laws and regulations that may constrain our business and/or financial arrangements. Restrictions under applicable federal and state healthcare laws and regulations include, without limitation, the following:

- the U.S. federal Anti-Kickback Statute, which prohibits, among other things, persons and entities from knowingly and willfully soliciting, receiving, offering, or paying remuneration, directly or indirectly, in-cash or in kind, to induce or reward either the referral of an individual for, or the purchase, order or recommendation of, any good or service, for which payment may be made, in whole or in part, under a federal healthcare program such as Medicare and Medicaid. A person or entity does not need to have actual knowledge of the statute or a specific intent to violate it in order to have committed a violation. Moreover, the government may assert that a claim that includes items or services resulting from a violation of the federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the civil False Claims Act;
- the federal civil and criminal false claims laws, including the civil False Claims Act, and civil monetary penalties laws, which prohibit individuals or entities from, among other things, knowingly presenting, or causing to be presented, to the federal government, claims for payment that are false, fictitious, or fraudulent or knowingly making, using, or causing to be made or used a false record or statement to avoid, decrease, or conceal an obligation to pay money to the federal government;
- HIPAA, which created additional federal criminal laws that prohibit, among other things, knowingly and willfully executing, or attempting to execute, a scheme to defraud any healthcare benefit program or making false statements relating to healthcare matters. Similar to the federal Anti-Kickback Statute, a person or entity does not need to have actual knowledge of the statute or a specific intent to violate it in order to have committed a violation;
- HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act, and their respective implementing regulations, including the Final Omnibus Rule published in January 2013, which impose obligations, including mandatory contractual terms, with respect to safeguarding the privacy, security and transmission of individually identifiable health information without the appropriate authorization by entities subject to the law, such as healthcare providers, health plans and healthcare clearinghouses and their respective business associates;
- the federal transparency requirements known as the federal Physician Payments Sunshine Act, under the ACA, which requires certain manufacturers of drugs, devices, biologics and medical supplies to report annually to the Centers for Medicare & Medicaid Services, or CMS, within the U.S. Department of Health and Human Services, information related to payments and other transfers of value made by that entity to physicians and teaching hospitals, as well as ownership and investment interests held by physicians and their immediate family members;
- federal consumer protection and unfair competition laws, which broadly regulate marketplace activities and activities that potentially harm consumers;
- federal government price reporting laws, which require us to calculate and report complex pricing metrics to government programs and which may be used in the calculation of reimbursement and/or discounts on marketed products;
- the Foreign Corrupt Practices Act, a U.S. law which regulates certain financial relationships with foreign government officials (which could include, for example, certain medical professionals); and
- analogous state and foreign laws and regulations, such as state anti-kickback and false claims laws, which may apply to healthcare items or services that are reimbursed by non-governmental third-party payors, including private insurers.

Some state laws require pharmaceutical companies to comply with the pharmaceutical industry's voluntary compliance guidelines and the relevant compliance guidance promulgated by the federal government in addition to requiring pharmaceutical manufacturers to report information related to payments to physicians and other health care providers or marketing expenditures and pricing information. State and foreign laws also govern the privacy and security of health information in some circumstances, many of which differ from each other in significant ways and often are not preempted by HIPAA, thus complicating compliance efforts.

Violations of these laws can subject us to criminal, civil and administrative sanctions including monetary penalties, damages, fines, disgorgement, individual imprisonment and exclusion from participation in government funded healthcare programs, such as Medicare and Medicaid, additional reporting requirements and oversight if we become subject to a corporate integrity agreement or similar agreement to resolve allegations of non-compliance with these laws, reputational harm, and we may be required to curtail or restructure our operations. Moreover, we expect that there will continue to be federal and state laws and regulations, proposed and implemented, that could impact our future operations and business.

## HEALTHCARE REFORM

A primary trend in the U.S. healthcare industry and elsewhere is cost containment. There have been a number of federal and state proposals during the last few years to reduce the cost of care through changes in the healthcare system, including limits on the pricing, coverage and reimbursement of pharmaceutical and biopharmaceutical products, especially under government-funded health care programs, and increased governmental control of drug pricing.

By way of example, in March 2010, the U.S. Congress enacted the ACA, which, among other things, includes changes to the coverage and payment for products under governmental and private insurance plans. Among the provisions of the ACA that may be of importance to our potential product candidates are:

- an annual, nondeductible fee on any entity that manufactures or imports specified branded prescription drugs and biologic products, apportioned among these entities according to their market share in certain government healthcare programs, although this fee would not apply to sales of certain products approved exclusively for orphan indications;
- expansion of eligibility criteria for Medicaid programs by, among other things, allowing states to offer Medicaid coverage to certain individuals with income at or below 133% of the federal poverty level, thereby potentially increasing a manufacturer's Medicaid rebate liability;
- expansion of manufacturers' rebate liability under the Medicaid Drug Rebate Program by increasing the minimum rebate for both branded and generic drugs and revising the definition of "average manufacturer price" for calculating and reporting Medicaid drug rebates on outpatient prescription drug prices and extending rebate liability to prescriptions for individuals enrolled in Medicare Advantage plans;
- a new methodology by which rebates owed by manufacturers under the Medicaid Drug Rebate Program are calculated for products that are inhaled, infused, instilled, implanted or injected;
- expanding the types of entities eligible for the 340B drug discount program;
- a new Patient-Centered Outcomes Research Institute to oversee, identify priorities in, and conduct comparative clinical effectiveness research, along with funding for such research;
- creation of the IPAB which, if impaneled, would have authority to recommend certain changes to the Medicare program to reduce expenditures by the program that could result in reduced payments for prescription products; and
- establishment of the Center for Medicare and Medicaid Innovation within CMS to test innovative payment and service delivery models to lower Medicare and Medicaid spending, potentially including prescription product spending (funding has been allocated to support the mission of the Center for Medicare and Medicaid Innovation through 2019).

At this point, healthcare reform and its impacts on us are highly uncertain in many respects. For example, since its enactment, there have been judicial and Congressional challenges to numerous aspects of the ACA. The current U.S. administration and U.S. Congress have focused on additional executive and legislative changes, including in particular repeal and replacement of certain provisions of the ACA. It remains to be seen, however, whether new legislation reforming, repealing or replacing the ACA will be enacted and, if so, precisely what the new legislation will provide and what impact it will have on the availability of healthcare and containing or lowering the cost of healthcare. It is possible that these reform, repeal and replacement initiatives, if enacted into law, could ultimately result in fewer individuals having health insurance coverage or in individuals having insurance coverage with less generous benefits. It is also possible that some ACA provisions that generally are not favorable for the research-based pharmaceutical industry could also be repealed along with ACA coverage expansion provisions.

Other legislative changes have been proposed and adopted in the United States since the ACA was enacted. For example, in August 2011, the Budget Control Act of 2011, among other things, included aggregate reductions of Medicare payments to providers of 2% per fiscal year, which went into effect in April 2013 and, due to subsequent legislative amendments, will remain in effect through 2025 unless additional Congressional action is taken. In January 2013, the American Taxpayer Relief Act of 2012, among other things, further reduced Medicare payments to several providers, including hospitals, imaging centers and cancer treatment centers, and increased the statute of limitations period for the government to recover overpayments to providers from three to five years.

Additionally, there has been increasing legislative and enforcement interest in the United States with respect to specialty drug pricing practices. Specifically, there have been several recent U.S. Congressional inquiries and proposed bills designed to, among other things, bring more transparency to drug pricing, reduce the cost of prescription drugs under Medicare, review the relationship between pricing and manufacturer patient programs, and reform government program reimbursement methodologies for drugs. Individual states have also become increasingly active in passing legislation and implementing regulations designed to control pharmaceutical product pricing, including price or patient reimbursement constraints, discounts, restrictions on certain product access, and to encourage importation from other countries and bulk purchasing.

There have been, and likely will continue to be, legislative and regulatory proposals at the foreign, federal and state levels directed at broadening the availability of healthcare and containing or lowering the cost of healthcare. Such reforms could have an adverse effect on anticipated revenues from product candidates that we may successfully develop and for which we may obtain marketing approval and may affect our overall financial condition and ability to develop product candidates.

## 7. OTHER INFORMATION

### FACILITIES

Our headquarters are in the suburbs of Munich, Germany, where we occupy office and laboratory space under a ten-year fixed term lease that started on January 1, 2017. Our subsidiary, Lanthio Pharma, is based in Groningen, the Netherlands, where it occupies office space under a six-year lease. The lease expires in 2022. Our subsidiary, MorphoSys US Inc., was initially established in Princeton, New Jersey, USA. In the future, it is planned to locate the subsidiary in Boston, Massachusetts, USA.

### LEGAL PROCEEDINGS

From time to time, we are subject to various legal proceedings and claims that arise in the ordinary course of our business activities. Although the results of litigation and claims cannot be predicted with certainty, as of the date of this report, we do not believe we are party to any claim or litigation, the outcome of which, if determined adversely to us, would individually or in the aggregate be reasonably expected to have a material adverse effect on our business. Regardless of the outcome, litigation can have an adverse impact on us because of defense and settlement costs, diversion of management resources and other factors.

On April 4, 2016 we filed a lawsuit against Janssen Biotech Inc., Genmab A/S and Genmab US, Inc at the District Court of Delaware. We were seeking redress for infringement in connection with the manufacture, use and sale of Janssen's and Genmab's daratumumab, an antibody targeting CD38, approved for the treatment of certain patients with MM and the same target against which MOR202 is directed. On January 26, 2019, we announced that in this lawsuit against Janssen Biotech and Genmab A/S, the United States (U.S.) District Court of Delaware, based on a hearing held November 27, 2018, ruled in a Court Order on January 25, 2019, that the asserted claims of three MorphoSys patents with U.S. Patent Numbers 8,263,746, 9,200,061 and 9,758,590 are invalid. The Court thus granted a motion for Summary Judgement of invalidity filed by Janssen Biotech and Genmab, A/S against the three patents held by MorphoSys. As a result of this decision, the jury trial scheduled for February 2019 to consider Janssen's and Genmab's alleged infringement and the validity of the MorphoSys patents did not take place. On January 31, 2019 we announced that we had settled the dispute with Janssen Biotech and Genmab A/S. The parties agreed to drop the mutual claims related to the litigation: MorphoSys dismissed claims for alleged patent infringement against Janssen Biotech and Genmab A/S and agreed not to appeal from the court order dated January 25, 2019. Janssen and Genmab dismissed their counterclaims against MorphoSys.

Apart from this patent litigation, within the past twelve months, we have not been party to any litigation, arbitration proceedings or administrative proceedings that may have a material effect on our financial condition or profitability, and we are not aware of any such proceedings being pending or threatened.

## CODE OF BUSINESS CONDUCT AND ETHICS

We have adopted a written code of business conduct and ethics, or code of conduct, which outlines the principles of legal and ethical business conduct under which we do business. The code of conduct applies to all of our Management Board members and employees. The full text of the code of conduct is available on our website at www.morphosys.com. The information and other content appearing on our website are not part of this report.

In addition, we have implemented a compliance handbook which describes the compliance management system implemented at MorphoSys, which is designed to ensure compliance with all legal requirements, while at the same time implementing high ethical standards that are mandatory for both management and each employee. The overall responsibility for the compliance management system lies with the Management Board, which reports regularly to the Audit Committee. In the performance of its compliance responsibilities, the Management Board has delegated the corresponding tasks to various functions at MorphoSys.

## DIFFERENCES BETWEEN OUR CORPORATE GOVERNANCE PRACTICES AND THOSE SET FORTH IN THE NASDAQ STOCK MARKET RULES

In general, Nasdaq Stock Market Rule 5615(a)(3) permits foreign private issuers such as us, to follow home country corporate governance practices instead of certain provisions of the Nasdaq Stock Market Rules without having to seek individual exemptions from Nasdaq. In addition, we also may qualify for certain exemptions under the Nasdaq Stock Market Rules as a foreign private issuer that may affect our corporate governance practices.

The significant differences between the corporate governance practices that we follow and those set forth in the Nasdaq Stock Market Rules are described below:

Distribution of Annual and Interim Reports. Nasdaq Listing Rule 5250(d) requires that our annual and interim reports be distributed or made available to shareholders within a reasonable period of time following filing with the SEC. Consistent with applicable rules and regulations in Germany, we do not distribute annual and interim reports automatically to shareholders. Instead, our annual and interim reports are available to shareholders on our website and delivery of printed versions thereof can be requested online. Furthermore, our annual and interim reports are also filed with the German Company Register (Unternehmensregister).

Code of Conduct. Nasdaq Listing Rule 5610 requires companies to adopt one or more codes of conduct applicable to all directors, officers and employees. Although there is no requirement under German law for a company to have a code of conduct, we nevertheless have one in place applying to our Management Board and employees but not to our Supervisory Board.

Proxy Solicitation. Nasdaq Listing Rule 5620(b) requires companies that are not a limited partnership to solicit proxies and provide proxy statements for all meetings of shareholders and to provide copies of such proxy solicitation to Nasdaq. Under German law, there is no requirement for companies to solicit proxies in connection with a meeting of shareholders. Shareholders have the right to exercise their voting rights in the shareholders' meeting through proxies appointed by them in writing. The proxies appointed by us are obligated to vote only in accordance with the instructions of the represented shareholder.

Shareholder approval requirements. Nasdaq Listing Rule 5635 requires companies to obtain shareholder approval before undertaking any of the following transactions:

- acquiring the stock or assets of another company, where such acquisition results in the issuance of 20% or more of our outstanding share capital or voting power;
- entering into any change of control transaction;
- establishing or materially amending any equity compensation arrangement; and
- entering into any transaction other than a public offering involving the sale, issuance or potential issuance by us of shares (or securities convertible into or exercisable for shares) equal to 20% or more of our outstanding share capital or 20% or more of the voting power outstanding before the issuance for less than the greater of book or market value of the stock.

Consistent with the German Stock Corporation Act *(Aktiengesetz)*, approval by the shareholders' meeting is generally required for the issuance of any shares as well as any securities granting the respective holder the right to acquire shares (including options and convertibles).

### SHARE OWNERSHIP BY MEMBERS OF SUPERVISORY BOARD AND MANAGEMENT BOARD

Please see "Principal Shareholders".

## 8. RELATED PARTY TRANSACTIONS

Since January 1, 2015, there has not been, nor is there currently proposed, any material transaction or series of similar material transactions to which we were or are a party in which any of the members of our supervisory or Management Boards, executive officers, holders of more than 10% of any class of our voting securities, or any member of the immediate family of any of the foregoing persons, had or will have a direct or indirect material interest, other than the compensation and shareholding arrangements we describe in the "Management" and "Principal Shareholders" sections of this report.

## 9. PRINCIPAL SHAREHOLDERS

The following table sets forth information, as of February 28, 2019, regarding the beneficial ownership of our ordinary shares for:

- members of our Supervisory Board;
- members of our Management Board;
- members of our supervisory and Management Boards as a group; and

- each person who has reported to us that such person beneficially owns 3% or more of our outstanding ordinary shares pursuant to applicable German law or 5% or more of our outstanding shares pursuant to applicable U.S. law.

The percentage of shares beneficially owned is computed on the basis of 31,839,572 issued shares as of February 28, 2019.

SHARES BENEFICIALLY OWNED AS OF FEBRUARY 28, 2019

| **Shareholders with 3% or more** | **Numbers** | **%** |
|---|---|---|
| Baillie Gifford [1] | 1,267,457 | 4.31% |
| BlackRock Inc. [2] | 1,196,258 | 3.85% |
| Consonance Capital Master Account L.P. [3] | 965,355 | 3.28% |
| FMR LLC [4] | 2,768,725 | 8,70% |
| Invesco Ltd. [5] | 964,573 | 3.03% |
| Oppenheimer Funds Inc. [6] | 1,482,749 | 4.71% |
| MEMBERS OF SUPERVISORY BOARD AND MANAGEMENT BOARD | | |
| Dr. Simon Moroney | 572,095 [8] | 1.80 [10] |
| Jens Holstein | 47,017 [9] | * |
| Dr. Malte Peters | 3,313 | * |
| Dr. Markus Enzelberger | 1,676 | * |
| Dr. Marc Cluzel | 500 | * |
| Dr. Frank Morich | 1,000 | * |
| Krisja Vermeylen | 350 | * |
| Wendy Johnson | 500 | * |
| Dr. George Golumbeski | 0 | * |
| Michael Brosnan | 0 | * |
| Members of Supervisory Board and Management Board (as a group) | 626,451 | 1.97 |

* Indicates holdings of less than 1%.

(1) The information is based solely on a notification provided by Baillie Gifford & Co. pursuant to the German Securities Trading Act (Wertpapierhandelsgesetz). MorphoSys issued a respective voting rights announcement on March 6, 2018.

(2) The information is based solely on a notification provided by Baillie BlackRock Inc. pursuant to the German Securities Trading Act (Wertpapierhandelsgesetz). MorphoSys issued a respective voting rights announcement on June 21, 2018.

(3) The information is based solely on a notification provided by Consonance Capital Master Account L.P. pursuant to the German Securities Trading Act (Wertpapierhandelsgesetz). MorphoSys issued a respective voting rights announcement on March 13, 2018.

(4) The information is based solely on a notification provided by FMR LLC pursuant to the German Securities Trading Act (Wertpapierhandelsgesetz). MorphoSys issued a respective voting rights announcement on July 25, 2018.

(5) The information is based solely on a notification provided by Invesco Ltd. pursuant to the German Securities Trading Act (Wertpapierhandelsgesetz). MorphoSys issued a respective voting rights announcement on February 14, 2019.

(6) The information is based solely on a notification provided by OppenheimerFunds, Inc. pursuant to the German Securities Trading Act (Wertpapierhandelsgesetz). MorphoSys issued a respective voting rights announcement on April 26, 2018.

(7) The information is based solely on a notification provided by Schroders plc pursuant to the German Securities Trading Act (Wertpapierhandelsgesetz). MorphoSys issued a respective voting rights announcement on January 23, 2019.

(8) Includes convertible bonds with a principal amount of €88,386 convertible into 88,386 ordinary shares.

(9) Includes convertible bonds with a principal amount of €60,537 convertible into 30,000 ordinary shares.
(10) Calculated as percentage of the outstanding share capital assuming exercise of all convertible bonds held by such person.

Our ordinary shares are issued only in bearer form. Accordingly, we cannot determine the identity of our shareholders or how many shares a particular shareholder owns and the number of ordinary shares directly held by persons with U.S. addresses.

All of our shareholders have the same voting rights. We are not aware of any arrangement that may, at a subsequent date, result in a change of control of our company.

## 10. DESCRIPTION OF SHARE CAPITAL

The following description is a summary of certain information relating to our share capital as well as certain provisions of our articles of association and the German Stock Corporation Act (*Aktiengesetz*). Unless stated otherwise, the description insofar as it relates to our articles of association is based on the amended version of our articles of association which was registered in the commercial register on February 2, 2019. This summary does not purport to be complete and speaks as of the date of this report. Copies of the articles of association will be publicly available from the commercial register (*Handelsregister*) of the local court (*Amtsgericht*) in Munich, Germany, electronically at *www.unternehmensregister.de* and as an exhibit to the registration statement of which this report forms a part.

### SHARE CAPITAL

As of the date of this report, we have share capital in the amount of € 31,839,572.00 which is divided into 31,839,572 ordinary bearer shares (*Inhaberaktien*). All shares are shares with no par value (*Stückaktien ohne Nennbetrag*) with a notional amount attributable to each ordinary share of €1.00.

### INCORPORATION OF THE COMPANY

MorphoSys AG was formed on March 3, 1998 and registered in the commercial register of the local court of Munich under number HRB121023 on June 30, 1998.

### FORM, CERTIFICATION AND TRANSFERABILITY OF THE SHARES

The form and contents of our global share certificates, any dividend certificates, renewal certificates and interest coupons are determined by our Management Board with the approval of our Supervisory Board. A shareholder's right to certificated shares is excluded, to the extent permitted by law and to the extent that certification is not required by the stock exchange on which the shares are admitted to trading. We are permitted to issue global share certificates that represent one or more shares.

All of our outstanding shares are no par-value bearer shares (*auf den Inhaber lautende Stückaktien ohne Nennbetrag*). Any resolution regarding a capital increase may determine the profit participation of the new shares resulting from such capital increase.

Our shares are freely transferable under German law, with the transfer of ownership governed by the rules of the relevant clearing system.

Our articles of association do not include any provisions that would have a direct effect of delaying, deferring or preventing a change of control. However, in the event of a hostile takeover, we could use our authorized capital to increase our share capital to issue new shares to an investor at a premium. See "—Authorized Capital". An increase in the number of shares outstanding could have a negative effect on a party's ability to carry out a hostile takeover.

## GENERAL INFORMATION ON CAPITAL MEASURES

Pursuant to our articles of association, an increase of our share capital generally requires a resolution passed at our shareholders' meeting with both a simple majority of the share capital represented at the relevant shareholders' meeting and a simple majority of the votes cast. The shareholders at such meeting may authorize our Management Board to increase our share capital with the consent of our Supervisory Board within a period of five years by issuing shares for a certain total amount, which we refer to as authorized capital (*genehmigtes Kapital*) and is a concept under German law that enables us to issue shares without going through the process of obtaining another shareholders' resolution. The aggregate nominal amount of the authorized capital created by the shareholders may not exceed one-half of the share capital existing at the time of registration of the authorized capital with the commercial register.

Furthermore, our shareholders may resolve to amend or create conditional capital (*bedingtes Kapital*). However, they may do so only to issue conversion or subscription rights to holders of convertible bonds, in preparation for a merger with another company or to issue subscription rights to employees and members of the management of our company or of an affiliated company by way of a consent or authorization resolution. According to German law, the aggregate nominal amount of the conditional capital created at the shareholders' meeting may not exceed one-half of the share capital existing at the time of the shareholders' meeting adopting such resolution. The aggregate nominal amount of the conditional capital created for the purpose of granting subscription rights to employees and members of the management of our company or of an affiliated company may not exceed 10% of the share capital existing at the time of the shareholders' meeting adopting such resolution.

According to German law, any resolution pertaining to the creation of authorized or conditional capital requires the vote of at least three-quarters of the share capital represented at the relevant shareholders' meeting and a simple majority of the votes cast. The shareholders may also resolve to increase the share capital from company resources by converting capital reserves and profit reserves into registered share capital. Pursuant to our articles of association, any resolution pertaining to an increase in share capital from company resources requires the vote of a simple majority of the share capital represented at the relevant shareholders' meeting and a simple majority of the votes cast.

All shares issued by the Company are fully paid in (meaning that shareholders are not liable to the Company to pay in any further amount in relation to their existing shares). Any resolution relating to a reduction of our share capital requires the vote of at least three-quarters of the share capital represented at the relevant shareholders' meeting as well as a simple majority of the votes cast according to German law.

## CHANGES IN OUR SHARE CAPITAL DURING THE LAST THREE FISCAL YEARS

As of February 2, 2019, our share capital as registered with the commercial register amounted to €31,839,572.00. Since January 1, 2015, our share capital has changed as follows:

As of February 12, 2015 our share capital as registered with the commercial register amounted to €26,456,834.00. Our share capital changed to reflect the issuance of new shares based on a share participation program.

As of February 1, 2016 our share capital as registered with the commercial register amounted to €26,537,682.00. Our share capital changed to reflect the issuance of new shares based on a share participation program.

As of November 17, 2016 our share capital as registered with the commercial register amounted to €29,159,770.00. Our share capital changed to reflect the issuance of new shares in a private placement.

As of January 4, 2018 our share capital as registered with the commercial register amounted to €29,420,785.00. Our share capital changed to reflect the issuance of new shares based on the exercise of convertible bonds by the beneficiaries in the financial year 2017.

As of April 18, 2018 our share capital as registered with the commercial register amounted to €31,495,785.00. Our share capital was increased to reflect the issuance of shares underlying the 8,300,000 ADSs offered for an initial public offering on the Nasdaq Global Market.

As of April 26, 2018 our share capital as registered with the commercial register amounted to €31,807,035.00. Our share capital was increased to reflect the issuance of shares underlying the additional 1,244,100 ADSs offered for an initial public offering on the Nasdaq Global Market.

As of February 2, 2019 our share capital as registered with the commercial register amounted to €31,839,572.00. Our share capital changed to reflect the issuance of new shares based on the exercise of convertible bonds by the beneficiaries in the financial year 2018.

## SUBSCRIPTION RIGHTS

According to the German Stock Corporation Act, every shareholder is generally entitled to subscription rights (commonly known as pre-emptive rights) to any new shares issued within the framework of a capital increase, including convertible bonds, bonds with warrants, profit-sharing rights or income bonds in proportion to the number of shares the respective shareholder holds in the corporation's existing share capital. Under German law, these rights do not apply to shares issued out of conditional capital. A minimum subscription period of two weeks must be provided for the exercise of such subscription rights.

Under German law, the shareholders' meeting may pass a resolution excluding subscription rights if at least three-quarters of the share capital represented adopts the resolution. To exclude subscription rights, the Management Board must also make a report available to the shareholders justifying the exclusion and demonstrating that the company's interest in excluding the subscription rights outweighs the shareholders' interest in having them. In addition to approval by the general shareholders' meeting, the exclusion of subscription rights requires a justification. The justification must be based on the principle that our interest in excluding subscription rights outweighs the shareholders' interest in their subscription rights and may be subject to judicial review. Accordingly, under German law, the exclusion of subscription rights upon the issuance of new shares is permitted, in particular, if we increase the share capital against cash contributions, if the amount of the capital increase does not exceed 10% of the existing share capital and the issue price of the new shares is not significantly lower than the market price of our shares (for this purpose, the market price may also be considered the market price of an ADS listed on Nasdaq divided by the number of our shares or the fraction of one of our shares represented by an ADS, as the case may be).

The authorization of the Management Board to issue convertible bonds or other securities convertible into shares must be limited to a period not exceeding five years as of the respective shareholder resolution.

## SHAREHOLDERS' MEETINGS, RESOLUTIONS AND VOTING RIGHTS

Pursuant to our articles of association, shareholders' meetings may be held at our registered offices or at the registered seat of a German stock exchange. In general, shareholders' meetings are convened by our Management Board. The Supervisory Board is additionally required to convene a shareholders' meeting in cases where this is required under binding statutory law (*i.e.*, if this is in the best interest of our company). In addition, shareholders who, individually or as a group, own at least 5% of our share capital may request that our Management Board convenes a shareholders' meeting. If our Management Board does not convene a shareholders' meeting upon such a request, the shareholders may petition the competent German court for authorization to convene a shareholders' meeting.

Pursuant to our articles of association, the convening notice for a shareholders' meeting must be made public at least 36 days prior to the meeting. Shareholders who, individually or as a group, own at least 5% or €500,000 of our share capital may require that modified or additional items be added to the agenda of the shareholders'

meeting. For each new item, an explanation of the requested change must be provided or a voting proposal (*Beschlussvorlage*). Any request for an amendment of the agenda of the shareholders' meeting must be received by the Company within 30 days prior to the meeting. The Company must publish any requests for the amendment of the agenda of the shareholders' meeting immediately. Under German law, our annual general shareholders' meeting must take place within the first eight months of each fiscal year. Among other things, the general shareholders' meeting is required to decide on the following issues:

- appropriation and use of annual net income;
- discharge or ratification of the actions taken by the members of our Management Board and our Supervisory Board;
- the approval of our statutory auditors;
- increases or decreases in our share capital;
- the election of Supervisory Board members; and
- to the extent legally required, the approval of our financial statements.

Each ordinary share grants one vote in a shareholders' meeting. Voting rights may be exercised by authorized proxies, which may be appointed by the Company (*Stimmrechtsvertreter*). The granting of a power of attorney must be made in text form. Generally, the shareholder or an authorized proxy must be present at the shareholders' meeting to cast a vote. However, under the Company's articles of association, the Management Board may determine in the invitation to the shareholders' meeting that shareholders may submit their votes in writing or by means of electronic communication without attending the shareholders' meeting in person.

Our articles of association provide in Article 20 that the resolutions of the shareholders' meeting are adopted by a simple majority of the votes cast. To the extent required by law, certain resolutions may have to be approved by a simple majority of share capital represented at the meeting, in addition to the majority of votes cast.

Neither German law nor our articles of association provide for a minimum participation for a quorum for our shareholders' meetings.

Under German law, certain resolutions of fundamental importance require the vote of at least three-quarters of the share capital present or represented in the voting at the time of adoption of the resolution. Resolutions of fundamental importance include, in particular, capital increases with exclusion of subscription rights, capital decreases, the creation of authorized or conditional share capital, the dissolution of a company, a merger into or with another company, split-offs and split-ups, the conclusion of inter-company agreements (*Unternehmensverträge*) as defined in the German Stock Corporation Act (in particular domination agreements (*Beherrschungsverträge*) and profit and loss transfer agreements (*Ergebnisabführungsverträge*)), and a change of the legal form of a company.

## DIVIDEND RIGHTS

Under German law, distributions of dividends on shares for a given fiscal year are generally determined by a process in which the Management Board and Supervisory Board submit a proposal to our annual general shareholders' meeting held in the subsequent fiscal year and such annual general shareholders' meeting adopts a resolution.

German law provides that a resolution concerning dividends and distribution thereof may be adopted only if the company's unconsolidated financial statements prepared in accordance with German law show net retained profits. In determining the profit available for distribution, the result for the relevant year must be adjusted for profits and losses brought forward from the previous year and for withdrawals from or transfers to reserves. Certain reserves are required by law and must be deducted when calculating the profit available for distribution.

Shareholders participate in profit distributions in proportion to the number of shares they hold. Dividends on shares resolved by the general shareholders' meeting are paid annually, shortly after the general shareholders' meeting, in compliance with the rules of the respective clearing system. Dividend payment claims are subject to a three-year statute of limitation in the company's favor.

## LIQUIDATION RIGHTS

Apart from liquidation as a result of insolvency proceedings, we may be liquidated only with a vote of the holders of at least three-quarters of the share capital represented at the shareholders' meeting at which such a vote is taken. If we are liquidated, any assets remaining after all of our liabilities have been paid off would be distributed among our shareholders in proportion to their holdings in accordance with German statutory law. The German Stock Corporation Act provides certain protections for creditors which must be observed in the event of liquidation.

## OBJECTIVE OF OUR COMPANY

Our business purpose, as described in Article 2 of our articles of association, is to identify, explore, optimize, develop, apply, commercialize, and sell technologies, processes and products in the field of medicine, pharmaceutical compounds and related intermediate products, as well as to provide related services. We may engage in all measures that relate to or appear, directly or indirectly, conducive to achieving the object of our company. In particular, we may establish, acquire or take participating interests in other companies.

## REGISTRATION OF THE COMPANY WITH COMMERCIAL REGISTER

We are a German stock corporation that is organized under the laws of Germany. On June 30, 1998, our company was registered in the commercial register (*Handelsregister*) of the local court (*Amtsgericht*) in Munich, Germany under the number HRB 121023.

## 11. DESCRIPTION OF AMERICAN DEPOSITARY SHARES

## AMERICAN DEPOSITARY SHARES

## FEES AND EXPENSES

| Persons depositing or withdrawing shares or ADS holders must pay: | For: |
|---|---|
| $5.00 (or less) per 100 ADSs (or portion of 100 ADSs) | Issuance of ADSs, including issuances resulting from a distribution of shares or rights or other property |
| | Cancellation of ADSs for the purpose of withdrawal, including if the deposit agreement terminates |
| $.05 (or less) per ADS | Any cash distribution to ADS holders |
| A fee equivalent to the fee that would be payable if securities distributed to you had been shares and the shares had been deposited for issuance of ADSs | Distribution of securities distributed to holders of deposited securities (including rights) that are distributed by the depositary to ADS holders |
| $.05 (or less) per ADS per calendar year | Depositary services |
| Registration or transfer fees | Transfer and registration of shares on our share register to or from the name of the depositary or its agent when you deposit or withdraw shares |
| Expenses of the depositary | Cable and facsimile transmissions (when expressly provided in the deposit agreement) |
| | Converting foreign currency to U.S. dollars |
| Taxes and other governmental charges the depositary or the custodian has to pay on any ADSs or shares underlying ADSs, such as stock transfer taxes, stamp duty or withholding taxes | As necessary |
| Any charges incurred by the depositary or its agents for servicing the deposited securities | As necessary |

The depositary collects its fees for delivery and surrender of ADSs directly from investors depositing ordinary shares or surrendering ADSs for the purpose of withdrawal or from intermediaries acting for them. The depositary collects fees for making distributions to investors by deducting those fees from the amounts distributed or by selling a portion of distributable property to pay the fees. The depositary may collect its annual fee for depositary services by deduction from cash distributions or by directly billing investors or by charging the book-entry system accounts of participants acting for them. The depositary may collect any of its fees by deduction from any cash distribution payable (or by selling a portion of securities or other property distributable) to ADS holders that are obligated to pay those fees. The depositary may generally refuse to provide fee-attracting services until its fees for those services are paid.

From time to time, the depositary may make payments to us to reimburse us for costs and expenses generally arising out of establishment and maintenance of the ADS program, waive fees and expenses for services provided to us by the depositary or share revenue from the fees collected from ADS holders. In performing its duties under the deposit agreement, the depositary may use brokers, dealers, foreign currency dealers or other service providers that are owned by or affiliated with the depositary and that may earn or share fees, spreads or commissions.

The depositary may convert currency itself or through any of its affiliates and, in those cases, acts as principal for its own account and not as agent, advisor, broker or fiduciary on behalf of any other person and earns revenue, including, without limitation, transaction spreads, that it will retain for its own account. The revenue is based on,

among other things, the difference between the exchange rate assigned to the currency conversion made under the deposit agreement and the rate that the depositary or its affiliate receives when buying or selling foreign currency for its own account. The depositary makes no representation that the exchange rate used or obtained in any currency conversion under the deposit agreement will be the most favorable rate that could be obtained at the time or that the method by which that rate will be determined will be the most favorable to ADS holders, subject to the depositary's obligations under the deposit agreement. The methodology used to determine exchange rates used in currency conversions is available upon request.

### PAYMENT OF TAXES

You will be responsible for any taxes or other governmental charges payable on your ADSs or on the deposited securities represented by any of your ADSs. The depositary may refuse to register any transfer of your ADSs or allow you to withdraw the deposited securities represented by your ADSs until those taxes or other charges are paid. It may apply payments owed to you or sell deposited securities represented by your American Depositary Shares to pay any taxes owed and you will remain liable for any deficiency. If the depositary sells deposited securities, it will, if appropriate, reduce the number of ADSs to reflect the sale and pay to ADS holders any proceeds, or send to ADS holders any property, remaining after it has paid the taxes.

## 12. EXCHANGE CONTROLS AND LIMITATIONS AFFECTING SHAREHOLDERS

There are currently no legal restrictions in Germany on international capital movements and foreign exchange transactions, except in limited embargo circumstances (*Teilembargo*) relating to certain areas, entities or persons as a result of applicable resolutions adopted by the United Nations and the EU. Restrictions currently exist with respect to, among others, Belarus, Congo, Egypt, Eritrea, Guinea, Guinea-Bissau, Iran, Iraq, Ivory Coast, Lebanon, Liberia, Libya, North Korea, Somalia, South Sudan, Sudan, Syria, Tunisia and Zimbabwe.

For statistical purposes, there are, however, limited notification requirements regarding transactions involving cross-border monetary transfers. With some exceptions, every corporation or individual residing in Germany must report to the German Central Bank (*Deutsche Bundesbank*) (i) any payment received from, or made to, a non-resident corporation or individual that exceeds €12,500 (or the equivalent in a foreign currency) and (ii) in case the sum of claims against, or liabilities payable to, non-residents or corporations exceeds €5,000,000 (or the equivalent in a foreign currency) at the end of any calendar month. Payments include cash payments made by means of direct debit, checks and bills, remittances denominated in euros and other currencies made through financial institutions, as well as netting and clearing arrangements.

## 13. CONTROLS AND PROCEDURES

Our management, with the participation of our chief executive officer and chief financial officer, has performed an evaluation of the effectiveness of our disclosure controls and procedures (as defined in Rule 13a-15(e) under the Exchange Act) as of the end of the period covered by this report, as required by Rule 13a-15(b) under the Exchange Act. Based upon this evaluation, our management, with the participation of our chief executive officer and chief financial officer, has concluded that, as of the end of the period covered by this annual report, our disclosure controls and procedures were effective in ensuring that the information required to be disclosed by us in the reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in by the SEC's rules and forms, and that the information required to be disclosed by us in the reports that we file or submit under the Exchange Act is accumulated and communicated to our management, including our chief executive officer and chief financial officer, as appropriate, to allow timely decisions regarding required disclosure.

This annual report does not include a report of management's assessment regarding internal control over financial reporting or an attestation report of the Company's registered public accounting firm due to a transition period established by rules of the SEC for newly public companies.

## 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

PricewaterhouseCoopers has served as our independent registered public accounting firm for the years ending December 31, 2018 and 2017. The following table sets out the aggregate fees for professional audit services and other services rendered by PricewaterhouseCoopers and their member firms and / or affiliates in 2018 and 2017:

| Year ended December 31 (in thousands) | 2017 | 2018 | Total |
|---|---|---|---|
| Audit fees | 253 | 469 | 722 |
| Audit-related fees | - | 516 | 516 |
| Tax service fees | - | - | - |
| Other fees for other services | 98 | 289 | 387 |

Audit fees relate to the audit of the financial statements as set out in this Annual Report, certain procedures on our quarterly results and services related to our statutory and regulatory filings of our subsidiaries.

Audit-related fees relate to the issuance of a comfort letter in connection with the IPO on the Nasdaq. Other fees for other services relate to the support of the IPO on the Nasdaq in April 2018.

The Audit Committee has approved the external audit plan and audit fees for the years 2017 and 2018. The Audit Committee monitors compliance with the German and U.S. rules on non-audit services provided by an independent registered public accounting firm.

## 15. DOCUMENTS ON DISPLAY

We are subject to certain reporting requirements of the Exchange Act. As a "foreign private issuer", we are exempt from the rules under the Exchange Act prescribing certain disclosure and procedural requirements for proxy solicitations, and our officers, directors and principal shareholders are exempt from the reporting and "short-swing" profit recovery provisions contained in Section 16 of the Exchange Act, with respect to their purchases and sales of shares. In addition, we are not required to file reports and Financial Statements with the SEC as frequently or as promptly as companies that are not foreign private issuers whose securities are registered under the Exchange Act. However, we are required to file with the SEC, within 4 months after the end of each fiscal year, an Annual Report on Form 20-F containing Financial Statements audited by an independent accounting firm and interactive data comprising Financial Statements in extensible business reporting language. We publish unaudited interim financial information after the end of each quarter. We furnish this quarterly financial information to the SEC under cover of a Form 6-K.

Documents we file with the SEC are publicly available at its public reference room at 100 F Street, N.E., Washington, DC 20549, United States. The SEC also maintains a website that contains reports and other information regarding registrants that are required to file electronically with the SEC. The address of this website is http://www.sec.gov. Please call the SEC at 1-800-SEC-0330 for further information on the operation of the public reference facilities.

## 16. TAXATION

The following discussion is a summary of U.S. and German tax consequences of owning and disposing of the ADSs. It does not purport to be a comprehensive description of all tax considerations that may be relevant to a decision to purchase ADSs by any particular investor. In particular, this discussion does not address tax considerations applicable to a U.S. holder (as defined in "– U.S. Taxation" below) that may be subject to special tax rules, including, without limitation, dealers or traders in securities, notional principal contracts or currencies, financial institutions, insurance companies, U.S. expatriates and inverted companies, certain stapled companies, tax-exempt organizations, tax-deferred or other retirement accounts, regulated investment companies, real estate

investment trusts, a person that holds ADSs as part of a hedge, straddle, conversion or other integrated transaction for tax purposes, a person that purchases or sells ADSs as part of a wash sale for tax purposes, a person whose functional currency for tax purposes is not the U.S. dollar, a person subject to the U.S. alternative minimum tax, a person who does not hold the ADSs as capital assets for tax purposes, a person subject to special tax accounting rules as a result of any item of gross income with respect to the ADSs being taken into account in an applicable financial statement; or a person that owns or is deemed to own 10% or more of the company's shares by vote or value. In addition, the discussion does not address tax consequences to an entity treated as a partnership (or other pass-through entity) for U.S. federal income tax purposes that holds ADSs. Prospective purchasers that are partners in a partnership holding ADSs should consult their own tax advisors.

## GERMAN TAXATION

The following discussion addresses certain German tax consequences of acquiring, owning or disposing of the ADSs. With the exception of the subsection "Taxation of Holders Tax Resident in Germany" below, which provides an overview of dividend taxation to holders that are residents of Germany, this discussion applies only to U.S. treaty beneficiaries (defined below) that acquire ADSs.

This discussion is based on domestic German tax laws, including, but not limited to, circulars issued by German tax authorities, which are not binding on the German courts, and the Treaty (defined below). It is based upon tax laws in effect at the time of filing of this report. These laws are subject to change, possibly with retroactive effect. For example, certain member states of the European Union are considering introducing a financial transaction tax (*Finanztransaktionssteuer*) which, if and when introduced, may also be applicable on sales and/or transfer of ADSs. In addition, in Germany, for example, there are currently ongoing discussions on the raise of the top tax rate, which may also have an effect on the German tax consequences of acquiring, owning and disposing of the ADSs. There is no assurance that German tax authorities will not challenge one or more of the tax consequences described in this discussion.

In addition, this discussion is based upon the assumption that each obligation in the deposit agreement and any related agreement will be performed in accordance with its terms. It does not purport to be a comprehensive or exhaustive description of all German tax considerations that may be of relevance in the context of acquiring, owning and disposing of ADSs.

The tax information presented in this report is not a substitute for tax advice. Prospective holders of ADSs should consult their own tax advisors regarding the German tax consequences of the purchase, ownership, disposition, donation or inheritance of ADSs in light of their particular circumstances, including the effect of any state, local, or other foreign or domestic laws or changes in tax law or interpretation. The same applies with respect to the rules governing the refund of any German dividend withholding tax (*Kapitalertragsteuer*) withheld. Only an individual tax consultation can appropriately account for the particular tax situation of each investor.

MorphoSys does not assume any responsibility for withholding tax at source.

## TAXATION OF MORPHOSYS

MorphoSys's taxable income, whether distributed or retained, is generally subject to corporate income tax (*Körperschaftsteuer*) at a uniform rate of 15% plus the solidarity surcharge (*Solidaritätszuschlag*) of 5.5% thereon, resulting in a total corporate income tax liability of 15.825%.

Dividends (*Gewinnanteile*) and other distributions received by MorphoSys from domestic or foreign corporations are exempt from corporate income tax, *inter alia*, if MorphoSys held at the beginning of the calendar year at least 10% of the registered share capital (*Grundkapital* or *Stammkapital*) of the distributing corporation which did not deduct the distributions from its own tax base; however, 5% of such revenue is treated as a non-deductible business expense and, as such, is subject to corporate income tax plus the solidarity surcharge. The acquisition of

a participation of at least 10% in the course of a calendar year is deemed to have occurred at the beginning of such calendar year for the purpose of this rule. Participations in the share capital of other corporations which MorphoSys holds through a partnership, including co- entrepreneurships (*Mitunternehmerschaften*), are attributable to MorphoSys only on a *pro rata* basis at its entitlement to the profits of the relevant partnership. Subject to the above-mentioned requirements, 95% of the amount of dividends and other distributions that MorphoSys receives from corporations are exempt from corporate income tax. The same applies, in general and irrespective of the size of the shareholding, to profits earned by MorphoSys from the sale of shares in another domestic or foreign corporation. Losses incurred from the sale of such shares are not deductible for tax purposes.

In addition, MorphoSys is subject to trade tax (*Gewerbesteuer*) with respect to its taxable trade profit (*Gewerbeertrag*) from its permanent establishments in Germany (*inländische gewerbesteuerliche Betriebsstätten*). Trade tax is generally based on the taxable income as determined for corporate income tax purposes taking into account, however, certain add-backs and deductions.

The trade tax rate depends on the local municipalities in which MorphoSys maintains its permanent establishments. Dividends received from other corporations and capital gains from the sale of shares in other corporations are treated in principle in the same manner for trade tax purposes as for corporate income tax purposes. However, dividends received from domestic and foreign corporations are effectively 95% exempt from trade tax only if MorphoSys held at least 15% (10% in the event of companies resident for tax purposes in EU member states other than Germany) of the registered share capital (*Grundkapital* or *Stammkapital*) of the distributing corporation at the beginning or – in the event of foreign corporations – since the beginning of the relevant tax assessment period. Additional limitations which previously appliedy with respect to dividends received from foreign non-EU corporations should currently not apply based on a decision of the European Court of Justice dated 20 September 2018.

Expenditures for external financing are subject to the "interest barrier" (*Zinsschranke*) rules. When MorphoSys calculates its taxable income, the interest barrier rules generally prevent MorphoSys from deducting certain net interest expense, *i.e.*, the excess of interest expense over interest income for a given fiscal year, exceeding 30% of its taxable EBITDA (taxable earnings adjusted for interest expense, interest income and certain depreciation/ amortization and other reductions) if its net interest expense is, or exceeds, EUR 3 million (*Freigrenze*) and no other exceptions apply. Special rules apply in the event of external financing undertaken by shareholders or related parties. Interest expense that is not deductible in a given year may be carried forward to subsequent fiscal years of MorphoSys (interest carry-forward) and will increase the interest expense in those subsequent years. EBITDA amounts that could not be utilized may, under certain conditions, be carried forward into future fiscal years. If such EBITDA carry-forward is not used within five fiscal years it will be forfeited. An EBITDA carry-forward that arose in an earlier year must be used before a carry-forward that arose in a later year is used. By the decision dated October 14, 2015, the German Federal Fiscal Court (*Bundesfinanzhof*) submitted to the German Federal Constitutional Court (*Bundesverfassungsgericht*) the question as to whether or not the interest barrier rule is unconstitutional. The final decision on whether the interest barrier rule violates the constitution now lies with the German Federal Constitutional Court. While a decision has not been issued as of the date of the filing of this report, it may take a few years until this Court will decide. For the time being, the interest barrier remains applicable, and tax assessments may be kept open.

Tax-loss carry-forwards can be used to fully offset taxable income for corporate income tax and trade tax purposes up to an amount of EUR 1 million. If the taxable profit for the year or taxable profit subject to trade taxation exceeds this threshold, only up to 60% of the amount exceeding the threshold may be offset by tax-loss carry-forwards. The remaining 40% is subject to tax (minimum taxation) (*Mindestbesteuerung*). The rules also provide for a tax carryback to the previous year with regard to corporate income tax. Unused tax-loss carry-forwards may be generally carried forward indefinitely and used in subsequent assessment periods to offset future taxable income in accordance with this rule.

However, unused losses, loss carry forwards and interest carry-forwards are fully forfeited in full if within five years more than 50% of the subscribed capital, membership interests, equity interests or voting rights of

MorphoSys are transferred, whether directly or indirectly, to an acquiring party or affiliated individuals/entities, or a similar change of ownership occurs (harmful acquisition) (*schädlicher Beteiligungserwerb*). A group of acquirers with aligned interests is also considered to be an acquiring party for these purposes. In addition, any current year losses incurred prior to the acquisition will not be deductible. If between 25% and 50% of the subscribed capital, membership interests, equity interests or voting rights of MorphoSys is transferred, a proportional amount of the unused losses and interest carry-forwards is would have been forfeited based on previously applicable law. A capital increase shall be deemed as equivalent to a transfer of the subscribed capital to the extent that it causes a change of the interest ratio in the capital of the corporation. Unused losses, loss carry-forwards, and interest carry-forwards are not forfeited (i) in the event of certain intra-group transactions, (ii) or to the extent that they are covered at the time of the harmful acquisition by certain built-in gains (*stille Reserven*) which are subject to tax in Germany. Alternatively to (i) and (ii), MorphoSys may, under certain requirements, opt for the continuity of business exemption *(Fortführungsgebundener Verlustvortrag)* to preserve unused losses, loss carry forwards and interest carry-forwards. By the decision dated March 29, 2017, the German Federal Constitutional Court decided that the proportional, i.e., between 25% and 50%, change of ownership rule is unconstitutional. The legislator was requested to change this rule with retroactive effect until December 31, 2018. Therefore, the legislator abolished the rule for the 25% to 50% transfers with retroactive effect. By the decision dated August 29, 2017, the Lower Tax Court of Hamburg (*Finanzgericht Hamburg*) submitted to the German Federal Constitutional Court the question as to whether or not the change of ownership rule stipulating a full forfeiture of unused losses, loss carry forwards and interest carry-forwards is also unconstitutional.

## GERMAN TAXATION OF HOLDERS OF ADSS

### GENERAL

Based on the circular issued by the German Federal Ministry of Finance (*BMF-Schreiben*), dated May 24, 2013, reference number IV C 1-S2204/12/10003, in respect of the taxation of American Depositary Receipts (ADRs) on domestic shares or the "ADR Tax Circular," for German tax purposes, the ADSs represent a beneficial ownership interest in the underlying shares of MorphoSys and qualify as ADRs for the purpose of the ADR Tax Circular. If the ADSs qualify as ADRs under the ADR Tax Circular, dividends would accordingly be attributable to holders of the ADSs for tax purposes, and not to the legal owner of the ordinary shares (*i.e.*, the financial institution on behalf of which the ordinary shares are stored at a domestic depository for the ADS holders). Furthermore, holders of the ADSs should be treated as beneficial owners of the capital of MorphoSys with respect to capital gains (see below in section "German Taxation of Capital Gains of the U.S. Treaty Beneficiaries of the ADSs"). However, investors should note that circulars published by the German tax authorities (including the ADR Tax Circular) are not binding on German courts, including German tax courts, and it is unclear whether a German court would follow the ADR Tax Circular in determining the German tax treatment of the ADSs. For the purpose of this German tax section, it is assumed that the ADSs qualify as ADRs within the meaning of the ADR Tax Circular. There may be a more detailed scrutiny with respect to ADRs in the near future because some fraudulent cases involving ADRs came to the attention of the German tax authorities in fall 2018. In those cases owners of ADRs requested tax refunds although there were no underlying shares with respect to these ADRs. Therefore, it also cannot be excluded that the tax authorities want to treat ADRs differently in the future.

### TAXATION OF HOLDERS NOT TAX RESIDENT IN GERMANY

The following discussion describes the material German tax consequences for a holder that is a U.S. treaty beneficiary of acquiring, owning and disposing of the ADSs. For purposes of this discussion, a "U.S. treaty beneficiary" is a resident of the United States for purposes of the Agreement between the Federal Republic of Germany and United States of America for the Avoidance of Double Taxation and the Prevention of Fiscal Evasion with respect to Taxes on Income and on Capital as of June 4, 2008 (*Abkommen zwischen der Bundesrepublik Deutschland und den Vereinigten Staaten von Amerika zur Vermeidung der Doppelbesteuerung und zur Verhinderung der Steuerverkürzung auf dem Gebiet der Steuern vom Einkommen und vom Vermögen*

*und einiger anderer Steuern in der Fassung vom 4. Juni 2008*), hereinafter referred to as the "Treaty", who is fully eligible for benefits under the Treaty.

A holder will be a U.S. treaty beneficiary entitled to full Treaty benefits in respect of the ADSs if it is, *inter alia*:

- the beneficial owner of the ADSs (and the dividends paid with respect thereto);
- a U.S. holder;
- not also a resident of Germany for German tax purposes; and
- not subject to the limitation on benefits (*i.e.*, anti-treaty shopping) article of the Treaty that applies in limited circumstances.

Special rules apply to pension funds and certain other tax-exempt investors.

This discussion does not address the treatment of ADSs that are (i) held in connection with a permanent establishment or fixed base through which a U.S. treaty beneficiary carries on business or performs personal services in Germany or (ii) part of business assets for which a permanent representative in Germany has been appointed.

## GENERAL RULES FOR THE TAXATION OF HOLDERS NOT TAX RESIDENT IN GERMANY

Non-German resident holders of ADSs are subject to German taxation with respect to German source income (*beschränkte Steuerpflicht*). According to the ADR Tax Circular, income from the shares should be attributed to the holder of the ADSs for German tax purposes. As a consequence, income from the ADSs should be treated as German source income.

The full amount of a dividend distributed by MorphoSys to a non-German resident holder which does not maintain a permanent establishment or other taxable presence in Germany is subject to (final) German withholding tax at an aggregate rate of 26.375%. German withholding tax is withheld and remitted to the German tax authorities by the disbursing agent (*i.e.*, the German credit institution, financial services institution, securities trading enterprise or securities trading bank (each as defined in the German Banking Act (*Kreditwesengesetz*) and in each case including a German branch of a foreign enterprise, but excluding a foreign branch of a German enterprise)) that holds or administers the underlying shares in custody and disburses or credits the dividend income from the underlying shares or disburses or credits the dividend income from the underlying shares on delivery of the dividend coupons or disburses such dividend income to a foreign agent or the central securities depository (*Wertpapiersammelbank)* in terms of the German Depositary Act (*Depotgesetz*) holding the underlying shares in a collective deposit, if such central securities depository disburses the dividend income from the underlying shares to a foreign agent, regardless of whether a holder must report the dividend for tax purposes and regardless of whether or not a holder is a resident of Germany.

Pursuant to the Treaty, the German withholding tax may not exceed 15% of the gross amount of the dividends received by U.S. treaty beneficiaries. The excess of the total withholding tax, including the solidarity surcharge, over the maximum rate of withholding tax permitted by the Treaty is refunded to U.S. treaty beneficiaries upon application. For example, for a declared dividend of 100, a U.S. treaty beneficiary initially receives 73.625 (100 minus the 26.375% withholding tax including solidarity surcharge). The U.S. treaty beneficiary is entitled to a partial refund from the German tax authorities in the amount of 11.375% of the gross dividend (of 100). As a result, the U.S. treaty beneficiary ultimately receives a total of 85 (85% of the declared dividend) following the refund of the excess withholding. However, investors should note that it is unclear how the German tax authorities will apply the refund process to dividends on the ADSs with respect to non-German resident holders of the ADSs. Further, such refund is subject to the German anti-avoidance treaty shopping rule (as described below in section "– Withholding Tax Refund for U.S. Treaty Beneficiaries").

## GERMAN TAXATION OF CAPITAL GAINS OF THE U.S. TREATY BENEFICIARIES OF THE ADSS

The capital gains from the disposition of the ADSs realized by a non-German resident holder which does not maintain a permanent establishment or other taxable presence in Germany would be treated as German source income and be subject to German tax if such holder at any time during the five years preceding the disposition, directly or indirectly, owned 1% or more of MorphoSys's share capital, irrespective of whether through the ADSs or shares of MorphoSys. If such holder had acquired the ADSs without consideration, the previous owner's holding period and quota would be taken into account.

Pursuant to the Treaty, U.S. treaty beneficiaries are not subject to German tax even under the circumstances described in the preceding paragraph and therefore should not be taxed on capital gains from the disposition of the ADSs.

German statutory law requires the disbursing agent to levy withholding tax on capital gains from the sale of ADSs or other securities held in a custodial account in Germany. With regard to the German taxation of capital gains, disbursing agent means a German credit institution, a financial services institution, a securities trading enterprise or a securities trading bank (each as defined in the German Banking Act and, in each case including a German branch of a foreign enterprise, but excluding a foreign branch of a German enterprise) that holds the ADSs in custody or administers the ADSs for the investor or conducts sales or other dispositions and disburses or credits the income from the ADSs to the holder of the ADSs. The German statutory law does not explicitly condition the obligation to withhold taxes on capital gains being subject to taxation in Germany under German statutory law or on an applicable income tax treaty permitting Germany to tax such capital gains.

However, a circular issued by the German Federal Ministry of Finance, dated January 18, 2016, reference number IV C 1-S2252/08/10004 :017, provides that taxes need not be withheld when the holder of the custody account is not a resident of Germany for tax purposes and the income is not subject to German taxation. The circular further states that there is no obligation to withhold such tax even if the non-resident holder owns 1% or more of the share capital of a German company. While circulars issued by the German Federal Ministry of Finance are only binding on the German tax authorities but not on the German courts, in practice, the disbursing agents nevertheless typically rely on guidance contained in such circulars. Therefore, a disbursing agent would only withhold tax at 26.375% on capital gains derived by a U.S. treaty beneficiary from the sale of ADSs held in a custodial account in Germany in the event that the disbursing agent did not follow the abovementioned guidance. In this case, the U.S. treaty beneficiary may be entitled to claim a refund of the withholding tax from the German tax authorities under the Treaty, as described below in the section "– Withholding Tax Refund for U.S. Treaty Beneficiaries".

## WITHHOLDING TAX REFUND FOR U.S. TREATY BENEFICIARIES

U.S. treaty beneficiaries are generally eligible for treaty benefits under the Treaty, as described above in Section "– Taxation of Holders Not Tax Resident in Germany". Accordingly, U.S. treaty beneficiaries are in general entitled to claim a refund of the portion of the otherwise applicable 26.375% German withholding tax (corporate income tax including solidarity surcharge) on dividends that exceeds the applicable Treaty rate. However, such refund is only possible, provided that pursuant to special rules on the restriction of withholding tax credit, the following three cumulative requirements are met: (i) the shareholder must qualify as beneficial owner of the ADSs for an uninterrupted minimum holding period of 45 days within a period starting 45 days prior to and ending 45 days after the due date of the dividends, (ii) the shareholder has to bear at least 70% of the change in value risk related to the ADSs during the minimum holding period as described under (i) of this paragraph and has not entered into (acting by itself or through a related party) hedging transactions which lower the change in value risk by more than 30%, and (iii) the shareholder must not be obliged to fully or largely compensate directly or indirectly the dividends to third parties. If these requirements are not met, then for a shareholder not being tax-resident in Germany who applied for a full or partial refund of the withholding tax pursuant to a double taxation treaty, no refund is available. This restriction generally does only apply, if (i) the tax underlying the

refund application is below a tax rate of 15% based on the gross amount of the dividends or capital gains and (ii) the shareholder does not directly own 10% or more in the shares of the company and is subject to income taxes in its state of residence, without being tax-exempt.

In general, as previously discussed, investors should note that it is unclear how the German tax administration will apply the refund process to dividends on the ADSs. Further, such refund is subject to the German anti-avoidance treaty shopping rule. Generally, this rule requires that the U.S. treaty beneficiary (in case it is a non-German resident company) maintains its own administrative substance and conducts its own business activities. In particular, a foreign company has no right to a full or partial refund to the extent persons holding ownership interests in MorphoSys would not be entitled to the refund if they derived the income directly and the gross income realized by the foreign company is not caused by the business activities of the foreign company, and there are either no economic or other considerable reasons for the interposition of the foreign company, or the foreign company does not participate in general commerce by means of a business organization with resources appropriate to its business purpose. However, this shall not apply if the foreign company's principal class of stock is regularly traded in substantial volume on a recognized stock exchange, or if the foreign company is subject to the provisions of the German Investment Tax Act (*Investmentsteuergesetz*). Whether or not and to which extent the anti-avoidance treaty shopping rule applies, has to be analyzed on a case by case basis taking into account all relevant tests. In addition, the interpretation of these tests is disputed and to date no published decisions of the German Federal Finance Court exist in this regard.

Due to the legal structure of the ADSs, only limited guidance of the German tax authorities exists on the practical application of this procedure with respect to the ADSs.

## TAXATION OF HOLDERS TAX RESIDENT IN GERMANY

This subsection provides an overview of dividend taxation with regard to the general principles applicable to MorphoSys's holders that are tax resident in Germany. A holder is a German tax resident if, in case of an individual, he or she maintains a domicile (*Wohnsitz*) or a usual residence (*gewöhnlicher Aufenthalt*) in Germany or if, in case of a corporation, it has its place of management (*Geschäftsleitung*) or registered office (*Sitz*) in Germany.

The German dividend and capital gains taxation rules applicable to German tax residents require a distinction between ADSs held as private assets (*Privatvermögen*) and ADSs held as business assets (*Betriebsvermögen*).

### ADSS AS PRIVATE ASSETS (PRIVATVERMÖGEN)

If the ADSs are held as private assets by a German tax resident, dividends and capital gains are taxed as investment income and are principally subject to 25% German flat income tax on capital income (*Abgeltungsteuer*) (plus a 5.5% solidarity surcharge (*Solidaritätszuschlag*) thereon, resulting in an aggregate rate of 26.375%), which is levied in the form of withholding tax (*Kapitalertragsteuer*). In other words, once deducted, the shareholder's income tax liability on the dividends will be settled.

Shareholders may apply to have their capital investment income assessed in accordance with the general rules and with an individual's personal income tax rate if this would result in a lower tax burden in which case actually incurred expenses are not deductible. The holder would be taxed on gross personal investment income (including dividends or gains with respect to ADSs), less the saver's allowance of €801 for an individual or €1,602 for a married couple and a registered civil union (*eingetragene Lebenspartnerschaft*) filing taxes jointly. The deduction of expenses related to the investment income (including dividends or gains with respect to ADSs) is generally not possible for private investors.

Losses resulting from the disposal of ADSs can only be offset by capital gains from the sale of any shares (*Aktien*) and other ADSs. If, however, a holder directly or indirectly held at least 1% of the share capital of the

company at any time during the five years preceding the sale, 60% of any capital gains resulting from the sale are taxable at the holder's personal income tax rate (plus 5.5% solidarity surcharge thereon). Conversely, 60% of any capital losses are recognized for tax purposes.

Church tax generally has to be withheld, if applicable, based on an automatic data access procedure, unless the shareholder has filed a blocking notice (*Sperrvermerk*) with the Federal Central Tax Office. Where church tax is not levied by way of withholding, it is determined by means of income tax assessment.

**ADSS AS BUSINESS ASSETS (BETRIEBSVERMÖGEN)**

In case the ADSs are held as business assets, the taxation depends on the legal form of the holder (*i.e.*, whether the holder is a corporation or an individual). Irrespective of the legal form of the holder, dividends are subject to the aggregate withholding tax rate of 26.375%. The withholding tax is credited against the respective holder's income tax liability, provided that pursuant to special rules on the restriction of withholding tax credit, the following three cumulative requirements are met: (i) the shareholder must qualify as beneficial owner of the ADSs for an uninterrupted minimum holding period of 45 days occurring within a period starting 45 days prior to and ending 45 days after the due date of the dividends, (ii) the shareholder has to bear at least 70% of the change in value risk related to the ADSs during the minimum holding period as described under (i) of this paragraph and has not entered into (acting by itself or through a related party) hedging transactions which lower the change in value risk for more than 30%, and (iii) the shareholder must not be obliged to fully or largely compensate directly or indirectly the dividends to third parties. If these requirements are not met, three-fifths of the withholding tax imposed on the dividends must not be credited against the shareholder's (corporate) income tax liability, but may, upon application, be deducted from the shareholder's tax base for the relevant tax assessment period. Such requirements also apply to ADSs, which lead to domestic income in Germany and which are held by a non-German depositary bank. A shareholder that is generally subject to German income tax or corporate income tax and that has received gross dividends without any deduction of withholding tax due to a tax exemption without qualifying for a full tax credit under the aforementioned requirements has to notify the competent local tax office accordingly and has to make a payment in the amount of the omitted withholding tax deduction. The special rules on the restriction of withholding tax credit do not apply to a shareholder whose overall dividend earnings within an assessment period do not exceed €20,000 or that has been the beneficial owner of the ADSs in the company for at least one uninterrupted year upon receipt of the dividends.

To the extent the amount withheld exceeds the income tax liability, the withholding tax will be refunded, provided that certain requirements are met (including the aforementioned requirements).

Special rules apply to credit institutions (*Kreditinstitute*), financial services institutions (*Finanzdienstleistungsinstitute*), financial enterprises (*Finanzunternehmen*), life insurance and health insurance companies, and pension funds.

With regard to holders in the legal form of a corporation, dividends and capital gains are in general 95% tax exempt from corporate income tax (including solidarity surcharge), *inter alia*, if the shareholder held at least 10% of the registered share capital (*Grundkapital oder Stammkapital*) of MorphoSys at the beginning of the calendar year. The remaining 5% is treated as non-deductible business expense and, as such, is subject to corporate income tax (including solidarity surcharge). The acquisition of a participation of at least 10% in the course of a calendar year is deemed to have occurred at the beginning of such calendar year for the purpose of this rule. Participations in the share capital of other corporations which MorphoSys holds through a partnership, including co-entrepreneurships (*Mitunternehmerschaften*), are attributable to MorphoSys only on a *pro rata* basis at the ratio of its entitlement to the profits of the relevant partnership. Moreover, actual business expenses incurred to generate the dividends may be deducted.

However, the amount of any dividends after deducting business expenses related to the dividends is subject to the trade tax, unless the corporation held at least 15% of MorphoSys's registered share capital at the beginning of the

relevant tax assessment period. In the latter case, the aforementioned exemption of 95% of the dividend income also applies for trade tax purposes. Losses from the sale of ADSs are generally not tax deductible for corporate income tax and trade tax purposes.

With regard to individuals holding ADSs as business assets, 60% of dividends and capital gains are taxed at the individual's personal income tax rate (plus 5.5% solidarity surcharge thereon). Correspondingly, only 60% of business expenses related to the dividends and capital gains as well as losses from the sale of ADSs are principally deductible for income tax purposes.

### GERMAN INHERITANCE AND GIFT TAX (ERBSCHAFT- UND SCHENKUNGSTEUER)

The transfer of ADSs to another person by inheritance or gift should be generally subject to German inheritance and gift tax only if:

(1) the decedent or donor or heir, beneficiary or other transferee maintained his or her domicile or a usual residence in Germany or had its place of management or registered office in Germany at the time of the transfer, or is a German citizen who has spent no more than five consecutive years outside of Germany without maintaining a domicile in Germany or is a German citizen who serves for a German entity established under public law and is remunerated for his or her service from German public funds (including family members who form part of such person's household, if they are German citizens) and is only subject to estate or inheritance tax in his or her country of domicile or usual residence with respect to assets located in such country (special rules apply to certain former German citizens who neither maintain a domicile nor have their usual residence in Germany);

(2) at the time of the transfer, the ADSs are held by the decedent or donor as business assets forming part of a permanent establishment in Germany or for which a permanent representative in Germany has been appointed; or

(3) the ADSs subject to such transfer form part of a portfolio that represents at the time of the transfer 10% or more of the registered share capital of the company and that has been held directly or indirectly by the decedent or donor, either alone or together with related persons.

The Agreement between the Federal Republic of Germany and the United States of America for the avoidance of double taxation with respect to taxes on inheritances and gifts as of December 21, 2000 (*Abkommen zwischen der Bundesrepublik Deutschland und den Vereinigten Staaten von Amerika zur Vermeidung der Doppelbesteuerung auf dem Gebiet der Nachlass-, Erbschaft- und Schenkungssteuern in der Fassung vom 21. Dezember 2000*), hereinafter referred to as the "United States-Germany Inheritance and Gifts Tax Treaty", provides that the German inheritance tax or gift tax can, with certain restrictions, only be levied in the cases of (1) and (2) above. Special provisions apply to certain German citizens living outside of Germany and former German citizens.

## OTHER TAXES

No German transfer tax, value-added tax, stamp duty or similar taxes are assessed on the purchase, sale or other transfer of ADSs. Provided that certain requirements are met, an entrepreneur may, however, opt for the payment of value-added tax on transactions that are otherwise tax-exempt. Net wealth tax (*Vermögensteuer*) is currently not imposed in Germany. Certain member states of the European Union are considering introducing a financial transaction tax (*Finanztransaktionssteuer*) which, if and when introduced, may also be applicable on sales and/or transfer of ADSs.

## U.S. TAXATION

The following discussion is a summary of U.S. federal income tax considerations to U.S. holders (as defined below), and solely to the extent described below under "—Withholding on Foreign Accounts", to non-U.S. persons, of owning and disposing of the ADSs who purchase such ADSs.

The information provided below is based on the Internal Revenue Code of 1986, as amended, or the Code, Treasury Regulations, the Treaty, Internal Revenue Service, or IRS, rulings and pronouncements, and judicial decisions all as now in effect and all of which are subject to change or differing interpretations, possibly with retroactive effect. There can be no assurance that the IRS or a court will not take a contrary position with respect to any U.S. federal income tax considerations described below.

This discussion does not provide a complete analysis of all potential tax considerations. For example, the summary does not address the 3.8% Medicare tax imposed on certain net investment income or any aspect of U.S. federal estate and gift tax laws or any foreign, state or local laws that may be applicable to a holder.

For purposes of this summary, a "U.S. holder" is a beneficial owner of ADSs that for U.S. federal income tax purposes, is (1) an individual who is a citizen or resident of the United States, (2) a corporation, or an entity treated as a corporation for U.S. federal income tax purposes, created or organized in or under the laws of the United States or any state of the United States, including the District of Columbia, (3) an estate, the income of which is subject to U.S. federal income taxation regardless of its source, or (4) a trust (i) the administration of which is subject to the primary supervision of a U.S. court and which has one or more U.S. persons who have the authority to control all substantial decisions of the trust or (ii) that has otherwise elected to be treated as a U.S. person under the applicable regulations. A "non-U.S. holder" is a beneficial owner of ADSs, other than a partnership or an entity or arrangement treated as a partnership, that is not a U.S. holder.

If a partnership (including an entity or arrangement, domestic or foreign, treated as a partnership for U.S. federal income tax purposes) holds ADSs, the tax treatment of a partner in the partnership will depend upon the status of the partner and the activities of the partnership. A holder of ADSs that is a partnership, and partners in such partnership, should consult their own tax advisors about the U.S. federal income tax consequences of owning and disposing of the ADSs.

In general, a holder of ADSs should be treated as the owner of our ordinary shares for U.S. federal income tax purposes. Holders should consult their own tax advisers concerning the tax consequences of converting ADSs to ordinary shares.

*Each prospective holder of ADSs should consult its own tax advisors regarding the U.S. federal, state and local or other tax consequences of acquiring, owning and disposing of the company's ADSs in light of their particular circumstances. U.S. holders should also review the discussion under "—German Taxation" for the German tax consequences to a U.S. holder of the ownership of the ADSs.*

## U.S. HOLDERS

This subsection describes the tax consequences to a U.S. holder.

## DISTRIBUTIONS

Under the United States federal income tax laws, and subject to the discussion below under "—PFIC Rules," the gross amount of any distribution that is actually or constructively received by a U.S. holder with respect to its ADSs without reduction for any German taxes withheld will be a dividend to the extent the amount of such distribution is paid out of our current or accumulated earnings and profits, as determined under U.S. federal income tax principles. To the extent the amount of such distribution exceeds our current or accumulated earnings and profits, such amount will be treated first as a non-taxable return of capital to the extent of such U.S. holder's adjusted tax basis in its ADSs, and to the extent the amount of such distribution exceeds such adjusted tax basis, will be treated as capital gain from the sale of the ADSs. Because we do not intend to determine our earnings and profits on the basis of U.S. federal income tax principles, any distribution we pay will generally be reported as dividend income for U.S. federal income tax purposes. If you are a non-corporate U.S. holder, dividends paid to you that constitute qualified dividend income should be taxable to you at a preferential rate (rather than the

higher rates of tax generally applicable to items of ordinary income) provided that you are not under any obligation to make related payments with respect to positions in substantially similar or related property, you hold our ADSs for more than 60 days during the 121-day period beginning 60 days before the ex-dividend date and your risk of loss with respect to the ADSs is not otherwise diminished. If we are a PFIC (as discussed below under "—Additional United States Federal Income Tax Consequences—PFIC Rules") during the year of distribution or the year preceding the distribution, distributions paid by us with respect to our ADSs will not be eligible for the preferential income tax rate. Prospective investors should consult their own tax advisors regarding the taxation of distributions under these rules.

Dividends paid on our ADSs will not be eligible for the dividends-received deduction generally available to corporate U.S. holders.

Subject to applicable limitations, non-refundable German taxes withheld from dividends on the ADSs can be claimed as a credit against the U.S. holder's U.S. federal income tax liability. For purposes of the U.S. foreign tax credit rules, dividends with respect to our ADSs should constitute income from sources outside of the United States and should generally be passive income for purposes of computing the foreign tax credit allowable to the U.S. holder. The amount of the qualified dividend income, if any, paid to a U.S. holder that is subject to the reduced dividend income tax rate and that is taken into account for purposes of calculating the U.S. holder's U.S. foreign tax credit limitation must be reduced by the rate differential portion of the dividend. In lieu of claiming a foreign tax credit, U.S. holders may, at their election, deduct foreign taxes, including any German income tax, in computing their taxable income, subject to generally applicable limitations under U.S. law. An election to deduct foreign taxes instead of claiming foreign tax credits applies to all foreign taxes paid or accrued in the taxable year. The rules applicable to foreign tax credits are complex. Prospective investors should consult their tax advisors regarding the implications of the foreign tax credit provisions for them, in light of their particular situation.

The gross amount of any dividend paid in foreign currency will be included in the gross income of a U.S. holder in an amount equal to the U.S. dollar value of the foreign currency calculated by reference to the exchange rate in effect on the date the dividend distribution is includable in the U.S. holder's income, regardless of whether the payment is in fact converted into U.S. dollars. If the foreign currency is converted into U.S. dollars on the date of receipt by the depositary, a U.S. holder generally should not be required to recognize foreign currency gain or loss in respect of the dividend. If the foreign currency received is not converted into U.S. dollars on the date of receipt, a U.S. holder will have a basis in the foreign currency equal to its U.S. dollar value on the date of receipt. Any gain or loss on a subsequent conversion or other disposition of the foreign currency will be treated as ordinary income or loss, and will generally be income or loss from sources within the United States for foreign tax credit limitation purposes.

### SALES OR OTHER TAXABLE DISPOSITIONS

A U.S. holder will generally recognize a gain or loss for U.S. federal income tax purposes upon the sale or other disposition of ADSs in an amount equal to the difference between the U.S. dollar value of the amount realized from such sale or other disposition and the U.S. holder's tax basis in such ADSs. Subject to the discussion below under "– PFIC Rules," such gain or loss generally will be capital gain or loss. Capital gains of individuals and certain other non-corporate U.S. holders recognized on the sale or other disposition of ADSs held for more than one year are generally eligible for a reduced rate of taxation. The gain or loss will generally be income or loss from sources within the United States for foreign tax credit limitation purposes. The deductibility of capital losses is subject to limitations.

A U.S. holder's adjusted tax basis in the ADSs will generally equal the U.S. dollar value of the purchase price for the ADSs, based on the prevailing exchange rate on the date of such purchase. The amount realized on a disposition of the ADSs in exchange for foreign currency, will generally equal the U.S. dollar value of such currency translated at the spot exchange rate in effect on the date of the disposition. If, however, the ADSs are

treated as traded on an "established securities market" for U.S. federal income tax purposes, a cash basis U.S. holder (or, if it elects, an accrual basis U.S. holder) will determine the U.S. dollar value of the purchase price for the ADSs or the amount realized on a disposition of the ADSs in exchange for non-U.S. currency, as the case may be, by translating the amount paid or received at the spot exchange rate in effect on the settlement date of the purchase or disposition, as the case may be. Any such election by an accrual basis U.S. holder must be applied consistently from year to year and cannot be changed without the consent of the IRS. A U.S. holder's tax basis in any non-U.S. currency received on a disposition of the ADSs will generally equal the U.S. dollar value of such currency on the date of receipt. Any gain or loss realized by a U.S. holder on a subsequent conversion or other disposition of the non-U.S. dollar currency will generally be foreign currency gain or loss and treated as U.S. source ordinary income or loss. U.S. holders should consult their tax advisors regarding the sale or other taxable disposition of the ADSs under their particular circumstances.

## PFIC RULES

A non-U.S. corporation will be classified as a passive foreign investment company, or PFIC, for U.S. federal income tax purposes for any taxable year, if either (i) 75% or more of its gross income for such year consists of certain types of "passive" income or (ii) 50% or more of the value of its assets (determined on the basis of a quarterly average) during such year produce or are held for the production of passive income. Passive income generally includes dividends, interest, royalties, rents, annuities, net gains from the sale or exchange of property producing such income and net foreign currency gains. In addition, a non-U.S. corporation will be treated as owning its proportionate share of the assets and earning its proportionate share of the income of any other corporation in which it owns, directly or indirectly, more than 25% (by value) of the stock.

Based on certain estimates of our gross income and gross assets, the latter determined by reference to the expected value of the ADSs and shares, we believe that we will not be classified as a PFIC for the taxable year ending December 31, 2018 and we do not expect to be treated as a PFIC in any future taxable year. However, because PFIC status is based on our income, assets and activities for the entire taxable year, (including goodwill, which is based on the market value of our shares and ADSs and is subject to change) which we expect may vary substantially over time, it is not possible to determine whether we will be characterized as a PFIC for any taxable year until after the close of the taxable year. Moreover, we must determine our PFIC status annually based on tests that are factual in nature, and our status in future years will depend on our income, assets and activities in each of those years. There can be no assurance that we will not be considered a PFIC for any taxable year.

If we are classified as a PFIC for any taxable year during which a U.S. Holder (as defined below) holds ADSs, unless the U.S. Holder makes a "mark-to-market" election (as described below), the U.S. Holder will generally be subject to special tax rules that have a generally penalizing effect, regardless of whether we remain a PFIC, on (i) any excess distribution that we make to the U.S. Holder (which generally means any distribution paid during a taxable year to a U.S. Holder that is greater than 125% of the average annual distributions paid in the three preceding taxable years or, if shorter, the U.S. Holder's holding period for its ADSs), and (ii) any gain realized on the sale or other disposition of its ADSs.

If we are a PFIC for any taxable year during which a U.S. Holder holds ADSs and any of our subsidiaries is also a PFIC, such U.S. Holder will be treated as owning a proportionate amount (by value) of the shares of the lower-tier PFIC. U.S. Holders should consult their tax advisors regarding the application of the PFIC rules to any of our subsidiaries.

If we were to be classified as a PFIC, a U.S. Holder may make a mark-to-market election with respect to its ADSs provided the ADSs are treated as regularly traded on a qualified exchange or other market as defined in applicable Regulations. Because, as a technical matter, a mark-to-market election cannot be made for any lower-tier PFICs that we may own, however, a U.S. Holder may continue to be subject to the PFIC rules with respect to such holder's indirect interest in any investments held by us that are treated as an equity interest in a PFIC for U.S. federal income tax purposes. U.S. Holders should consult their tax advisors regarding the potential

availability and consequences of a mark-to-market election in case we are classified as a PFIC in any taxable year.

We do not intend to make available the information necessary for a U.S. Holder to make a "qualified electing fund" election.

If a U.S. Holder holds ADSs in any year in which we are treated as a PFIC with respect to such U.S. Holder, such U.S. Holder will generally be required to file IRS Form 8621 and such other forms as may be required by the U.S. Treasury Department.

U.S. holders should consult their own tax advisors regarding the application of the PFIC rules to their investment in our ADSs and the elections discussed above.

## INFORMATION WITH RESPECT TO FOREIGN FINANCIAL ASSETS

Owners of "specified foreign financial assets" with an aggregate value in excess of $50,000 (and in some circumstances, a higher threshold) may be required to file IRS Form 8938 (Statement of Specified Foreign Financial Assets) with respect to such assets on their tax returns. "Specified foreign financial assets" may include financial accounts maintained by foreign financial institutions, as well as any of the following, if they are held for investment and not held in accounts maintained by financial institutions: (i) stocks and securities issued by non-U.S. persons, (ii) financial instruments and contracts held for investment that have non-U.S. issuers or counterparties, and (iii) interests in foreign entities. U.S. holders are urged to consult their tax advisors regarding the application of these rules to their ownership of the ADSs.

## WITHHOLDING ON FOREIGN ACCOUNTS

Legislation commonly referred to as "FATCA" generally imposes a withholding tax of 30% in certain circumstances on certain "withholdable payments" and, in the future, may impose such withholding on "foreign passthru payments" made by a "foreign financial institution" (each as defined in the Code) that has entered into an agreement with the IRS to perform certain diligence and reporting obligations with respect to the foreign financial institution's U.S.-owned accounts. An intergovernmental agreement between the United States and the non-U.S. entity's jurisdiction may modify these requirements. If we are treated as a "foreign financial institution" under a relevant intergovernmental agreement, we would be subject to these diligence, withholding and reporting obligations under FATCA. It is not yet clear how foreign passthru payments will be addressed under FATCA. Non-U.S. holders, and U.S. holders holding ADSs through a non-U.S. intermediary, should consult their tax advisors regarding the potential application of FATCA to the ADSs.

## 17. APPENDIX

### CVS OF MANAGEMENT BOARD MEMBERS

| Name | Age | Term ends | Position |
|---|---|---|---|
| Dr. Simon Moroney | 59 | June 30, 2020 | Chief Executive Officer |
| Jens Holstein | 55 | June 30, 2020 | Chief Financial Officer |
| Dr. Malte Peters | 56 | June 30, 2022 | Chief Development Officer |
| Dr. Markus Enzelberger | 49 | June 30, 2020 | Chief Scientific Officer |

The following is a brief summary of the business experience of the members of our Management Board:

### DR. SIMON MORONEY

Dr. Moroney is one of our co-founders. Prior to that, Dr. Moroney held positions in the Department of Pharmacology, University of Cambridge, United Kingdom, as assistant professor in the Chemistry Department of the University of British Columbia, Vancouver, Canada, and as associate in the Chemistry Department of the ETH in Zurich, Switzerland, where he also held a position as lecturer. He was an associate in the Harvard Medical School, Boston, Massachusetts, USA, and an employee of ImmunoGen Inc., where he worked on the first generation of anti-cancer antibody conjugates. Dr. Moroney studied chemistry in New Zealand, where he completed a masters in science with 1st class honors and was a Commonwealth Scholar to the University of Oxford, where he was awarded a doctor in philosophy in Chemistry.

In 2002, Dr. Moroney received the German Cross of the Order of Merit by Dr. Johannes Rau, President of the Federal Republic of Germany, for his services to the biotechnology industry.

### JENS HOLSTEIN

Jens Holstein joined MorphoSys in May 2011. Prior to his time at MorphoSys, Mr. Holstein served as regional chief financial officer for the EME (Europe/Middle East) region for Fresenius Kabi AG and as managing director of Fresenius Kabi Deutschland GmbH. Over almost 16 years at Fresenius he had held a variety of financial and general management positions. From 2006 to 2010, he was regional chief financial officer of Fresenius Kabi Asia Pacific Ltd., based in Hong Kong. Prior to this appointment, Mr. Holstein was managing director of Fresenius ProServe GmbH and finance director and labor director of Fresenius's subsidiary Wittgensteiner Kliniken AG. Earlier positions within Fresenius included general manager of hospitalia care GmbH, commercial manager of the projects & service business unit of Fresenius AG and commercial manager of hospitalia international GmbH. Prior to joining Fresenius, Mr. Holstein spent several years in the consulting industry, with positions in Frankfurt and London. Mr. Holstein holds a diploma in business administration from the University of Münster, Germany.

Jens Holstein is also a member of the Supervisory Board of InflaRx N.V., Jena, Germany (publicly listed company).

### DR. MALTE PETERS

Dr. Peters joined MorphoSys in March 2017. Prior to his time at MorphoSys, Dr. Peters served as the global head of clinical development of the biopharmaceuticals business unit at Sandoz International. Prior to this position, he served as clinical head and site head for Basel and East Hanover in the department of oncology translational medicine at Novartis. Dr. Peters held teaching appointments in internal medicine and biochemistry at the University of Mainz, Germany. Dr. Peters also served as research scientist at the Amgen Research Institute in Toronto, Canada, as director of cancer research at Merck KGaA and as medical director at Micromet AG.

Dr. Peters received his doctor of medicine from the Freie Universität Berlin, Germany, and was trained at the Universities of Padova, Italy, and Bochum and Berlin, Germany. After scientific work at different universities he habilitated in internal medicine at the University of Mainz, Germany.

Dr. Malte Peters is also a member of the Board of Directors of Targo Therapeutics, Cambridge, MA, USA (not publicly listed company).

## DR. MARKUS ENZELBERGER

Dr. Enzelberger joined MorphoSys in March 2002 and served in different leadership positions within R&D. Since 2012 he acted as senior vice president discovery, alliances and technologies, taking responsibility for discovery programs for our partners and our proprietary pipeline as well as for the technology development. He was appointed Interim-Chief Scientific Officer effective April 15, 2017 and Chief Scientific Officer effective November 1, 2017. His new areas of responsibility include discovery, technology development, protein sciences, manufacturing and alliance management. Dr. Enzelberger is co-inventor of the HuCAL Platinum and the Ylanthia libraries and worked on Tremfya® and many other programs within our pipeline.

Before joining MorphoSys, Dr. Enzelberger completed a post-doctorate with Steven Quake at the California Institute of Technology on microfluidic biological assays, where he co-invented the key technologies of Fluidigm. Dr. Enzelberger studied chemistry and was awarded a doctor of natural sciences by the Technical University of Stuttgart, Germany.

Dr. Markus Enzelberger is also a member of the Advisory Board of SHS Gesellschaft für Beteiligungsmanagement mbH, Tuebingen, Germany (not publicly listed company).

## SERVICE AGREEMENTS

The service agreements with our Management Board members generally have a total term of three years. The current service agreements of our Management Board members Dr. Simon Moroney, Jens Holstein and Dr. Markus Enzelberger run until June 30, 2020. The current service agreement of our Management Board member Dr. Malte Peters runs until June 30, 2022.

In the event of a change of control, our Management Board members are entitled to exercise a right to terminate their employment contracts and receive any outstanding fixed salary and annual bonus for the remainder of the fixed contract period, however, at least 200% of the fixed yearly gross salary and the annual bonus.

## CVS OF SUPERVISORY BOARD MEMBERS

| Name | Age | Term expires | Principal business activities performed outside of MorphoSys |
|---|---|---|---|
| Dr. Marc Cluzel (Chaiman) | 64 | 2021 | Consultant & business professional; member of the board of directors of Moleac Pte. Ltd; member of the board of directors of Griffon Pharmaceuticals Inc. |
| Dr. Frank Morich (Deputy Chairman) | 65 | 2020 | Independent consultant of the life sciences and healthcare industries; member of the board of directors of Cue Biopharma Inc. |
| Krisja Vermeylen | 56 | 2019 | Business consultant in the life science and healthcare industries |
| Wendy Johnson | 67 | 2020 | Chief operating officer, Reneo Pharmaceuticals, Inc.; managing director of Gemini Advisors |
| Dr. George Golumbeski | 61 | 2020 | President, Grail Inc. and business consultant in the life science and healthcare industries |
| Michael Brosnan | 63 | 2020 | Chief Financial Officer, Fresenius Medical Care Management AG |

The following is a brief summary of the business experience of the members of our Supervisory Board:

### DR. MARC CLUZEL

Dr. Marc Cluzel has been a member of our Supervisory Board since 2012 and holds the position of the Supervisory Boards Chairman since the AGM 2018. He was Executive Vice President of product development at HÙYÀ Bioscience International, LLC from 2011 to 2012. Prior to that, between 1993 and 2010, he held several positions at Sanofi-Aventis, including Head of research and development. Dr. Cluzel received his Ph.D. in Biochemistry and his Doctor of Medicine from the University of Montpellier, France.

### DR. FRANK MORICH

Dr. Frank Morich has been a member of our Supervisory Board since 2015. Dr. Morich also serves as a consultant in the life sciences and health care industries, and is also a member of the Board of Directors of CUE Biopharma Inc. Dr. Morich previously served as Chief Commercial Officer (2011 to 2014) and Executive Vice President international operations (2010 to 2011) at Takeda Pharmaceutical. Prior to that, Dr. Morich served as Chief Executive Officer of NOXXON Pharma AG (2008 to 2010), Chief Executive Officer and member of the Board of Directors of Innogenetics N.V. (2005 to 2007), and Chief Executive Officer and Chairman of the Executive Board of AM Pharma B.V. (2004). Prior to that, Dr. Morich held several positions at Bayer, including member of the Board of Management of Bayer AG, Head of global product development and Head of research and development. Dr. Morich graduated in medical studies at the University of Marburg, Germany.

### KRISJA VERMEYLEN

Krisja Vermeylen has been a member of our Supervisory Board since 2017. From 1997 to October 2018, Mrs. Vermeylen held several positions at Novo Nordisk, including the position as Senior Vice President corporate people & organization. Prior to that, she held several positions at Pharmacia and Upjohn. Mrs. Vermeylen graduated with a Master in Pharmaceutical Sciences from the University of Antwerp, Belgium.

### WENDY JOHNSON

Wendy Johnson has been a member of our Supervisory Board since 2015. Mrs. Johnson currently serves as the Chief Operating Officer at Reneo Pharmaceuticals and as Managing Director of Gemini Advisors. Mrs. Johnson was the Founder, President and Chief Executive Officer of Aires Pharmaceuticals, Inc. from 2007 to 2014. Mrs. Johnson was also a Venture Partner in ProQuest Investments (2005 to 2014), Senior Vice President corporate development at Salmedix, Inc. (2001 to 2005), Vice President business development at Women First HealthCare (1998 to 2000), Vice President corporate development & operations at Selective Genetics (1994 to 1998), Vice President business development & regulatory affairs at Cytel Corp. (1990 to 1994), Manager business development at Synbiotics Corp. (1988 to 1990) and international business development & regulatory affairs Manager at Murex Corp. (1986 to 1988). Prior to that, Mrs. Johnson served as Assistant Director at the Center for Devices & Radiological Health at the U.S. Food and Drug Administration from 1976 to 1986. Mrs. Johnson graduated with a Master in Business Administration from Loyola Marymount University, USA, a Master in Science in Clinical Microbiology from Hahnemann University Hospital, USA and a Bachelor of Science in Microbiology from the University of Maryland, USA.

### DR. GEORGE GOLUMBESKI

Dr. George Golumbeski currently serves as President, Grail Inc. and is a self-employed business consultant in the life science and healthcare industries. From 2017 to April 2018 he served as an Executive Vice President & Executive Advisor for Innovation at Celgene Corporation. Over the last 27 years, he has held leadership roles in business and corporate development, partnering and M&A with global pharmaceutical and life science companies, including Celgene, Novartis, Elan Corporation (today: Perrigo), and Schwarz Pharma (today: UCB). Dr. Golumbeski obtained his Doctorate in Genetics from the University of Wisconsin in Madison, USA and holds a degree in Biology from the University of Virginia, Charlottesville, USA.

## MICHAEL BROSNAN

Michael Brosnan has over 40 years of experience in finance, controlling and auditing. Since 2010, he has served as Chief Financial Officer of Fresenius Medical Care Management AG, a company with a dual listing in Germany (Frankfurt) and the United States (NYSE). Over the last 20 years, he has worked in various leadership and executive positions for Fresenius Medical Care in the United States and Germany. Prior to joining Fresenius Medical Care, he held senior financial positions at Polaroid Corporation and was an audit partner at KPMG. Mr. Brosnan holds a degree in Business Administration and Accounting from Northeastern University, Boston, Massachusetts, USA.

## List of Figures and Tables

# INDEX TO FINANCIAL STATEMENTS

**Report of Independent Registered Public Accounting Firm**

To the Supervisory Board and Stockholders of MorphoSys AG

***Opinion on the Financial Statements***

We have audited the accompanying consolidated balance sheet of MorphoSys AG and its subsidiaries (the "Company") as of December 31, 2018 and 2017, and the related consolidated statements of profit or loss, comprehensive income, changes in stockholders' equity and cash flows for each of the three years in the period ended December 31, 2018, including the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2018 and 2017, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2018 in conformity with International Financial Reporting Standards as issued by the International Accounting Standards Board and International Financial Reporting Standards as adopted by the European Union.

***Basis for Opinion***

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's consolidated financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits of these consolidated financial statements in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud.

Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

Munich, Germany
March 13, 2019

PricewaterhouseCoopers GmbH

Wirtschaftsprüfungsgesellschaft

/s/ Stefano Mulas
Wirtschaftsprüfer
(German Public Auditor)

/s/ Holger Lutz
Wirtschaftsprüfer
(German Public Auditor)

We have served as the Company's auditor since 2011.

**MorphoSys Group:**
**Consolidated Financial Statements**

CONSOLIDATED FINANCIAL STATEMENTS

## Consolidated Statement of Profit or Loss (IFRS)

| in € | Note | 2018 | 2017 | 2016 |
|---|---|---|---|---|
| **Revenues** | **2.7.1, 4.1** | **76,442,505** | **66,790,840** | **49,743,515** |
| **Operating Expenses** | | | | |
| Cost of Sales | 2.1.1, 2.7.2, 4.2.1 | (1,796,629) | 0 | 0 |
| Research and Development | 2.7.2, 4.2.2 | (106,397,017) | (113,313,679) | (93,962,975) |
| Selling | 2.1.1, 2.7.2, 4.2.3 | (6,382,510) | (4,816,038) | (2,444,224) |
| General and Administrative | 2.7.2, 4.2.4 | (21,927,731) | (15,717,578) | (13,431,955) |
| **Total Operating Expenses** | | **(136,503,887)** | **(133,847,295)** | **(109,839,154)** |
| Other Income | 2.7.3, 4.3 | 1,644,632 | 1,119,598 | 708,571 |
| Other Expenses | 2.7.4, 4.3 | (689,343) | (1,670,792) | (553,925) |
| **Earnings before Interest and Taxes (EBIT)** | | **(59,106,093)** | **(67,607,649)** | **(59,940,993)** |
| Finance Income | 2.7.5, 4.3 | 417,886 | 712,397 | 1,385,164 |
| Finance Expenses | 2.7.5, 4.3 | (753,588) | (1,894,852) | (1,308,322) |
| Impairment Losses on Financial Assets | 2.3.1 | (1,035,000) | 0 | 0 |
| Income Tax Benefit / (Expenses) | 2.7.6, 4.4 | 4,304,674 | (1,036,365) | (518,625) |
| **Consolidated Net Loss** | | **(56,172,121)** | **(69,826,469)** | **(60,382,776)** |
| Earnings per Share, basic and diluted | 2.7.7, 4.5 | (1.79) | (2.41) | (2.28) |
| Shares Used in Computing Earnings per Share, basic and diluted | 2.7.7, 4.5 | 31,338,948 | 28,947,566 | 26,443,415 |

The notes are an integral part of these consolidated financial statements.

## Consolidated Statement of Comprehensive Income (IFRS) [1]

| in € | 2018 | 2017 | 2016 |
|---|---|---|---|
| **Consolidated Net Loss** | **(56,172,121)** | **(69,826,469)** | **(60,382,776)** |
| Change in Fair Value of Equity Instruments through Other Comprehensive Income [2] | (127,458) | 0 | 0 |
| Foreign Currency Translation Differences from Consolidation [3] | (83,432) | 0 | 0 |
| Change in Unrealized Gains and Losses on Available-for-sale Financial Assets and Bonds (Thereof € 0 for 2018, € 86,685 for 2017 and € 251,455 for 2016, respectively, Reclassifications of realized Gains and Losses to Profit or Loss) | 0 | 54,170 | 115,396 |
| Change of Tax Effects presented in Other Comprehensive Income on Available-for-sale Financial Assets and Bonds | 0 | 63,659 | (136,550) |
| **Change in Unrealized Gains and Losses on Available-for-sale Financial Assets and Bonds, Net of Tax Effects** | **0** | **117,829** | **(21,154)** |
| Change in Unrealized Gains and Losses on Cash Flow Hedges (Thereof € 0 for 2018, € 256,085 for 2017 and € 0 for 2016, respectively, Reclassifications of realized Losses to Profit or Loss) | 0 | (490,164) | 490,164 |
| Change of Tax Effects presented in Other Comprehensive Income on Cash Flow Hedges | 0 | 130,751 | (130,751) |
| **Change in Unrealized Gains and Losses on Cash Flow Hedges, Net of Tax Effects** | **0** | **(359,413)** | **359,413** |
| **Other Comprehensive Income** | **(210,890)** | **(241,584)** | **338,259** |
| **Total Comprehensive Income** | **(56,383,011)** | **(70,068,053)** | **(60,044,517)** |

[1] In financial years 2017 and 2016, the statement of comprehensive income only comprised components which will be reclassified in terms of IAS 1.82A(a)(ii) to profit or loss in subsequent periods when specific conditions are met.

[2] Item will not be reclassified in terms of IAS 1.82A(a)(i) to profit or loss in subsequent periods.

[3] Item will be reclassified in terms of IAS 1.82A(a)(ii) to profit or loss in subsequent periods when specific conditions are met.

The notes are an integral part of these consolidated financial statements.

## Consolidated Balance Sheet (IFRS)

| in € | Note | 12/31/2018 | 12/31/2017 |
|---|---|---|---|
| **ASSETS** | | | |
| **Current Assets** | | | |
| Cash and Cash Equivalents | 2.8.1, 5.1 | 45,459,836 | 76,589,129 |
| Available-for-sale Financial Assets | 2.8.1, 5.2 | 0 | 86,538,195 |
| Financial Assets classified as Loans and Receivables | 2.8.1, 5.2 | 0 | 149,059,254 |
| Financial Assets at Fair Value through Profit or Loss | 2.1.2, 5.2 | 44,581,264 | 0 |
| Other Financial Assets at Amortized Cost | 2.1.2, 5.2 | 268,922,724 | 0 |
| Accounts Receivable | 2.8.2, 5.3 | 17,732,933 | 11,234,308 |
| Income Tax Receivables | 2.8.2, 5.5 | 161,048 | 654,511 |
| Other Receivables | 2.8.2, 5.4 | 147,449 | 84,727 |
| Inventories, Net | 2.8.3, 5.5 | 245,161 | 300,753 |
| Prepaid Expenses and Other Current Assets | 2.8.4, 5.5 | 11,654,880 | 16,219,761 |
| **Total Current Assets** | | **388,905,295** | **340,680,638** |
| **Non-current Assets** | | | |
| Property, Plant and Equipment, Net | 2.8.5, 5.6 | 3,530,709 | 3,526,351 |
| Patents, Net | 2.8.6, 5.7.1 | 3,938,739 | 4,669,128 |
| Licenses, Net | 2.8.6, 5.7.2 | 2,526,829 | 2,999,074 |
| In-process R&D Programs | 2.8.6, 5.7.3 | 37,019,370 | 52,158,527 |
| Software, Net | 2.8.6, 5.7.4 | 203,807 | 655,399 |
| Goodwill | 2.8.6, 5.7.5 | 3,676,233 | 7,364,802 |
| Other Financial Assets at Amortized Cost, Net of Current Portion | 2.8.1, 5.2 | 95,749,059 | 0 |
| Shares at Fair Value through Other Comprehensive Income | 2.8.7, 5.8 | 232,000 | 0 |
| Prepaid Expenses and Other Assets, Net of Current Portion | 2.8.8, 5.9 | 2,981,716 | 3,344,292 |
| **Total Non-current Assets** | | **149,858,462** | **74,717,573** |
| **Total Assets** | | **538,763,757** | **415,398,211** |

The notes are an integral part of these consolidated financial statements.

| in € | Note | 12/31/2018 | 12/31/2017 |
|---|---|---|---|
| **LIABILITIES AND STOCKHOLDERS' EQUITY** | | | |
| **Current Liabilities** | | | |
| Accounts Payable and Accruals | 2.9.1, 6.1 | 44,760,615 | 44,811,718 |
| Tax Provisions | 2.9.2, 6.2 | 208,034 | 314,944 |
| Other Provisions | 2.9.1, 6.2 | 160,411 | 1,185,741 |
| Current Portion of Contract Liability (2017: Current Portion of Deferred Revenue) | 2.9.3, 6.3 | 794,230 | 1,388,638 |
| **Total Current Liabilities** | | **45,923,290** | **47,701,041** |
| **Non-current Liabilities** | | | |
| Other Provisions, Net of Current Portion | 2.9.1, 6.2 | 23,166 | 23,166 |
| Contract Liability, Net of Current Portion (2017: Deferred Revenue, Net of Current Portion) | 2.9.4, 6.3 | 158,024 | 306,385 |
| Convertible Bonds due to Related Parties | 2.9.5 | 71,517 | 87,785 |
| Deferred Tax Liability | 2.9.6, 4.4 | 3,507,233 | 7,811,258 |
| Other Liabilities, Net of Current Portion | 2.9.7, 6.4 | 707,893 | 797,537 |
| **Total Non-current Liabilities** | | **4,467,833** | **9,026,131** |
| **Total Liabilities** | | **50,391,123** | **56,727,172** |
| **Stockholders' Equity** | | | |
| Common Stock | 2.9.8, 6.5.1 | 31,839,572 | 29,420,785 |
| Ordinary Shares Issued (31,839,572 and 29,420,785 for 2018 and 2017, respectively) | | | |
| Ordinary Shares Outstanding (31,558,536 and 29,101,107 for 2018 and 2017, respectively) | | | |
| Treasury Stock (281,036 and 319,678 shares for 2018 and 2017, respectively), at Cost | 2.9.8, 6.5.4 | (10,398,773) | (11,826,981) |
| Additional Paid-in Capital | 2.9.8, 6.5.5 | 619,908,453 | 438,557,856 |
| Revaluation Reserve | 2.9.8, 6.5.6 | 0 | (105,483) |
| Other Comprehensive Income Reserve | 2.9.8, 6.5.7 | (210,890) | 0 |
| Accumulated Deficit | 2.9.8, 6.5.8 | (152,765,728) | (97,375,138) |
| **Total Stockholders' Equity** | | **488,372,634** | **358,671,039** |
| **TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY** | | **538,763,757** | **415,398,211** |

The notes are an integral part of these consolidated financial statements.

## Consolidated Statement of Changes in Stockholders‘ Equity (IFRS)

| | Note | Common Stock | |
|---|---|---|---|
| | | Shares | € |
| **Balance as of January 1, 2016** | | **26,537,682** | **26,537,682** |
| Capital Increase, Net of Issuance Cost of € 2,778,652 | | 2,622,088 | 2,622,088 |
| Compensation Related to the Grant of Convertible Bonds and Performance Shares | | 0 | 0 |
| Repurchase of Treasury Stock, Net of Bank Fees | | 0 | 0 |
| Transfer of Treasury Stock for Long-Term Incentive Program | | 0 | 0 |
| **Reserves:** | | | |
| Change in Unrealized Gains and Losses on Available-for-sale Financial Assets and Bonds, Net of Tax Effects | | 0 | 0 |
| Change in Unrealized Gains on Cash Flow Hedges, Net of Tax Effects | | 0 | 0 |
| Consolidated Net Loss | | 0 | 0 |
| **Total Comprehensive Income** | | **0** | **0** |
| **Stand am 31. Dezember 2016** | | **29,159,770** | **29,159,770** |
| **Balance as of January 1, 2017** | | **29,159,770** | **29,159,770** |
| Compensation Related to the Grant of Stock Options, Convertible Bonds and Performance Shares | 7.1, 7.2, 7.3 | 0 | 0 |
| Exercise of Convertible Bonds Issued to Related Parties | 7.2 | 261,015 | 261,015 |
| Transfer of Treasury Stock for Long-Term Incentive Program | 7.3.1 | 0 | 0 |
| Transfer of Treasury Stock to Members of the Management Board | 7.4 | 0 | 0 |
| **Reserves:** | | | |
| Change in Unrealized Gains and Losses on Available-for-sale Financial Assets and Bonds, Net of Tax Effects | | 0 | 0 |
| Change in Unrealized Gains on Cash Flow Hedges, Net of Tax Effects | | 0 | 0 |
| Consolidated Net Loss | 6.5.8 | 0 | 0 |
| **Total Comprehensive Income** | | **0** | **0** |
| **Balance as of December 31, 2017** | | **29,420,785** | **29,420,785** |
| Application of IFRS 9 | 2.1.2, 6.5.6, 6.5.8 | 0 | 0 |
| Application of IFRS 15 | 2.1.2, 6.5.8 | 0 | 0 |
| **Balance as of January 1, 2018** | | **29,420,785** | **29,420,785** |
| Capital Increase, Net of Issuance Cost of € 15,038,362 | 6.5.1, 6.5.5 | 2,386,250 | 2,386,250 |
| Compensation Related to the Grant of Stock Options and Performance Shares | 7.1, 7.3 | 0 | 0 |
| Exercise of Convertible Bonds Issued to Related Parties | 7.2, 7.4 | 32,537 | 32,537 |
| Transfer of Treasury Stock for Long-Term Incentive Program | 7.3.2, 7.4 | 0 | 0 |
| Transfer of Treasury Stock to Related Parties | 6.5.4, 7.3.7, 7.4 | 0 | 0 |
| **Reserves:** | | | |
| Change in Fair Value of Equity Instruments through Other Comprehensive Income | 5.8, 6.5.7 | 0 | 0 |
| Foreign Currency Losses from Consolidation | 6.5.7 | 0 | 0 |
| Consolidated Net Loss | 6.5.8 | 0 | 0 |
| **Total Comprehensive Income** | | **0** | **0** |
| **Balance as of December 31, 2018** | | **31,839,572** | **31,839,572** |

The notes are an integral part of these consolidated financial statements.

| Treasury Stock | | Additional Paid-in Capital | Revaluation Reserve | Other Comprehensive Income Reserve | Accumulated Deficit | Total Stockholders' Equity |
|---|---|---|---|---|---|---|
| Shares | € | € | € | € | € | € |
| **434,670** | **(15,827,946)** | **319,394,322** | **(202,158)** | **0** | **32,834,107** | **362,736,007** |
| 0 | 0 | 109,971,132 | 0 | 0 | 0 | 112,593,220 |
| 0 | 0 | 2,357,418 | 0 | 0 | 0 | 2,357,418 |
| 52,295 | (2,181,963) | 0 | 0 | 0 | 0 | (2,181,963) |
| (90,955) | 3,361,697 | (3,361,697) | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | (21,154) | 0 | 0 | (21,154) |
| 0 | 0 | 0 | 359,413 | 0 | 0 | 359,413 |
| 0 | 0 | 0 | | 0 | (60,382,776) | (60,382,776) |
| **0** | **0** | **0** | **338,259** | **0** | **(60,382,776)** | **(60,044,517)** |
| **396,010** | **(14,648,212)** | **428,361,175** | **136,101** | **0** | **(27,548,669)** | **415,460,165** |
| **396,010** | **(14,648,212)** | **428,361,175** | **136,101** | **0** | **(27,548,669)** | **415,460,165** |
| 0 | 0 | 4,974,599 | 0 | 0 | 0 | 4,974,599 |
| 0 | 0 | 8,043,313 | 0 | 0 | 0 | 8,304,328 |
| (61,871) | 2,286,752 | (2,286,752) | 0 | 0 | 0 | 0 |
| (14,461) | 534,479 | (534,479) | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 117,829 | 0 | 0 | 117,829 |
| 0 | 0 | 0 | (359,413) | 0 | 0 | (359,413) |
| 0 | 0 | 0 | 0 | 0 | (69,826,469) | (69,826,469) |
| **0** | **0** | **0** | **(241,584)** | **0** | **(69,826,469)** | **(70,068,053)** |
| **319,678** | **(11,826,981)** | **438,557,856** | **(105,483)** | **0** | **(97,375,138)** | **358,671,039** |
| 0 | 0 | 0 | 105,483 | 0 | (353,483) | (248,000) |
| 0 | 0 | 0 | 0 | 0 | 1,135,014 | 1,135,014 |
| **319,678** | **(11,826,981)** | **438,557,856** | **0** | **0** | **(96,593,607)** | **359,558,053** |
| 0 | 0 | 176,189,256 | 0 | 0 | 0 | 178,575,506 |
| 0 | 0 | 5,584,969 | 0 | 0 | 0 | 5,584,969 |
| 0 | 0 | 1,004,580 | 0 | 0 | 0 | 1,037,117 |
| (17,219) | 636,414 | (636,414) | 0 | 0 | 0 | 0 |
| (21,423) | 791,794 | (791,794) | 0 | 0 | 0 | 0 |
| **0** | **0** | **0** | **0** | **(127,458)** | **0** | **(127,458)** |
| 0 | 0 | 0 | 0 | (83,432) | 0 | (83,432) |
| 0 | 0 | 0 | 0 | 0 | (56,172,121) | (56,172,121) |
| **0** | **0** | **0** | **0** | **(210,890)** | **(56,172,121)** | **(56,383,011)** |
| **281,036** | **(10,398,773)** | **619,908,453** | **0** | **(210,890)** | **(152,765,728)** | **488,372,634** |

## Consolidated Statement of Cash Flows (IFRS)

| in € | Note | 2018 | 2017 | 2016 |
|---|---|---|---|---|
| **Operating Activities:** | | | | |
| Consolidated Net Loss | | (56,172,121) | (69,826,469) | (60,382,776) |
| **Adjustments to Reconcile Net Loss to Net Cash Provided by / (Used in) Operating Activities:** | | | | |
| Impairment of Assets | 5.6, 5.7 | 24,033,479 | 9,863,582 | 10,141,187 |
| Depreciation and Amortization of Tangible and Intangible Assets | 5.6, 5.7 | 3,750,259 | 4,028,948 | 3,763,813 |
| Net (Gain) / Loss on Sales of Financial Assets at Fair Value through Profit or Loss (2017 and 2016: Available-for-sale Financial Assets) | 5.2 | 1,114,330 | 84,841 | 915,201 |
| Proceeds from Derivative Financial Instruments | 5.4 | (488,201) | (589,134) | 725,157 |
| Net (Gain) / Loss on Derivative Financial Instruments | 5.4 | 121,717 | 919,042 | (29,879) |
| Net (Gain) / Loss on Sale of Property, Plant and Equipment | | (24,093) | 11,314 | (4,037) |
| Proceeds from Recognition of previously unrecognized Intangible Assets | 5.8 | (350,000) | 0 | 0 |
| Recognition of Contract Liability (2017 and 2016: Recognition of Deferred Revenue) | 6.3 | (1,993,763) | (19,595,746) | (19,042,772) |
| Share-based Payment | 4.2.5, 7 | 5,584,969 | 4,974,599 | 2,357,418 |
| Income Tax (Benefit) / Expenses | 4.4 | (4,304,674) | 1,036,365 | 518,625 |
| **Changes in Operating Assets and Liabilities:** | | | | |
| Accounts Receivable | 5.3 | (6,610,625) | 1,362,347 | (1,154,597) |
| Prepaid Expenses and Other Assets, Tax Receivables and Other Receivables | 5.4, 5.5 | 545,816 | 1,807,670 | (13,912,263) |
| Accounts Payable and Accruals, Tax Provisions and Other Provisions | 6.1, 6.2 | 1,890,046 | 7,819,386 | 13,010,160 |
| Other Liabilities | 6.4 | (2,718,825) | 3,133,558 | (421,492) |
| Contract Liability (2017 and 2016: Deferred Revenue) | 6.3 | 2,386,009 | 18,385,824 | 17,440,930 |
| Income Taxes Paid | | (33,837) | (1,861,982) | (540,383) |
| **Net Cash Provided by / (Used in) Operating Activities** | | **(33,269,514)** | **(38,445,855)** | **(46,615,708)** |

The notes are an integral part of these consolidated financial statements.

| in € | Note | 2018 | 2017 | 2016 |
|---|---|---|---|---|
| **Investing Activities:** | | | | |
| Purchase of Financial Assets at Fair Value through Profit or Loss (2017 and 2016: Available-for-sale Financial Assets) | 5.2 | (84,511,324) | (56,406,580) | (166,923,795) |
| Proceeds from Sales of Financial Assets at Fair Value through Profit or Loss (2017 and 2016: Available-for-sale Financial Assets) | 5.2 | 126,388,925 | 33,231,500 | 167,873,152 |
| Proceeds from Sales of Bonds, Available-for-sale | 5.2 | 0 | 6,500,000 | 25,770,000 |
| Purchase of Other Financial Assets at Amortized Cost (2017 and 2016: Financial Assets Classified as Loans and Receivables) | 5.2 | (366,810,000) | (108,000,000) | (256,499,997) |
| Proceeds from Sales of Other Financial Assets at Amortized Cost (2017 and 2016: Financial Assets Classified as Loans and Receivables) | 5.2 | 149,980,211 | 170,498,593 | 149,894,769 |
| Purchase of Property, Plant and Equipment | 5.6 | (1,820,749) | (1,317,058) | (2,502,286) |
| Proceeds from Disposals of Property, Plant and Equipment | | 28,444 | 84 | 5,000 |
| Purchase of Intangible Assets | 5.7 | (644,575) | (11,831,789) | (411,204) |
| Purchase of Financial Assets at Fair Value through Other Comprehensive Income | 5.8 | (9,458) | 0 | 0 |
| Interest Received | | 136,124 | 257,752 | 2,008,325 |
| **Net Cash Provided by / (Used in) Investing Activities** | | **(177,262,402)** | **32,932,502** | **(80,786,036)** |
| **Financing Activities:** | | | | |
| Repurchase of Treasury Stock, Net of Bank Fees | | 0 | 0 | (2,181,963) |
| Proceeds of Share Issuance | 6.5 | 193,613,868 | 0 | 115,371,872 |
| Cost of Share Issuance | 6.5 | (15,038,362) | (15,525) | (2,778,652) |
| Proceeds in Connection with Convertible Bonds Granted to Related Parties | 7.2 | 1,020,849 | 8,189,345 | 0 |
| Outflows in Connection with Convertible Bonds Granted to Related Parties | | 0 | 0 | (6,707) |
| Interest Paid | | (134,269) | 0 | (1,819) |
| **Net Cash Provided by / (Used in) Financing Activities** | | **179,462,086** | **8,173,820** | **110,402,731** |
| **Effect of Exchange Rate Differences on Cash** | | **(59,463)** | **0** | **0** |
| Increase / (Decrease) in Cash and Cash Equivalents | | (31,129,293) | 2,660,467 | (16,999,013) |
| **Cash and Cash Equivalents at the Beginning of the Period** | | **76,589,129** | **73,928,661** | **90,927,673** |
| **Cash and Cash Equivalents at the End of the Period** | | **45,459,836** | **76,589,129** | **73,928,661** |

The notes are an integral part of these consolidated financial statements.

## Notes

## 1 General Information

### BUSINESS ACTIVITIES AND THE COMPANY

MorphoSys AG ("the Company" or "MorphoSys") develops and applies technologies for generating therapeutic antibodies. The Company has a broad proprietary portfolio of compounds and a broad pipeline of compounds developed with partners from the pharmaceutical and biotechnology industry. MorphoSys was founded as a German limited liability company in July 1992. In June 1998, MorphoSys became a German stock corporation. In March 1999, the Company completed its initial public offering on Germany's "Neuer Markt": the segment of the Deutsche Börse at that time designated for high-growth companies. On January 15, 2003, MorphoSys AG was admitted to the Prime Standard segment of the Frankfurt Stock Exchange. On April 18, 2018, MorphoSys completed an IPO on the Nasdaq Global Market through the issue of American Depositary Shares (ADS). MorphoSys AG's registered office is located in Planegg (district of Munich), and the registered business address is Semmelweisstraße 7, 82152 Planegg, Germany. The Company is registered in the Commercial Register B of the District Court of Munich under the number HRB 121023.

## 2 Summary of Significant Accounting Policies

### 2.1 BASIS OF AND CHANGES IN ACCOUNTING STANDARDS

### 2.1.1 BASIS OF APPLICATION

These consolidated financial statements were prepared in accordance with the International Financial Reporting Standards ("IFRS"), taking into account the recommendations of the International Financial Reporting Standards Interpretations Committee (IFRS IC). We have applied all standards and interpretations that were in force as of December 31, 2018 and adopted by the European Union (EU). As of December 31, 2018, there were no standards or interpretations that affected our consolidated financial statements for the years ended December 31, 2018 and 2017 that were in effect but not yet endorsed into European law. As a result, our consolidated financial statements comply with both the IFRSs published by the International Accounting Standards Board (IASB) and those adopted by the EU. These consolidated financial statements also take into account the supplementary provisions under commercial law, which must be applied in accordance with Section 315e (1) of the German Commercial Code (Handelsgesetzbuch – HGB).

These consolidated financial statements as of December 31, 2018 and 2017 and for each of the years in the three years period ended December 31, 2018, comprise MorphoSys AG and its subsidiaries (collectively referred to as the "MorphoSys Group" or the "Group").

In preparing the consolidated financial statements in accordance with IFRS, the Management Board is required to make certain estimates and assumptions, which have an effect on the amounts recognized in the consolidated financial statements and the accompanying Notes. The actual results may differ from these estimates. The estimates and the underlying assumptions are subject to continuous review. Any changes in estimates are recognized in the period in which the changes are made and in all relevant future periods.

The annual financial statements of the foreign Group companies are prepared in their respective functional currencies and converted into the euro prior to their consolidation. The consolidated financial statements were prepared in euros.

The financial statements are prepared on the basis of historical cost, with the exception of derivative financial instruments and financial assets at fair value, which are recognized at their respective fair value. All figures in this report have been rounded to the nearest euro, thousand euros or million euros.

The line item "cost of sales" in profit or loss was first introduced in the third quarter of 2018 and includes the expenses related to the provision of services for the transfer of projects to customers. The rationale for

introducing this item is the generally increasing significance of this item in the course of the Group's planned business development. In 2017 and 2016, there were no material comparable transactions to be reported under this item.

Since January 1, 2018, the Group has reported the line item "selling expenses" separately under "operating expenses" in profit or loss. The reason for introducing this new line item and the concomitant changes to the presentation of existing items is the increasing importance of marketing expenses in connection with the preparations planned for the commercialization of MOR208. To ensure comparability of the information, the previous year's figures have been adjusted accordingly. The disclosure of selling expenses resulted in a change in the recording of research and development and general and administrative expenses in 2017, which reduced these items in 2017 by € 3.5 million and € 1.3 million and in 2016 by € 1.7 million and € 0.7 million, respectively. The corresponding amounts are now reported in "selling expenses".

Unless stated otherwise, the accounting policies set out below have been applied consistently to all periods presented in these consolidated financial statements.

### 2.1.2 CHANGES IN ACCOUNTING POLICIES AND DISCLOSURES

The accounting principles applied generally correspond to the policies used in the prior year.

#### NEW AND REVISED STANDARDS AND INTERPRETATIONS APPLIED FOR THE FIRST TIME IN THE FINANCIAL YEAR

| Standard / Interpretation | | Mandatory Application for financial years starting on | Adopted by the European Union | Impact on MorphoSys |
|---|---|---|---|---|
| IFRS 9 | Financial Instruments | 01/01/2018 | yes | yes |
| IFRS 15 and IFRS 15 (A) | Revenue from Contracts with Customers | 01/01/2018 | yes | yes |
| IFRS 2 (A) | Classification and Measurement of Share-based Payment Transactions | 01/01/2018 | yes | yes |
| IFRS 4 (A) | Applying IFRS 9 'Financial Instruments' with IFRS 4 'Insurance Contracts' | 01/01/2018 | yes | none |
| IFRS 15 (C) | Revenue from Contracts with Customers | 01/01/2018 | yes | yes |
| IAS 40 (A) | Transfers of Investment Property | 01/01/2018 | yes | none |
| IFRIC 22 | Foreign Currency Transactions and Advance Consideration | 01/01/2018 | yes | none |
| | Annual Improvements to IFRS Standards 2014 – 2016 Cycle | 01/01/2018 | yes | none |

(A) Amendments
(C) Clarifications

The impact of the amendments to IFRS 2 on the consolidated financial statements is deemed not to be material.

#### IFRS 9 – FINANCIAL INSTRUMENTS

As of January 1, 2018, the Group has been applying the new standard for financial instruments, IFRS 9. In this context, the exception granted by IFRS 9 Section 7.2.15 is applied for the transitional provisions for

classification and measurement according to which the adjustment of prior year figures is not required. Financial instruments were accounted for in accordance with IAS 39 in fiscal years 2017 and 2016. The Group applied the provisions of IAS 39 on the classification, recognition, measurement and derecognition of financial instruments.

As of January 1, 2018, financial instruments, namely money market funds, previously reported in accordance with IAS 39 until December 31, 2017, in the balance sheet item "available-for-sale financial assets" are now classified as "financial assets at fair value, with changes recognized in profit or loss" in accordance with IFRS 9. These items do not meet the IFRS 9 criteria for classification at amortized cost, because their cash flows do not represent solely payments of principal and interest.

Financial instruments, namely term deposits with fixed and variable interest rates as well as corporate bonds, previously classified in accordance with IAS 39 as "financial assets classified as loans and receivables" until December 31, 2017, are now presented in the balance sheet item "other financial assets at amortized cost" in accordance with IFRS 9. At the date of initial application the Group's business model is to hold these financial instruments for collection of contractual cash flows, and the cash flows represent solely payments of principal and interest on the principal amount.

| in 000' € | Available-for-sale Financial Assets | Financial Assets at Fair Value through Profit or Loss | Financial Assets classified as Loans and Receivables | Other Financial Assets at Amortized Cost |
|---|---|---|---|---|
| Balance as of December 31, 2017 | 86,538 | 0 | 149,059 | 0 |
| Reclassifications of "Available-for-sale Financial Assets" to "Financial Assets at Fair Value through Profit or Loss" | (86,538) | 86,538 | 0 | 0 |
| Reclassifications of "Financial Assets classified as Loans and Receivables" to "Other Financial Assets at Amortized Cost" | 0 | 0 | (149,059) | 149,059 |
| Impairment | 0 | 0 | 0 | (136) |
| Balance as of January 1, 2018 | 0 | 86,538 | 0 | 148,923 |

As of January 1, 2018, there was no difference between the previous carrying amounts of financial instruments in accordance with IAS 39 and the carrying amounts in accordance with IFRS 9. As a result, no change in value has been recognized in accumulated deficit as of January 1, 2018. For financial instruments classified as "at amortized cost", impairment losses for the expected twelve-month loss were recognized in accumulated deficit as of January 1, 2018. For financial instruments previously classified as "available-for-sale financial assets", all unrealized gains and losses recognized in the revaluation reserve as of December 31, 2017 were reclassified to accumulated deficit as of January 1, 2018, as these financial instruments are now classified as "financial assets at fair value, with changes recognized in profit or loss". No reclassification adjustment was required to be made to other financial assets at amortized cost under IFRS 9 compared to the application of IAS 39.

| in 000' € | Revaluation Reserve | Accumulated Deficit |
|---|---|---|
| Balance as of December 31, 2017 | (105) | 0 |
| Reclassifications of "Available-for-sale Financial Assets" to "Financial Assets at Fair Value through Profit or Loss" | 105 | (105) |
| Balance as of January 1, 2018 | 0 | (105) |

The group recognized impairments on financial instruments in accordance with the incurred loss model of IAS 39 until December 31, 2017, by recognizing an allowance once objective evidence of impairment occurred. On January 1, 2018, an expected twelve-month loss for financial instruments, namely for the cash and cash equivalents as well as the term deposits, amounting to € 0.1 million, was recognized as strictly required by

IFRS 9. All of these debt investments at amortized cost are considered to have a low credit risk, and the risk provision recognized was therefore limited to twelve-month expected losses. For accounts receivable, the simplified impairment model was applied, which requires expected lifetime losses to be recognized. This resulted in a risk provision of € 0.1 million as of January 1, 2018.

| in 000' € | Impairment IAS 39 | General Impairment Model | | | Simplified Impairment Model | | Accumulated Deficit |
|---|---|---|---|---|---|---|---|
| | | Stage 1 | Stage 2 | Stage 3 | Stage 2 | Stage 3 | |
| Balance as of December 31, 2017 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Financial Assets at Amortized Cost | 0 | (136) | 0 | 0 | 0 | 0 | (136) |
| Accounts Receivable | 0 | 0 | 0 | 0 | (112) | 0 | (112) |
| Balance as of January 1, 2018 | 0 | (136) | 0 | 0 | (112) | 0 | (248) |

MorphoSys did not apply hedge accounting under IAS 39 as of December 31, 2017, nor during the year 2018, therefore the first time application of IFRS 9 has no impact on the accounting of hedging relationships.

## IFRS 15 – REVENUE FROM CONTRACTS WITH CUSTOMERS

Since January 1, 2018, the Group has been applying IFRS 15, the new accounting standard governing revenue recognition, using the modified retrospective method. Using this method requires that the cumulative effects of the first adoption of IFRS 15 to be recognized in accumulated deficit as of January 1, 2018 without an adjustment of previous periods. Hence, deferred revenue and accumulated deficit each decreased by € 1.1 million. This effect resulted from license payments which, under IFRS 15, are to be realized at a specific point in time rather than over a period of time, as was the case under IAS 18.

| in 000' € | Current Portion of Contract Liability (2017: Current Portion of Deferred Revenue) | Contract Liability, Net of Current Portion (2017: Deferred Revenue, Net of Current Portion) | Accumulated Deficit |
|---|---|---|---|
| Balance as of December 31, 2017 | 1,389 | 306 | 0 |
| Application of IFRS 15 | (1,041) | (94) | 1,135 |
| Balance as of January 1, 2018 | 348 | 212 | 1,135 |

Had revenues in the 2018 financial year continued to be recognized in accordance with IAS 18, revenues would have been € 1.1 million higher. This reflects the aforementioned effect as of January 1, 2018, which would have been fully realized as revenue until December 31, 2018, without the application of the new IFRS 15 standard. For the revenue realized under IFRS 15 in the 2018 financial year, the accounting under IAS 18 would have resulted in revenue recognition in the same amount and at the same point in time.

Accounting principles for accounts receivable assets are presented in Items 2.4.2, 2.5.1 and 2.8.2 of these Notes.

As of January 1, 2018, contract liabilities as defined by IFRS 15 rather than deferred revenue were recorded in the consolidated balance sheet. The accounting policies that apply to contract liabilities are presented in Items 2.9.3 and 2.9.4 of the Notes.

## NEW AND REVISED STANDARDS AND INTERPRETATIONS THAT WERE NOT YET MANDATORY

The following new and revised standards and interpretations that were not yet mandatory for the financial year or were not yet adopted by the European Union were not applied. Standards with the remark "yes" are likely to have

an impact on the consolidated financial statements, and their impact is currently being assessed by the Group. Only those standards having a material impact are described in more detail. The impact on the consolidated financial statements of the amendments to IAS 1 and IAS 8 is not expected to be material and therefore these are not explained separately. Standards with the remark "none" are unlikely to have a material impact on the consolidated financial statements.

| Standard / Interpretation | | Mandatory Application for financial years starting on | Adopted by the European Union | Possible Impact on MorphoSys |
|---|---|---|---|---|
| IFRS 3 (A) . . . . . | Business Combinations | 01/01/2020 | no | none |
| IFRS 16 . . . . . | Leases | 01/01/2019 | yes | yes |
| IFRS 17 . . . . . | Insurance Contracts | 01/01/2021 | no | none |
| IFRS 9 (A) . . . . . | Prepayment Features with Negative Compensation | 01/01/2019 | yes | none |
| IAS 1 und IAS 8 (A) . . . | Definition of Material | 01/01/2020 | no | yes |
| IAS 19 (A) . . . . . | Plan Amendment, Curtailment or Settlement | 01/01/2019 | no | none |
| IAS 28 (A) . . . . . | Long-term Interests in Associates and Joint Ventures | 01/01/2019 | yes | none |
| IFRIC 23 . . . . . | Uncertainty over Income Tax Treatments | 01/01/2019 | yes | none |
| | Amendments to References to the Conceptual Framework in IFRS Standards | 01/01/2020 | no | none |
| | Annual Improvements to IFRS Standards 2015 – 2017 Cycle | 01/01/2019 | no | none |

(A) Amendments

## IFRS 16 – LEASES

As of January 1, 2019, the new IFRS 16 standard for leases, replaces the previous IAS 17 standard for leases, including the related interpretations (IFRIC 4, SIC-15, SIC-27). Currently, all leases are accounted for as operating leases in accordance with IAS 17.

The Group reviewed IFRS 16 for its potential impact on existing lease contracts and will apply the standard for the first time as of the date of its mandatory adoption on January 1, 2019, using the modified retrospective method. The Group will not retroactively adjust comparative amounts for the year prior to first-time adoption and will recognize right-of-use assets in the amount of the lease liabilities in accordance with IFRS 9.C8 (b)(ii) on January 1, 2019. The analysis of the first-time application of IFRS 16 showed that IFRS 16 will have a material impact on components of the consolidated financial statements and the presentation of net assets, financial position and results of operations.

For lessees, IFRS 16 introduces a uniform approach to the accounting treatment of leases, whereby assets for the right of use and liabilities for the payment obligations must be recognized in the balance sheet for all leases. The right of use is initially measured at the present value of the future lease payments plus the initial direct costs and subsequently amortized over the term of the lease. The lease liability is the present value of the lease payments that are paid during the term of the lease. For subsequent measurement, the carrying amount of the lease liabilities is compounded with the interest rate or the incremental borrowing rate underlying the lease and reduced by lease payments made. For low value lease assets or short-term leases (less than twelve months), the simplified method is applied. Under this method, the lease payments are recognized as expenses over the term of the lease.

The analysis of the first-time application of IFRS 16 has shown that, as of January 1, 2019, the conversion is expected to result in the recognition of rights of us right-of-use assets and lease liabilities of around € 40.6 million in the balance sheet. In addition, current prepaid expenses of € 0.3 million resulting from rent paid in advance and non-current prepaid expenses of € 2.1 million are reclassified to the capitalized right-of-use asset as of January 1, 2019. Furthermore, as of January 1, 2019, current other liabilities of € 0.1 million and non-current other liabilities of € 0.7 million resulting from deferred rent-free periods are offset against the right-of-use asset. The resulting expansion in total liabilities is expected to decrease the equity ratio. The first-time adoption of IFRS 16 is not expected to have an impact on equity as of January 1, 2019.

The lease expenses currently recognized in the statement of income will be replaced by depreciation on assets and interest expenses from the compounding of lease liabilities. This means that the related costs will be presented in different line items in the statement of income and may differ in their total amount compared to the application of IAS 17. The first-time application of IFRS 16 is not expected to have a material impact on Group EBIT.

Payments for the repayment of lease liabilities and payments relating to the interest portion of the lease liability will be allocated to cash flow from financing activities.

## 2.2 CONSOLIDATION PRINCIPLES

Intercompany balances and transactions and any unrealized gains arising from intercompany transactions are eliminated when preparing consolidated financial statements pursuant to IFRS 10.B86. Unrealized losses are eliminated in the same manner as unrealized gains. Accounting policies have been applied consistently for all subsidiaries.

For all contracts and business transactions between Group entities, the arm's length principle was applied.

### 2.2.1 CONSOLIDATED COMPANIES AND SCOPE OF CONSOLIDATION

MorphoSys AG, as the ultimate parent company, is located in Planegg, near Munich. MorphoSys AG has two wholly owned subsidiaries (collectively referred to as the "MorphoSys Group" or the "Group"): MorphoSys US Inc. (Princeton, New Jersey) and Lanthio Pharma B.V. (Groningen, The Netherlands). Additionally, MorphoSys AG's investment in Lanthio Pharma B.V. indirectly gives it 100% ownership in LanthioPep B.V. (Groningen, The Netherlands).

On July 2, 2018, MorphoSys AG established the wholly owned subsidiary, MorphoSys US Inc., under Section 102 of the General Corporation Law of the State of Delaware. Since its foundation, the company has been fully included in the MorphoSys AG scope of consolidation.

Upon entry into the commercial register on June 28, 2018, and based on the merger agreement dated May 17, 2018, Sloning BioTechnology GmbH, as the transferring legal entity, was merged into MorphoSys AG, as the acquiring legal entity, with retroactive effect from January 1, 2018.

The consolidated financial statements for the year ended December 31, 2018, were prepared and approved by the Management Board in its meeting on March 13, 2019, by means of a resolution. The Management Board members are Dr. Simon Moroney (Chief Executive Officer), Jens Holstein (Chief Financial Officer), Dr. Markus Enzelberger (Chief Scientific Officer) and Dr. Malte Peters (Chief Development Officer).

On March 13, 2019, the Management Board authorized the consolidated financial statements for issue and passed it through to the Supervisory Board for review and authorization.

### 2.2.2 CONSOLIDATION METHODS

The following Group subsidiaries are included in the scope of consolidation as shown in the table below.

| Company | Purchase of Shares / Establishment | Included in Basis of Consolidation since |
|---|---|---|
| Lanthio Pharma B.V. | May 2015 | 05/07/2015 |
| LanthioPep B.V. | May 2015 | 05/07/2015 |
| MorphoSys US Inc. | July 2018 | 07/02/2018 |

These subsidiaries are fully consolidated because they are either directly or indirectly wholly owned. MorphoSys controls these subsidiaries because it possesses full power over the investees. Additionally, MorphoSys is subject to risk exposure and has rights to variable returns from its involvement with the investees. MorphoSys also has unlimited capacity to exert power over the investees to influence their returns.

The Group does not have any entities consolidated as joint ventures using the equity method as defined by IFRS 11 “Joint Arrangements”, nor does it exercise a controlling influence as defined by IAS 28 “Investments in Associates and Joint Ventures”.

Assets and liabilities of fully consolidated domestic and international entities are recognized using Group-wide uniform accounting and valuation methods. The consolidation methods applied have not changed from the previous year.

Receivables, liabilities, expenses and income among consolidated entities are eliminated in the consolidated financial statements.

### 2.2.3 BASIS OF FOREIGN CURRENCY TRANSLATION

IAS 21 “The Effects of Changes in Foreign Exchange Rates” governs the accounting for transactions and balances denominated in foreign currencies. Transactions denominated in foreign currencies are translated at the exchange rates prevailing on the date of the transaction. Any resulting translation differences are recognized in profit or loss. On the reporting date, assets and liabilities are translated at the closing rate for the financial year. Any foreign exchange rate differences derived from these translations are recognized in profit or loss. Any other foreign exchange rate differences at the group level are recognized in the “Other Comprehensive Income Reserve” (stockholders’ equity).

## 2.3 FINANCIAL INSTRUMENTS AND FINANCIAL RISK MANAGEMENT

### 2.3.1 CREDIT RISK AND LIQUIDITY RISK

Financial instruments in which the Group may have a concentration of credit and liquidity risk are mainly cash and cash equivalents, financial assets at fair value, with changes recognized in profit or loss, other financial assets at amortized cost, derivative financial instruments and receivables. The Group’s cash and cash equivalents are mainly denominated in euros. Financial assets at fair value, with changes recognized in profit or loss and other financial assets at amortized cost are high-quality assets. Cash, cash equivalents, financial assets at fair value, with changes recognized in profit or loss and other financial assets at amortized cost are generally held at numerous reputable financial institutions. With respect to its investments, the Group continuously monitors the financial institutions that are its counterparties to the financial instruments, as well as their creditworthiness, and does not anticipate any risk of non-performance.

The changes in impairment losses for credit risks required to be recognized under IFRS 9 on the financial year’s profit or loss in the line item “impairment losses on financial assets” (see Item 2.4 of the Notes) were as follows.

Negative values represent additions and positive values represent reversals of this risk provision. No utilization of impairments was recognized in 2018. The increase of this risk provision resulted from a higher volume of financial assets at amortized cost due to the cash raised in connection with the IPO on the Nasdaq and higher premiums on counterparties' credit default swaps compared with January 1, 2018.

| | General Impairment Model | | | Simplified Impairment Model | | |
|---|---|---|---|---|---|---|
| in 000' € | Stage 1 | Stage 2 | Stage 3 | Stage 2 | Stage 3 | Total |
| Balance as of January 1, 2018 | (136) | 0 | 0 | (112) | 0 | (248) |
| Unused Amounts Reversed | 0 | 0 | 0 | 112 | 0 | 112 |
| Increase in Impairment Losses for Credit Risks recognized in Profit or Loss during the Year | (570) | (465) | 0 | (90) | 0 | (1,125) |
| Change between Impairment Stages | 41 | (41) | 0 | 0 | 0 | 0 |
| Amounts written off during the Year as uncollectible | 0 | 0 | 0 | 0 | 0 | 0 |
| Balance as of December 31, 2018 | (665) | (506) | 0 | (90) | 0 | (1,261) |

The Group recognizes impairment losses for credit risks on financial assets as of December 31, 2018 as follows.

| Balance Sheet Item | Internal Credit Rating | Basis for Recognition of Expected Credit Loss Provision | Gross Carrying Amount (in 000' €) | Impairment (in 000' €) | Carrying Amount (in 000' €) | Average Impairment Rate |
|---|---|---|---|---|---|---|
| Cash and Cash Equivalents | low | Expected Twelve-Month Loss | 43,165 | (16) | 43,149 | 0.0% |
| Other Financial Assets at Amortized Cost | low | Expected Twelve-Month Loss | 275,805 | (649) | 275,156 | 0.2% |
| | medium | Lifetime Expected Credit Losses | 93,102 | (506) | 92,596 | 0.5% |
| Accounts Receivable | low | Lifetime Expected Credit Losses | 17,823 | (90) | 17,733 | 0.5% |

The Group is also exposed to credit risk from debt instruments that are measured at fair value in profit or loss. As of December 31, 2018, the maximum credit risk corresponded to the carrying amounts of these investments amounting to € 44.6 million.

One of the Group's policies requires that all customers who wish to transact business on credit undergo a credit assessment based on external ratings. Nevertheless, the Group's revenue and accounts receivable are still subject to credit risk from customer concentration. The Group's most significant single customer accounted for € 5.9 million of accounts receivables as of December 31, 2018 (December 31, 2017: € 5.1 million) or 33% of the Group's total accounts receivable at the end of 2018. The Group's top three single customers accounted for of 65%, 25% and 5% of the total revenue in 2018. On December 31, 2017, one customer had accounted for 45% of the Group's accounts receivable, and the top three customers had individually accounted for 55%, 25% and 10% of the Group's revenue in 2017. In 2016, the top three customers had individually accounted for 85%, 5% and 5% of the Group's revenue. The carrying amounts of financial assets represented the maximum credit risk.

The table below shows accounts receivables by region as of the reporting date.

| in € | 12/31/2018 | 12/31/2017 |
|---|---|---|
| Europe and Asia | 13,176,523 | 8,838,884 |
| USA and Canada | 4,646,410 | 2,395,424 |
| Other | 0 | 0 |
| Impairment | (90,000) | 0 |
| **Total** | **17,732,933** | **11,234,308** |

The following table shows the aging of accounts receivable as of the reporting date. The loss rate for accounts receivable is valued at 0.5% as of December 31, 2018.

| in €; due since | 12/31/2018<br>0 - 30 days | 12/31/2018<br>30 - 60 days | 12/31/2018<br>60 + days | 12/31/2018<br>Total |
|---|---|---|---|---|
| Accounts Receivable | 17,822,933 | 0 | 0 | 17,822,933 |
| Impairment | (90,000) | 0 | 0 | (90,000) |
| **Accounts Receivable, Net of Allowance for Impairment** | **17,732,933** | **0** | **0** | **17,732,933** |

| in €; due since | 12/31/2017<br>0 - 30 days | 12/31/2017<br>30 - 60 days | 12/31/2017<br>60 + days | 12/31/2017<br>Total |
|---|---|---|---|---|
| Accounts Receivable | 11,234,308 | 0 | 0 | 11,234,308 |
| Write-off | 0 | 0 | 0 | 0 |
| **Accounts Receivable, Net of Allowance for Impairment** | **11,234,308** | **0** | **0** | **11,234,308** |

On December 31, 2018 and December 31, 2017, the Group's exposure to credit risk from derivative financial instruments was assessed as low. The maximum credit risk (is equal to carrying amount) for rent deposits on the reporting date amounted to € 0.7 million (December 31, 2017: € 1.1 million).

The following table shows the maturities of accounts payable as of the reporting date.

| in €; due in | 12/31/2018<br>Between One and Twelve Months | 12/31/2018<br>More than 12 Months | 12/31/2018<br>Total |
|---|---|---|---|
| Trade Accounts Payable | 7,215,127 | 0 | 7,215,127 |
| Convertible Bonds due to Related Parties | 71,517 | 0 | 71,517 |

| in €; due in | 12/31/2017<br>Between One and Twelve Months | 12/31/2017<br>More than 12 Months | 12/31/2017<br>Total |
|---|---|---|---|
| Trade Accounts Payable | 4,621,918 | 0 | 4,621,918 |
| Convertible Bonds due to Related Parties | 87,785 | 0 | 87,785 |

Financial assets and financial liabilities were not netted as of December 31, 2018. There is no current legal right to offset amounts recognized against each other, to settle on a net basis or to settle an associated liability simultaneously with the realisation of an asset. There were no financial instruments pledged as collateral as of December 31, 2018. Under existing framework netting agreements, there was no netting potential as of December 31, 2018.

### 2.3.2 MARKET RISK

Market risk represents the risk that changes in market prices, such as foreign exchange rates, interest rates or equity prices, will affect the Group's results of operations or the value of the financial instruments held. The Group is exposed to both currency and interest rate risks.

## CURRENCY RISK

The consolidated financial statements are prepared in euros. Whereas MorphoSys's expenses are predominantly incurred in euros, a portion of the revenue is dependent on the prevailing exchange rate of the US dollar. Throughout the year, the Group monitors the need to hedge foreign exchange rates to minimize currency risk and addresses this risk by using derivative financial instruments.

Under the Group's hedging policy, highly probable cash flows and definite foreign currency receivables collectible within a twelve-month period are tested to determine if they should be hedged. MorphoSys had begun using foreign currency options and forwards to hedge its foreign exchange risk against US dollar receivables in 2003. For derivatives with a positive fair value, unrealized gains are reported in other receivables and for derivatives with a negative fair value, unrealized losses are reported in other liabilities.

As of December 31, 2018, there were nine unsettled forward rate agreements with terms ranging from one month to nine months (December 31, 2017: twelve unsettled forward rate agreements; December 31, 2016: ten unsettled forward rate agreements). The unrealized gross gains from these agreements amounted to € 0.1 million as of December 31, 2018, and were reported in the finance result (December 31, 2017: € 0.3 million unrealized gross loss; December 31, 2016: less than € 0.1 million unrealized gross gain).

The table below shows the Group's exposure to foreign currency risk based on the items' carrying amounts.

| as of December 31, 2018; in € | EUR | US$ | Other | Impairment | Total |
|---|---|---|---|---|---|
| Cash and Cash Equivalents | 38,732,565 | 6,743,271 | 0 | (16,000) | 45,459,836 |
| Financial Assets at Fair Value through Profit or Loss | 34,971,116 | 9,610,148 | 0 | 0 | 44,581,264 |
| Other Financial Assets at Amortized Cost | 365,823,783 | 0 | 0 | (1,152,000) | 364,671,783 |
| Accounts Receivable | 17,570,035 | 252,898 | 0 | (90,000) | 17,732,933 |
| Restricted Cash (included in Other Current Assets) | 772,425 | 12,901 | 0 | (3,000) | 782,326 |
| Accounts Payable and Accruals | (43,638,268) | (1,122,347) | 0 | 0 | (44,760,615) |
| **Total** | **414,231,656** | **15,496,871** | **0** | **(1,261,000)** | **428,467,527** |

| as of December 31, 2017; in € | EUR | US$ | Other | Impairment | Total |
|---|---|---|---|---|---|
| Cash and Cash Equivalents | 74,289,250 | 2,299,879 | 0 | 0 | 76,589,129 |
| Available-for-sale Financial Assets | 86,538,195 | 0 | 0 | 0 | 86,538,195 |
| Financial Assets classified as Loans and Receivables | 149,059,254 | 0 | 0 | 0 | 149,059,254 |
| Accounts Receivable | 11,199,652 | 34,656 | 0 | 0 | 11,234,308 |
| Restricted Cash (included in Other Current Assets) | 1,132,782 | 0 | 0 | 0 | 1,132,782 |
| Accounts Payable and Accruals | (44,655,328) | (156,390) | 0 | 0 | (44,811,718) |
| **Gesamt** | **277,563,805** | **2,178,145** | **0** | **0** | **279,741,950** |

Various foreign exchange rates and their impact on assets and liabilities were simulated in an in-depth sensitivity analysis to determine the effects on profit or loss. A 10% increase in the euro versus the US dollar as of December 31, 2018, would have reduced the Group's income by € 1.4 million. A 10% decline in the euro versus the US dollar would have increased the Group's income by € 1.7 million.

A 10% increase in the euro versus the US dollar as of December 31, 2017, would have reduced the Group's income by € 0.2 million. A 10% decline in the euro versus the US dollar would have increased the Group's income by € 0.2 million.

A 10% increase in the euro versus the US dollar as of December 31, 2016, would have reduced the Group's income by less than € 0.1million. A 10% decline in the euro versus the US dollar would have increased the Group's income by less than € 0.1million.

### INTEREST RATE RISK

The Group's risk exposure to changes in interest rates mainly relates to fixed term deposits and corporate bonds. Changes in the general level of interest rates may lead to an increase or decrease in the fair value of these securities. The Group's investment focus places the safety of an investment ahead of its return. Interest rate risks are limited because all securities can be liquidated within a maximum of two years and due tothe partially fixed interest commitment during the term.

Different interest rates and their effects on existing investments with variable interest rates were simulated in a detailed sensitivity analysis in order to determine the effects on profit or loss. An increase of the variable interest rate by 0.5 % would have increased the Group's result by € 0.4 million as of December 31, 2018 (December 31, 2017: € 0.6 million; December 31, 2016: € 0.3 million). A decrease of the variable interest rate by 0.5 % would have reduced the Group's result by € 0.1 million as of December 31, 2018 (December 31, 2017: € 0.4 million; December 31, 2016: € 0.5 million). Changes in the interest rate had no material impact on equity as of December 31, 2017 or December 31, 2016.

The Group is not subject to significant interest rate risks from the liabilities currently reported in the balance sheet.

## 2.3.3 FAIR VALUE HIERARCHY AND MEASUREMENT PROCEDURES

The IFRS 13 "Fair Value Measurement" guidelines must always be applied when measurement at fair value is required or permitted or disclosures regarding measurement at fair value are required based on another IAS/IFRS guideline. The fair value is the price that would be achieved for the sale of an asset in an arm's length transaction between independent market participants or the price to be paid for the transfer of a liability (disposal or exit price). Accordingly, the fair value of a liability reflects the default risk (i.e., own credit risk). Measurement at fair value requires that the sale of the asset or the transfer of the liability takes place on the principal market or, if no such principal market is available, on the most advantageous market. The principal market is the market a company has access to that has the highest volume and level of activity.

Fair value is measured by using the same assumptions and taking into account the same characteristics of the asset or liability as would an independent market participant. Fair value is a market-based, not an entity-specific measurement. The fair value of non-financial assets is based on the best use of the asset by a market participant. For financial instruments, the use of bid prices for assets and ask prices for liabilities is permitted but not required if those prices best reflect the fair value in the respective circumstances. For simplification, mean rates are also permitted. Thus, IFRS 13 not only applies to financial assets, but all assets and liabilities.

MorphoSys applies the following hierarchy in determining and disclosing the fair value of financial instruments:

Level 1: Quoted (unadjusted) prices in active markets for identical assets or liabilities to which the Company has access.

Level 2: Inputs other than quoted prices included within Level 1 that are observable for assets or liabilities, either directly (i.e., as prices) or indirectly (i.e., derived from prices).

Level 3: Inputs for the asset or liability that are not based on observable market data (that is, unobservable inputs).

The carrying amounts of financial assets and liabilities, such as other financial assets at amortized cost, as well as accounts receivable and accounts payable, approximate their fair value because of their short-term maturities.

## HIERARCHY LEVEL 1

The fair value of financial instruments traded in active markets is based on the quoted market prices on the reporting date. A market is considered active if quoted prices are available from an exchange, dealer, broker, industry group, pricing service or regulatory body that is easily and regularly accessible and prices reflect current and regularly occurring market transactions at arm's length conditions. For assets held by the Group, the appropriate quoted market price is the buyer's bid price. These instruments fall under Hierarchy Level 1 (see Item 5.2 of the Notes).

## HIERARCHY LEVEL 2 AND 3

The fair value of financial instruments not traded in active markets can be determined using valuation methods. In this case, fair value is estimated using the results of a valuation method that makes maximum use of market data and relies as little as possible on entity-specific inputs. If all significant inputs required for measuring fair value by using valuation methods are observable, the instrument is allocated to Hierarchy Level 2. If significant inputs are not based on observable market data, the instrument is allocated to Hierarchy Level 3.

Hierarchy Level 2 contains forward exchange contracts to hedge exchange rate fluctuations, term deposits and restricted cash. Future cash flows for these forward exchange contracts are determined based on forward exchange rate curves. The fair value of these instruments corresponds to their discounted cash flows. The fair value of the term deposits and restricted cash is determined by discounting the expected cash flows at market interest rates.

Financial assets belonging to Hierarchy Level 3 are shown in Item 5.7 of the Notes to the Consolidated Financial Statements. No financial liabilities were assigned to Hierarchy Level 3, and there were no Hierarchy Level 3 balance sheet items measured at fair value in 2017.

There were no transfers from one fair value hierarchy level to another in 2018 or 2017.

The table below shows the fair values of financial assets and liabilities and the carrying amounts presented in the consolidated balance sheet.

**December 31, 2018**

| in 000' € | Note | Hierarchy Level | Not classified into a Measurement Category | Financial Assets at Amortized Cost | Financial Assets at Fair Value (Through Profit or Loss) |
|---|---|---|---|---|---|
| Cash and Cash Equivalents | 5.1 | * | | 45,460 | 0 |
| Financial Assets at Fair Value through Profit or Loss | 5.2 | 1 | | 0 | 44,581 |
| Other Financial Assets at Amortized Cost | 5.2 | * | | 268,923 | 0 |
| Accounts Receivable | 5.3 | * | | 17,733 | 0 |
| Other Receivables | | | | | |
| thereof Financial Assets | | * | | 81 | |
| thereof Forward Exchange Contracts used for Hedging | 5.4 | 2 | | 0 | 66 |
| **Current Assets** | | | | **332,197** | **44,647** |
| Other Financial Assets at Amortized Cost, Net of Current Portion | 5.2 | 2 | | 95,749 | 0 |
| Shares at Fair Value through Other Comprehensive Income | 5.8 | 3 | | 0 | 0 |
| Prepaid Expenses and Other Assets, Net of Current Portion | 5.9 | | | | |
| thereof Non-Financial Assets | | n/a | 2,271 | | |
| thereof Restricted Cash | | 2 | | 711 | 0 |
| **Non-current Assets** | | | **2,271** | **96,460** | **0** |
| **Total** | | | **2,271** | **428,657** | **44,647** |
| Accounts Payable and Accruals | 6.1 | * | | 0 | 0 |
| **Current Liabilities** | | | | **0** | **0** |
| Convertible Bonds – Liability Component | | 2 | | 0 | 0 |
| **Non-current Liabilities** | | | | **0** | **0** |
| **Total** | | | | **0** | **0** |

* Declaration waived in accordance with IFRS 7.29 (a). For these instruments the carrying amount is a reasonable approximation of fair value.

| Financial Assets at Fair Value (Through Other Comprehensive Income) | Financial Liabilities at Amortized Cost | Financial Liabilities at Fair Value | Total Carrying Amount | Fair value |
|---|---|---|---|---|
| 0 | 0 | 0 | 45,460 | * |
| 0 | 0 | 0 | 44,581 | 44,581 |
| 0 | 0 | 0 | 268,923 | * |
| 0 | 0 | 0 | 17,733 | * |
| | | | 147 | |
| | | | 81 | * |
| 0 | 0 | 0 | 66 | 66 |
| **0** | **0** | **0** | **376,844** | |
| 0 | 0 | 0 | 95,749 | 95,749 |
| 232 | 0 | 0 | 232 | 0 |
| | | | 2,982 | |
| | | | 2,271 | n/a |
| 0 | 0 | 0 | 711 | 701 |
| **232** | **0** | **0** | **98,963** | |
| **232** | **0** | **0** | **475,807** | |
| 0 | (44,761) | 0 | (44,761) | * |
| **0** | **(44,761)** | **0** | **(44,761)** | |
| 0 | (72) | 0 | (72) | (72) |
| **0** | **(72)** | **0** | **(72)** | |
| **0** | **(44,833)** | **0** | **(44,833)** | |

**December 31, 2017**

| in 000' € | Note | Hierarchy Level | Not classified into a Measurement Category | Loans and Receivables |
|---|---|---|---|---|
| Cash and Cash Equivalents | 5.1 | * | | 76,589 |
| Available-for-sale Financial Assets | 5.2 | 1 | | 0 |
| Financial Assets classified as Loans and Receivables | 5.2 | * | | 149,059 |
| Accounts Receivable | 5.3 | * | | 11,234 |
| Other Receivables | 5.4 | * | | 85 |
| Prepaid Expenses and Other Current Assets | | | | |
| thereof Non-Financial Assets | | n/a | 15,788 | |
| thereof Restricted Cash | 5.5 | * | | 432 |
| **Current Assets** | | | **15,788** | **237,399** |
| Prepaid Expenses and Other Assets, Net of Current Portion | 5.9 | | | |
| thereof Non-Financial Assets | | n/a | 2,643 | |
| thereof Restricted Cash | | 2 | | 701 |
| **Non-current Assets** | | | **2,643** | **701** |
| **Total** | | | **18,431** | **238,100** |
| Accounts Payable and Accruals | 6.1 | * | | 0 |
| Other Provisions | | | | |
| thereof Non-Financial Liabilities | | n/a | (886) | |
| thereof Forward Exchange Contracts used for Hedging | | 2 | | 0 |
| **Current Liabilities** | | | **(886)** | **0** |
| Convertible Bonds – Liability Component | | 2 | | 0 |
| **Non-current Liabilities** | | | | **0** |
| **Total** | | | **(886)** | **0** |

* Declaration waived in line with IFRS 7.29 (a). For these instruments carrying amount is a reasonable approximation of fair value.

| Available-for-sale | Other Financial Liabilities | Total Carrying Amount | Fair value |
|---|---|---|---|
| 0 | 0 | 76,589 | * |
| 86,538 | 0 | 86,538 | 86,538 |
| | | | |
| 0 | 0 | 149,059 | * |
| 0 | 0 | 11,234 | * |
| 0 | 0 | 85 | * |
| | | | |
| | | 16,220 | |
| | | 15,788 | n/a |
| 0 | 0 | 432 | * |
| **86,538** | **0** | **339,725** | |
| | | | |
| | | 3,344 | |
| | | 2,643 | n/a |
| 0 | 0 | 701 | 701 |
| **0** | **0** | **3,344** | |
| **86,538** | **0** | **343,069** | |
| 0 | (44,812) | (44,812) | * |
| | | (1,186) | |
| | | (886) | n/a |
| | | | |
| 0 | (300) | (300) | (300) |
| **0** | **(45,112)** | **(45,998)** | |
| 0 | (88) | (88) | (88) |
| **0** | **(88)** | **(88)** | |
| **0** | **(45,200)** | **(46,086)** | |

## 2.4 IMPAIRMENTS

### 2.4.1 FINANCIAL INSTRUMENTS

As of January 1, 2018, the Group assesses on a forward-looking basis the expected credit losses associated with its debt instruments carried at amortized cost, namely term deposits with fixed and variable interest rates as well as corporate bonds. The impairment method applied depends on whether there has been a significant increase in credit risk. If, at the reporting date, the credit risk of a financial instrument has not increased significantly since initial recognition, the Group measures the loss allowance for that financial instrument at an amount equal to twelve-month expected credit losses (Level 1). In case the credit risk of a financial instrument has increased significantly since initial recognition, the Group measures the loss allowance for that financial instrument at an amount equal to the lifetime expected credit losses. The Group currently classifies an increase in credit risk on debt instruments as significant if the premium on a counterparty credit default swap exceeds 100 basis points at the reporting date (Level 2). If there is an objective indication of impairment, the interest received must also be adjusted so that as of that date the interest is accrued on the basis of the net carrying amount (carrying amount less risk provisions) of the financial instrument (Level 3).

Objective evidence of a financial instrument's impairment may arise from material financial difficulties of the issuer or the borrower, a breach of contract such as a default or delay in interest or principal payments, an increased likelihood of insolvency or other remediation process, or from the disappearance of an active market for a financial asset due to financial difficulties.

Financial instruments are derecognized when it can be reasonably expected that they will not be recovered and when one of the objective evidences occurs. Impairment of financial intruments is reported under impairment losses on financial assets.

### 2.4.2 RECEIVABLES

In the case of accounts receivable, the Group applies the simplified approach permitted by IFRS 9, which requires expected lifetime losses to be recognized from the initial recognition of the receivables (Level 2). In the case of insufficient reason to expect recovery, the expected loss shall be calculated as the difference between the gross carrying amount and the present value of the expected cash flows discounted at the original effective interest rate (Level 3). An indicator that there is insufficient reason to expect recovery includes a situation, among others, when internal or external information indicates that the Group will not fully receive the contractual amounts outstanding.

All accounts receivable were aggregated to measure the expected credit losses as they all share the same credit risk characteristics. All accounts receivable are currently due from customers in the same industry and are therefore exposed to the same credit risks. The impairment is determined on the basis of the premium for an industry credit default swap. In the event that accounts receivable cannot be grouped together, they are measured individually.

Accounts receivable are derecognized when it can be reasonably expected that they will not be recovered. Impairment of accounts receivable is reported under other expenses. If in subsequent periods amounts are received that were previously impaired, these amounts are recognized in other income.

### 2.4.3 NON-FINANCIAL ASSETS

The carrying amounts of the Group's non-financial assets and inventories are reviewed at each reporting date for any indication of impairment. The non-financial asset's recoverable amount and inventories' net realizable value is estimated if such indication exists. For goodwill and intangible assets that have indefinite useful lives or are not yet available for use, the recoverable amount is estimated at the same time each year, or on an interim basis, if required. Impairment is recognized if the carrying amount of an asset or the cash-generating unit (CGU) exceeds its estimated recoverable amount.

The recoverable amount of an asset or CGU is the greater of its value-in-use or its fair value less costs of disposal. In assessing value-in-use, the estimated future pre-tax cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset or CGU. For the purposes of impairment testing, assets that cannot be tested individually are grouped into the smallest group of assets that generates cash flows from ongoing use that are largely independent of the cash flows of other assets or CGUs. A ceiling test for the operating segment must be carried out for goodwill impairment testing. CGUs that have been allocated goodwill are aggregated so that the level at which impairment testing is performed reflects the lowest level at which goodwill is monitored for internal reporting purposes. Goodwill acquired in a business combination may be allocated to groups of CGUs that are expected to benefit from the combination's synergies.

The Group's corporate assets do not generate separate cash flows and are utilized by more than one CGU. Corporate assets are allocated to CGUs on a reasonable and consistent basis and are tested for impairment as part of the impairment testing of the CGU that was allocated the corporate asset.

Impairment losses are recognized in profit or loss. Goodwill impairment cannot be reversed. For all other assets, impairment recognized in prior periods is assessed on each reporting date for any indications that the losses decreased or no longer exist. Impairment is reversed when there has been a change in the estimates used to determine the recoverable amount. Impairment losses can only be reversed to the extent that the asset's carrying amount does not exceed the carrying amount net of depreciation or amortization that would have been determined if an impairment had not been recognized.

## 2.5 ADDITIONAL INFORMATION

### 2.5.1 KEY ESTIMATES AND ASSUMPTIONS

Estimates and judgments are continually evaluated and based on historical experience and other factors that include expectations of future events that are believed to be realistic under the prevailing circumstances.

The Group makes estimates and assumptions concerning the future. The resulting accounting-related estimates will, by definition, seldom correspond to the actual results. The estimates and assumptions that carry a significant risk of causing material adjustments to the carrying amounts of assets and liabilities in the next financial year are addressed below.

#### REVENUE

Revenues from milestones, royalties and contracts with multiple performance obligations are subject to assumptions regarding probabilities of occurrence and individual selling prices within the scope of the accounting and measurement principles explained in Note 2.7.1.

#### FINANCIAL ASSETS

Impairment losses on financial assets in the form of debt instruments and accounts receivable are based on assumptions about credit risk. The Group exercises discretion in making these assumptions and in selecting the inputs to calculate the impairment based on past experience, current market conditions and forward-looking estimates at the end of each reporting period.

#### IN-PROCESS R&D PROGRAMS AND GOODWILL

The Group performs an annual review to determine whether in-process R&D programs or goodwill is subject to impairment in accordance with the accounting policies discussed in Item 2.4.3. The recoverable amounts from in-process R&D programs and cash-generating units have been determined using value-in-use calculations and are subjected to a sensitivity analysis. These calculations require the use of estimates (see Items 5.7.3 and 5.7.5 in the Notes).

#### INCOME TAXES

The Group is subject to income taxes in a number of tax jurisdictions. Due to the increasing complexity of tax laws and the corresponding uncertainty regarding the legal interpretation by the fiscal authorities, tax calculations are generally subject to an elevated amount of uncertainty. To the extent necessary, possible tax risks are taken into account in the form of provisions.

Deferred tax assets on tax loss carryforwards are recognized based on the expected business performance of the relevant Group entity. For details on tax loss carryforwards and any recognized deferred tax assets, please refer to Item 4.4 in the Notes.

### 2.5.2 CAPITAL MANAGEMENT

The Management Board’s policy for capital management is to preserve a strong and sustainable capital base in order to maintain the confidence of investors, business partners, and the capital market and to support future business development. As of December 31, 2018, the equity ratio was 90.6% (December 31, 2017: 86.3%; see also the following overview). The Group does not currently have any financial liabilities.

Under the respective incentive plans resolved by the Annual General Meeting, the Management Board and employees may participate in the Group’s performance through long-term performance-related remuneration

consisting of convertible bonds issued in 2013 and stock option plans (SOP) set up in 2017 and 2018. MorphoSys also established Long-Term Incentive plans (LTI plan) in 2014, 2015, 2016, 2017 and 2018. These programs are based on the performance-related issue of shares, or "performance shares", which are granted when certain predefined success criteria have been achieved and the vesting period has expired (for more information, please refer to Item 7.3 in the Notes). There were no changes in the Group's approach to capital management during the year.

| in 000' € | 12/31/2018 | 12/31/2017 |
|---|---|---|
| Stockholders' Equity | 488,373 | 358,671 |
| In % of Total Capital | 90.6% | 86.3% |
| Total Liabilities | 50,391 | 56,727 |
| In % of Total Capital | 9.4% | 13.7% |
| Total Capital | 538,764 | 415,398 |

## 2.6 USE OF INTEREST RATES FOR MEASUREMENT

The Group uses interest rates to measure fair value. When calculating share-based payment, MorphoSys uses the interest rate on four-year German government bonds on the date the share-based payment was granted.

## 2.7 ACCOUNTING POLICIES APPLIED TO LINE ITEMS OF PROFIT OR LOSS

### 2.7.1 REVENUES AND REVENUE RECOGNITION

As of January 1, 2018, the Group has adopted IFRS 15, the new accounting standard governing revenue recognition, using the modified retrospective method.

The application of IFRS 15 requires a five-stage approach:

- Identification of the contract
- Identification of performance obligations
- Determination of the transaction price
- Allocation of the transaction price
- Revenue recognition

The Group's revenues typically include license fees, milestone payments, service fees, and royalties.

#### LICENSE FEES AND MILESTONE PAYMENTS

The Group recognizes revenues from license fees for intellectual property (IP) both at a point in time and over a period of time. An assessment needs to be made as to whether such a license represents a right to use (at a point in time) or a right to access (over time). Revenue for a right to use a license is recognized by the Group when the customer can use the IP and benefit from it as well as when the license term begins, e.g. for outlicensing of a drug candidate or technology without any further obligations for the Group. A license is treated as a right to access if the Group will undertake activities that significantly affect the IP during the license term, and the customer is directly exposed to any positive or negative effects of these activities, and these activities do not result in the transfer of a good or service to the customer. Revenues from right to access licenses are recognized linear over the license term.

Milestone payments for research and development are contingent upon occurrence of a future event and represent variable consideration. The Group determines that at contract inception the most likely amount for milestone payments is zero. The most likely amount method of estimation is considered to be the most predictive for the

outcome, since the outcome is binary, such as achieving a certain success in clinical development (or not). The Group will recognize milestone payments as revenue when it is highly unlikely that there will be a material reversal of cumulative revenue in future periods.

Sales-based milestone payments included in contracts for licenses of IP are considered by the Group to be sales-based license fees because they are solely determined by sales of an approved drug. Accordingly, such milestones are recognized as revenue once sales of such drug occur or later if the performance obligation has not been fulfilled.

### SERVICE FEES

Service fees for the assignment of personnel in research and development collaborations are recognized as revenues in the period the services are provided. In case a Group company acts as agent, revenues are recognized on a net basis.

### ROYALTIES

With regard to royalties (income based on a percentage of sales of a marketed product), the same revenue recognition principles apply as for sales-based milestones as described above.

### AGREEMENTS WITH MULTIPLE PERFORMANCE OBLIGATIONS

A Group company may enter into agreements with multiple performance obligations that include both licenses and services. In such cases, it has to be assessed as to whether the license is distinct from services (or other performance obligations) provided under the same agreement. The transaction price is allocated to separate performance obligations based on the relative stand-alone selling price of the performance obligations in the agreement. The Group company estimates stand-alone selling prices for non-individually sold goods and services on the basis of comparable transactions with other customers. A residual approach is used as a method to estimate the stand-alone selling price when the selling price for a good or service is highly variable or uncertain.

### PRINCIPLE-AGENT RELATIONSHIPS

In agreements involving two or more independent parties that contribute to the provision of a specific good or service to a customer, a Group company assesses as to whether it has promised to provide the specific good or service itself (the company acting as a principal) or to arrange for this specific good or service to be provided by another party (the company acting as an agent). Depending on the result of this assessment, the Group company records revenues on a gross (principal) or net (agent) basis. A Group company is an agent and recognizes revenue on a net basis if its obligation is to arrange for another party to provide goods or services, i.e., the Group company does not control the specified good or service before it is transferred to the customer. Indicators to assist a company in determining whether it does not control the good or service before it is provided to a customer, and is therefore an agent, include, but are not limited to, the following criteria:

- Another party is primarily responsible for fulfilling the contract.
- The company does not have inventory risk.
- The company does not have discretion in establishing the price.

No single indicator is determinative or weighted more heavily than other indicators. However, some indicators may provide stronger evidence than others, depending on the individual facts and circumstances. A Group company's control needs to be substantive, so obtaining legal title of a good or service only momentarily before it is transferred to the customer does not necessarily indicate that a Group company is a principal. In general, the assessment whether a Group company is acting as a principal or as an agent in a transaction requires significant judgement.

Based on the relevant facts and circumstances, the assessment of an agreement may lead to the conclusion that the counterparty is a cooperation partner or partner rather than a customer, meaning the agreement does not fall in the scope of IFRS 15 because the parties equally share the risks of co-developing a drug and the future profits from the marketing of the approved drug.

#### REVENUE RECOGNITION THROUGH DECEMBER 31, 2017

The group applied the revenue recognition principles of IAS 18 Revenue through December 31, 2017.

The Group's revenue included license fees, milestone payments and service fees in 2017 and 2016. Under IAS 18.9, revenues were measured at fair value of the consideration received or receivable. In accordance with IAS 18.20b, revenues were recognized only to the extent that it was sufficiently probable that the Company will have received the economic benefits associated with the transaction.

#### LICENSE FEES AND MILESTONE PAYMENTS

Revenues related to non-refundable fees for providing access to technologies, fees for the use of technologies and license fees were recognized immediately and in full, if all IAS 18.14 criteria were met. Specifically, when significant risks and rewards of a license ownership have transferred to the customer and a Group company does not retain any continuing managerial involvement or effective control. In case these criteria were not met, revenues were recognized on a straight-line basis over the period of the agreement unless a more appropriate method of revenue recognition was available. The period of the agreement usually corresponded to the contractually agreed term of the research project or, in the case of contracts without an agreed project term, the expected term of the collaboration. Revenues from milestone payments were recognized upon achievement of certain contractual criteria.

#### SERVICE FEES

Service fees from research and development collaborations were recognized in the period the services were provided.

Discounts that were likely to be granted and whose amount could be reliably determined were recognized as a reduction in revenue at the time of revenue recognition. The timing of the transfer of risks and rewards varied depending on the terms of the sales contract. In accordance with IAS 18.21 and 18.25, revenue from multiple-component contracts was recognized by allocating the total consideration to the separately identifiable components based on their respective fair values and by applying IAS 18.20. The applicable revenue recognition criteria were assessed separately for each component.

### 2.7.2 OPERATING EXPENSES

#### COST OF SALES

Cost of sales is recognized as an expense in the period in which the associated revenue accrues. This line item currently includes personnel expenses only.

#### RESEARCH AND DEVELOPMENT

Research costs are expensed in the period in which they occur. Development costs are generally expensed as incurred in accordance with IAS 38.5 and IAS 38.11 to 38.23. Development costs are recognized as an intangible asset when the criteria of IAS 38.21 (probability of expected future economic benefits, reliability of cost measurement) are met and if the Group can provide proof under IAS 38.57.

This line item contains personnel expenses, consumables supplies, other operating expenses, impairment charges, amortization and other costs of intangible assets (additional information can be found under Item 5.7 in the Notes), costs for external services and depreciation and other costs for infrastructure.

### SELLING

The item includes personnel expenses, consumables, operating costs, amortization of intangible assets (software; further details in Item 5.7 of the Notes), costs for external services, infrastructure costs and depreciation.

### GENERAL AND ADMINISTRATIVE

This line item contains personnel expenses, consumable supplies, other operating expenses, amortization of intangible assets (software; additional information can be found under Item 5.7 in the Notes), expenses for external services and depreciation and other costs for infrastructure.

### PERSONNEL EXPENSES RESULTING FROM STOCK OPTIONS

The Group applies the provisions of IFRS 2 “Share-based Payment”, which require the Group to spread compensation expenses from the estimated fair values of share-based payments on the reporting date over the period in which the beneficiaries provide the services which triggered the granting of the share-based payments.

IFRS 2 “Share-based Payment” requires the consideration of the effects of share-based payments if the Group acquires goods or services in exchange for shares or stock options (“settlement in equity instruments”) or other assets that represent the value of a specific number of shares or stock options (“cash settlement”). The key impact of IFRS 2 on the Group is the personnel expense resulting from the use of an option pricing model in relation to share-based incentives for the Management Board and employees d. Additional information can be found under Items 7.1, 7.2, 7.3 and 7.4 in the Notes.

### OPERATING LEASE PAYMENTS

Payments made under operating leases are recognized in profit or loss on a straight-line basis over the term of the lease. According to SIC-15, all incentive agreements in the context of operating leases are recognized as an integral part of the net consideration agreed for the use of the leased asset. The total amount of income from incentives is recognized as a reduction in lease expenses on a straight-line basis over the term of the lease.

All of the Group’s lease agreements are classified exclusively as operating leases. The Group did not engage in any finance lease arrangements.

## 2.7.3 OTHER INCOME

In addition to government grants, other income primarily included currency gains from operating activities and income related to the Company’s canteen.

### GOVERNMENT GRANTS

Grants, not repayable, received from government agencies to fund specific research and development projects are recognized in profit or loss in the separate line item “other income” to the extent that the related expenses have already occurred. Under the terms of the grants, government agencies generally have the right to audit the use of the funds granted to the Group.

Basically, government grants are cost subsidies, and their recognition through profit or loss is limited to the corresponding costs.

When the repayment of cost subsidies depends on the success of the development project, these cost subsidies are recognized as other liabilities until success has been achieved. If the condition for repayment is not met, then the grant is recognized under “other income”.

No payments were granted in the 2018, 2017 and 2016 financial year that are required to be classified as investment subsidies.

### 2.7.4 OTHER EXPENSES

The line item “other expenses” consisted mainly of currency losses from the operating business.

### 2.7.5 FINANCE INCOME AND FINANCE EXPENSES

Gains and losses arising from changes in fair value, as well as interest effects from the application of the effective interest method to financial assets are recognized in profit or loss when incurred.

### 2.7.6 INCOME TAX EXPENSES/BENEFIT

Income taxes consist of current and deferred taxes and are recognized in profit or loss unless they relate to items recognized directly in equity.

Current taxes are the taxes expected to be payable on the year’s taxable income based on prevailing tax rates on the reporting date and any adjustments to taxes payable in previous years.

The calculation of deferred taxes is based on the balance sheet liability method that refers to the temporary differences between the carrying amounts of assets and liabilities and the amounts used for taxation purposes. The method of calculating deferred taxes depends on how the assets’ carrying amount is expected to be realized and how the liabilities will be repaid. The calculation is based on the prevailing tax rates or those adopted on the reporting date.

Deferred tax assets are offset against deferred tax liabilities if the taxes are levied by the same taxation authority and the entity has a legally enforceable right to set off current tax assets against current tax liabilities.

Deferred tax assets are recognized only to the extent that it is likely that there will be future taxable income to offset. Deferred tax assets are reduced by the amount that the related tax benefit is no longer expected to be realized.

### 2.7.7 EARNINGS PER SHARE

The Group reports basic and diluted earnings per share under consideration of IAS 33.41. Basic earnings per share is computed by dividing the net profit or loss attributable to parent company shareholders by the weighted-average number of ordinary shares outstanding during the reporting period. Diluted earnings per share is calculated in the same manner with the exception that the net profit or loss attributable to parent company shareholders and the weighted-average number of ordinary shares outstanding are adjusted for any dilutive effects resulting from stock options and convertible bonds granted to the Management Board and employees.

In 2018, 2017 and 2016, diluted earnings per share equaled basic earnings per share. The effect of 120,214 potentially dilutive shares in 2018 (2017: 87,904 dilutive shares; 2016: 99,764 dilutive shares) resulting from stock options and convertible bonds granted to the Management Board, the Senior Management Group and employees of the Company who are not members of the Senior Management Group, has been excluded from the diluted earnings per share because it would result in a decrease in the loss per share and should therefore not be treated as dilutive.

The 52,930 stock options not yet vested as of December 31, 2018 are not included in the calculation of potentially dilutive shares, as they are anti-dilutive for the 2018 fiscal year. These shares could possibly have a dilutive effect in the future.

## 2.8 ACCOUNTING POLICIES APPLIED TO THE ASSETS OF THE BALANCE SHEET

### 2.8.1 LIQUIDITY

#### CLASSIFICATION

As of January 1, 2018, the Group classifies its financial assets (debt instruments) in the following measurement categories: those that are subsequently measured at fair value (either through other comprehensive income or profit or loss) and those that are measured at amortized cost. The classification depends on the Company's business model with respect to the management of the financial assets and the contractual cash flows. For assets measured at fair value, gains and losses are recognized either within other comprehensive income or profit or loss. The Group only reclassifies debt instruments when the business model for managing such assets changes.

The Group regards all cash at banks and on hand and all short-term deposits with a maturity of three months or less as cash and cash equivalents. The Group invests most of its cash and cash equivalents at several major financial institutions: Commerzbank, UniCredit, BayernLB, LBBW, BNP Paribas, Deutsche Bank, Sparkasse, Rabobank and Bank of America Merrill Lynch.

Guarantees granted for rent deposits and obligations from convertible bonds issued to employees are recorded under other assets as restricted cash since they are not available for use in the Group's operations.

#### RECOGNITION AND DERECOGNITION

A purchase or sale of financial assets in a manner that is customary for the market is recognized as of the trade date, which is the date on which the Group commits to buying or selling the asset. Financial assets are derecognized when the claims to receive cash flows from the financial assets expire or have been transferred, and the Group has transferred substantially all the risks and rewards of ownership.

#### MEASUREMENT

Upon initial recognition, the Group measures a financial asset at fair value plus transaction costs directly attributable to the acquisition of that asset when a financial asset is not subsequently measured at fair value in profit or loss. Transaction costs of financial assets measured at fair value through profit or loss are recognized as expenses in profit or loss.

The subsequent measurement of debt instruments depends on the Group's business model for managing the asset and the asset's cash flow characteristics. The Group classifies its debt instruments in one of the following measurement categories.

Assets that are held in order to collect the contractual cash flows and for which these cash flows represent only interest and principal payments are measured at amortized cost. Interest income from these financial assets is recognized in finance income using the effective interest method. Gains or losses on derecognition are recognized directly in profit or loss and recorded in the finance result. Impairment losses are recognized as a separate line item in profit or loss.

Assets that are held to collect the contractual cash flows and to sell the financial assets and where the cash flows represent solely principle and interest payments are measured at fair value through other comprehensive income. Changes in the carrying amount are recognized in other comprehensive income, with the exception of impairment losses and income from the reversal of impairment, interest income, and foreign currency gains and

losses, which are recognized in profit or loss. Upon derecognition of the financial asset, the cumulative gain or loss previously recognized in other comprehensive income is reclassified from equity to profit or loss and is recorded in the finance result. Interest income from these financial assets is reported in finance income using the effective interest method. Foreign exchange gains and losses are shown under other income/expenses, and impairment losses are included in a separate line item in profit or loss.

Assets that do not meet the criteria of the categories at amortized cost or at fair value through other comprehensive income are allocated to the category at fair value through profit or loss. Gains or losses on a debt instrument that is subsequently measured at fair value through profit or loss, are recognized on a net basis in the finance result in the period in which they occur.

#### DERIVATIVES

The Group uses derivatives to hedge its foreign exchange risk and cash flows. The use of derivatives is subject to a Group policy approved by the Management Board, which sets out a written guideline on the use of derivatives. According to the Group's hedging policy, only highly probable future cash flows and clearly identifiable receivables that can be collected within a twelve-month period are hedged.

Derivatives are initially recognized at fair value at the time of the conclusion of a derivative transaction and subsequently remeasured at fair value at the end of each reporting period. Changes in the fair value of a derivative instrument that are not accounted for as a hedging relationship are recognized directly in the finance result in profit or loss.

MorphoSys did not apply hedge accounting under IAS 39 as at December 31, 2017, nor during the year 2018, therefore IFRS 9 has no impact on the recognition of hedging relationships.

### 2.8.2 ACCOUNTS RECEIVABLE, INCOME TAX RECEIVABLES AND OTHER RECEIVABLES

Accounts receivable are measured at amortized cost less any impairment using the simplified impairment model (see Items 2.3.1, 2.4.2 and 5.3 in the Notes).

Income tax receivables mainly include receivables due from tax authorities in the context of capital gain taxes withheld.

Other non-derivative financial instruments are measured at amortized cost using the effective interest method.

### 2.8.3 INVENTORIES

Inventories are measured at the lower value of production or acquisition cost and net realizable value under the first-in first-out method. Acquisition costs comprise all costs of purchase and those incurred in bringing the inventories into operating condition while taking into account purchase price reductions, such as bonuses and discounts. Net realizable value is the estimated selling price less the estimated expenses necessary for completion and sale. Inventories are divided into the categories of raw materials and supplies.

### 2.8.4 PREPAID EXPENSES AND OTHER CURRENT ASSETS

Prepaid expenses include expenses resulting from an outflow of liquid assets prior to the reporting date that are only recognized as expenses in the subsequent financial year. Such expenses usually involve maintenance contracts, sublicenses and upfront payments for external laboratory services not yet performed. Other current assets primarily consist of receivables towards tax authorities from input tax surplus resulting from value-added taxes, combination compounds and receivables from upfront payments. This item is recognized at nominal value.

### 2.8.5 PROPERTY, PLANT AND EQUIPMENT

Property, plant and equipment is recorded at historical cost less accumulated depreciation (see Item 5.6 in the Notes) and any impairment (see Item 2.4.3 in the Notes). Historical cost includes expenditures directly related to the purchase at the time of the acquisition. Replacement purchases, building alterations and improvements are capitalized while repair and maintenance expenses are charged as expenses as they are incurred. Property, plant and equipment is depreciated on a straight-line basis over its estimated useful life (see table below). Leasehold improvements are depreciated on a straight-line basis over the lesser of the asset's estimated useful life or the remaining term of the lease.

| Asset Class | Useful Life | Depreciation Rates |
|---|---|---|
| Computer Hardware | 3 years | 33% |
| Low-value Laboratory and Office Equipment between € 250 and € 800 | Immediately | 100% |
| Permanent Improvements to Property/Buildings | 10 years | 10% |
| Office Equipment | 8 years | 13% |
| Laboratory Equipment | 4 years | 25% |

The residual values and useful lives of assets are reviewed at the end of each reporting period and adjusted if appropriate.

Borrowing costs that can be directly attributed to the acquisition, construction or production of a qualifying asset are not included in the acquisition or production costs because the Group finances the entire operating business with equity.

### 2.8.6 INTANGIBLE ASSETS

Purchased intangible assets are capitalized at acquisition cost and exclusively amortized on a straight-line basis over their useful lives. Internally generated intangible assets are recognized to the degree the recognition criteria set out in IAS 38 are met.

Development costs are capitalized as intangible assets when the capitalization criteria described in IAS 38 have been met, namely, clear specification of the product or procedure, technical feasibility, intention of completion, use, commercialization, coverage of development costs through future free cash flows, reliable determination of these free cash flows and availability of sufficient resources for completion of development and sale. Amortization of intangible assets is recorded in research and development expenses.

Expenses to be classified as research expenses are allocated to research and development expenses as defined by IAS 38.

Subsequent expenditures for capitalized intangible assets are capitalized only when they substantially increase the future economic benefits of the specific asset to which they relate. All other expenditures are expensed as incurred.

#### PATENTS

Patents obtained by the Group are recorded at acquisition cost less accumulated amortization (see below) and any impairment (see Item 2.4.3 in the Notes). Patent costs are amortized on a straight-line basis over the lower of the estimated useful life of the patent (ten years) or the remaining patent term. Amortization starts when the patent is issued. Technology identified in the purchase price allocation for the acquisition of Sloning BioTechnology GmbH is recorded at the fair value at the time of acquisition, less accumulated amortization (useful life of ten years).

### LICENSE RIGHTS

The Group has acquired license rights from third parties by making upfront license payments, paying annual fees to maintain the license and paying fees for sublicenses. The Group amortizes upfront license payments on a straight-line basis over the estimated useful life of the acquired license (eight to ten years). The amortization period and method are reviewed at the end of each financial year in accordance with IAS 38.104. Annual fees to maintain a license are amortized over the term of each annual agreement. Sublicense fees are amortized on a straight-line basis over the term of the contract or the estimated useful life of the collaboration for contracts without a set duration.

### IN-PROCESS R&D PROGRAMS

This line item contains capitalized upfront payments from the in-licensing of compounds for the Proprietary Development segment, as well as milestone payments for these compounds subsequently paid as milestones were achieved. Additionally, this line item also includes compounds or antibody programs resulting from acquisitions. The assets are recorded at acquisition cost and are not yet available for use and therefore not subject to scheduled amortization. The assets are tested for impairment annually or in case of triggering events, as required by IAS 36.

### SOFTWARE

Software is recorded at acquisition cost less accumulated amortization (see below), and any impairment (see Item 2.4.3 in the Notes). Amortization is recognized in profit or loss on a straight-line basis over the estimated useful life of three to five years. Software is amortized from the date the software is operational.

### GOODWILL

Goodwill is recognized for expected synergies from business combinations and the skills of the acquired workforce. Goodwill is tested annually for impairment as required by IAS 36 (see Item 5.7.5 in the Notes).

| Intangible Asset Class | Useful Life | Amortization Rates |
|---|---|---|
| Patents | 10 years | 10% |
| License Rights | 8 - 10 years | 13%-10% |
| In-process R&D Programs | Not yet amortized, Impairment Only | - |
| Software | 3 - 5 years | 33%-20% |
| Goodwill | Impairment Only | - |

### 2.8.7 INVESTMENTS AT FAIR VALUE, WITH CHANGES RECOGNIZED IN OTHER COMPREHENSIVE INCOME

The investment in adivo GmbH is accounted for as an equity instrument at fair value. Changes in fair value are recognized in other comprehensive income. This was irrevocably determined when the investment was first recognized. This investment is a strategic financial investment, and the Group considers this classification to be more meaningful. If the investment is derecognized, no subsequent reclassification of gains or losses to profit or loss will occur. Dividends from this investment are recognized in profit or loss when there is a justified right to receive payment.

### 2.8.8 PREPAID EXPENSES AND OTHER ASSETS, NET OF CURRENT PORTION

The non-current portion of expenses that occurred prior to the reporting date, but are to be recognized in subsequent financial years is recorded in prepaid expenses. This line item contains maintenance contracts and sublicenses.

This line item also includes other non-current assets, which are recognized at fair value. Other non-current assets consist mainly of restricted cash, such as rent deposits.

## 2.9 ACCOUNTING POLICIES APPLIED TO EQUITY AND LIABILITY ITEMS OF THE BALANCE SHEET

### 2.9.1 ACCOUNTS PAYABLE, OTHER LIABILITIES AND OTHER PROVISIONS

Accounts payable and other liabilities are initially recognized at fair value and subsequently at amortized cost using the effective interest method. Liabilities with a term of more than one year are discounted to their net present value. Liabilities with uncertain timing or amount are recorded as provisions.

IAS 37 requires the recognition of provisions for obligations to third parties arising from past events. Furthermore, provisions are only recognized for legal or factual obligations to third parties if the event's occurrence is more likely than not. Provisions are recognized at the amount required to settle the respective obligation and discounted to the reporting date if the interest effect is material. The amount required to meet the obligation also includes expected price and cost increases. The interest portion of other provisions is recorded in the finance result. The measurement of provisions is based on past experience and considers the circumstances in existence on the reporting date.

The Group has entered into various research and development contracts with research institutions and other companies. These agreements are generally cancelable, and related costs are recorded as research and development expenses as incurred. The Group records accruals for estimated ongoing research costs that have been incurred. When evaluating the adequacy of the accruals, the Group analyzes the progress of the studies, including the phase or completion of events, invoices received and contracted costs. Significant judgments and estimates are made in determining the accrued balances at the end of any reporting period. Actual results could differ from the Group's estimates. The Group's historical accrual estimates have not been materially different from the actual costs.

### 2.9.2 TAX PROVISIONS

Tax liabilities are recognized and measured at their nominal value. Tax liabilities contain obligations from current taxes, excluding deferred taxes. Provisions for trade taxes, corporate taxes and similar taxes on income are determined based on the taxable income of the consolidated entities less any prepayments made.

### 2.9.3 CURRENT PORTION OF CONTRACT LIABILITIES

Upfront payments from customers for services to be rendered by the Group and revenue that must be recognized over a period of time in accordance with IFRS 15.35 are deferred and measured at the nominal amount of cash received. The corresponding rendering of services and revenue recognition is expected to occur within a twelve-month period following the reporting date. Prior to December 31, 2017, this item was recognized as deferred revenue.

### 2.9.4 CONTRACT LIABILITIES, NET OF CURRENT PORTION

This line item includes the non-current portion of deferred upfront payments and income from customers that is required to be recognized over a period of time in accordance with IFRS 15.35. These are measured at the nominal amount of cash received. Prior to December 31, 2017, this item was reported as deferred revenue, net of current portion.

### 2.9.5 CONVERTIBLE BONDS DUE TO RELATED PARTIES

The Group had issued convertible bonds to the Group's Management Board and employees. In accordance with IAS 32.28, the equity component of a convertible bond must be credited separately in additional paid-in capital.

The equity component is determined by deducting the separately determined amount of the liability component from the fair value of the convertible bond. The debit effect of the equity component is recognized in profit or loss in personnel expenses from share-based payments, whereas the effect on profit or loss from the liability component is recognized as interest expense. The Group applies the provisions of IFRS 2 “Share-based Payment” for all convertible bonds granted to the Management Board and the Group’s employees.

### 2.9.6 DEFERRED TAXES

The recognition and measurement of deferred taxes are based on the provisions of IAS 12. Deferred tax assets and liabilities are calculated using the liability method, which is common practice internationally. Under this method, taxes expected to be paid or recovered in subsequent financial years are based on the applicable tax rate at the time of recognition.

Deferred tax assets and liabilities are recorded separately in the balance sheet and take into account the future tax effect resulting from temporary differences between values in the balance sheet for assets, liabilities as well as for tax loss carryforwards.

Deferred tax assets are offset against deferred tax liabilities if the taxes are levied by the same taxation authority and the entity has a legally enforceable right to set off current tax assets against current tax liabilities. Pursuant to IAS 12, deferred tax assets and liabilities may not be discounted.

### 2.9.7 OTHER LIABILITIES

The line item “other liabilities” consists of a deferred amount related to rent-free periods as agreed. The corresponding reduction of these liabilities over the minimum rent period is calculated based on the effective interest method. Other liabilities are discounted due to their long-term maturities at an interest rate equivalent to the rent term.

### 2.9.8 STOCKHOLDERS’ EQUITY

#### COMMON STOCK

Ordinary shares are classified as stockholders’ equity. Incremental costs directly attributable to the issue of ordinary shares and stock options are recognized as a deduction from stockholders’ equity.

#### TREASURY STOCK

Repurchases of the Company’s own shares at prices quoted on an exchange or at market value are recorded in this line item as a deduction from common stock.

When common stock that is recorded as stockholders’ equity is repurchased, the amount of consideration paid, including directly attributable costs, is recognized as a deduction from stockholders’ equity net of taxes and is classified as treasury shares. When treasury shares are subsequently sold or reissued, the proceeds are recognized as an increase in stockholders’ equity, and any difference between the proceeds from the transaction and the initial acquisition costs is recognized in additional paid-in capital.

The allocation of treasury shares to beneficiaries under Long-Term Incentive plans (in this case: performance shares) is reflected in this line item based on the set number of shares to be allocated after the expiration of the four-year vesting period (quantity structure) multiplied by the weighted-average purchase price of the treasury shares (value structure). The adjustment is carried out directly in equity by reducing the line item treasury stock, which is a deduction from common stock, while simultaneously reducing additional paid-in capital. Further information can be found in Items 7.3.1 and 7.3.2 in the Notes.

### ADDITIONAL PAID- IN CAPITAL

Additional paid-in capital mainly consists of personnel expenses resulting from the grant of stock options, convertible bonds and performance shares and the proceeds from newly created shares in excess of their nominal value.

### REVALUATION RESERVE

The revaluation reserve mainly consisted of unrealized gains and losses on available-for-sale financial assets that were measured directly in equity until they were sold. Starting with the application of IFRS 9 as of January 1, 2018, the reporting of this reserve is no longer required.

### OTHER COMPREHENSIVE INCOME RESERVE

The item “other comprehensive income reserve” includes changes in the fair value of equity instruments that are recognized in other comprehensive income and foreign exchange differences that are not recognized in profit or loss.

### ACCUMULATED INCOME/DEFICIT

The “accumulated income/deficit” line item consists of the Group’s accumulated consolidated net profits/losses. A separate measurement of this item is not made.

## 3 Segment Reporting

MorphoSys Group applies IFRS 8 “Operating Segments”. An operating segment is defined as a unit of an entity that engages in business activities from which it can earn revenues and incur expenses and whose operating results are regularly reviewed by the entity’s chief operating decision maker, the Management Board, and for which discrete financial information is available.

Segment information is provided for the Group’s operating segments based on the Group’s management and internal reporting structures. The segment results and segment assets include items that can be either directly attributed to the individual segment or allocated to the segments on a reasonable basis.

The Management Board evaluates a segment’s economic success using selected key figures so that all relevant income and expenses are included. EBIT, which the Company defines as earnings before finance income, finance expenses, impairment losses on financial assets and income taxes, is the key benchmark for measuring and evaluating the operating results. Refer to the table in Note 3.3 for a reconciliation of EBIT to Net income as well as to the table in Note 4.3 for a breakdown of finance income and expenses. Other key internal reporting figures include revenues, operating expenses, segment results and the liquidity position. The Group consists of the following operating segments.

### 3.1 PROPRIETARY DEVELOPMENT

The segment comprises all activities related to the proprietary development of therapeutic antibodies and peptides. Currently, this segment’s activities comprise a total of twelve antibodies and peptides, with MOR208 representing the Company’s most advanced proprietary clinical program. Also included are the antibody MOR202, which was partially out-licensed to I-Mab Biopharma and MOR106, which had been co-developed with Galapagos and was out-licensed to Novartis during the reporting year. Also included is the Company’s MOR103 program, which was out-licensed to GlaxoSmithKline (GSK) in 2013. The partially or completely out-licensed programs have been part of the Proprietary Development segment since the beginning of their development and will therefore continue to be reported in this segment. MorphoSys is also pursuing other early-

stage proprietary development and co-development programs. These include the clinical program MOR107 (formerly LP2), which originated from the acquisition of Lanthio Pharma B.V. This program was evaluated in a phase 1 study in healthy volunteers and is currently undergoing preclinical studies for oncology indications. One other program is in preclinical development and another six programs are in drug discovery. The Proprietary Development segment also manages the development of proprietary technologies.

## 3.2 PARTNERED DISCOVERY

MorphoSys possesses one of the leading technologies for generating therapeutics based on human antibodies. The Group markets this technology commercially through its partnerships with numerous pharmaceutical and biotechnology companies. The Partnered Discovery segment encompasses all operating activities relating to these commercial agreements.

## 3.3 CROSS-SEGMENT DISCLOSURE

The information on segment assets is based on the assets' respective locations.

| For the Twelve-month Period Ended December 31 | Proprietary Development | | | Partnered Discovery | | | Unallocated | | | Group | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (in 000's €) | 2018 | 2017 | 2016 | 2018 | 2017 | 2016 | 2018 | 2017 | 2016 | 2018 | 2017 | 2016 |
| External Revenues | 53,610 | 17,635 | 621 | 22,832 | 49,156 | 49,123 | 0 | 0 | 0 | 76,442 | 66,791 | 49,744 |
| Operating Expenses | (107,019) | (99,106) | (78,515) | (9,516) | (18,906) | (18,113) | (19,969) | (15,835) | (13,212) | (136,504) | (133,847) | (109,840) |
| **Segment Result** | **(53,409)** | **(81,471)** | **(77,894)** | **13,316** | **30,250** | **31,010** | **(19,969)** | **(15,835)** | **(13,212)** | **(60,062)** | **(67,056)** | **(60,096)** |
| Other Income | 159 | 157 | 327 | 0 | 0 | 0 | 1,486 | 963 | 382 | 1,645 | 1,120 | 709 |
| Other Expenses | 0 | 0 | 0 | 0 | 0 | 0 | (689) | (1,671) | (554) | (689) | (1,671) | (554) |
| **Segment EBIT** | **(53,250)** | **(81,314)** | **(77,567)** | **13,316** | **30,250** | **31,010** | **(19,172)** | **(16,543)** | **(13,384)** | **(59,106)** | **(67,607)** | **(59,941)** |
| Finance Income | | | | | | | | | | 418 | 712 | 1,385 |
| Finance Expenses | | | | | | | | | | (754) | (1,895) | (1,308) |
| Impairment Losses on Financial Assets | | | | | | | | | | (1,035) | 0 | 0 |
| **Earnings before Taxes** | | | | | | | | | | **(60,477)** | **(68,790)** | **(59,864)** |
| Income Tax Benefit / (Expenses) | | | | | | | | | | 4,305 | (1,036) | (519) |
| **Net Loss** | | | | | | | | | | **(56,172)** | **(69,826)** | **(60,383)** |
| Current Assets | 15,842 | 8,802 | 13,157 | 7,114 | 18,054 | 18,415 | 365,949 | 313,825 | 276,484 | 388,905 | 340,681 | 308,056 |
| Non-current Assets | 42,041 | 60,658 | 59,292 | 6,288 | 8,490 | 10,165 | 101,530 | 5,569 | 86,087 | 149,859 | 74,717 | 155,544 |
| **Total Segment Assets** | **57,883** | **69,460** | **72,449** | **13,402** | **26,544** | **28,580** | **467,479** | **319,394** | **362,571** | **538,764** | **415,398** | **463,600** |
| Current Liabilities | 32,167 | 33,008 | 20,948 | 1,471 | 4,083 | 2,512 | 12,285 | 10,610 | 14,842 | 45,923 | 47,701 | 38,302 |
| Non-current Liabilities | 3,291 | 7,072 | 6,930 | 158 | 1,045 | 2,165 | 1,019 | 909 | 743 | 4,468 | 9,026 | 9,838 |
| Stockholders' Equity | 0 | 0 | 0 | 0 | 0 | 0 | 488,373 | 358,671 | 415,460 | 488,373 | 358,671 | 415,460 |
| **Total Segment Liabilities and Equity** | **35,458** | **40,080** | **27,878** | **1,629** | **5,128** | **4,677** | **501,677** | **370,190** | **431,045** | **538,764** | **415,398** | **463,600** |
| Capital Expenditure | 1,319 | 12,344 | 1,358 | 879 | 602 | 1,181 | 268 | 204 | 374 | 2,466 | 13,150 | 2,913 |
| Depreciation and Amortization | 1,903 | 1,555 | 1,272 | 1,429 | 2,075 | 2,117 | 418 | 400 | 375 | 3,750 | 4,030 | 3,764 |

The segment result is defined as a segment's revenue less the segment's operating expenses. The unallocated other operating expenses of € 20.0 million (2017: € 15.8 million; 2016: € 13.2 million) included primarily expenses for central administrative functions that are not allocated to one of the two segments. Finance income, finance expense and income tax are also not allocated to the segments as they are managed on a Group basis. In the 2018 financial year, impairments totaling € 19.2 million were recognized in the Proprietary Development segment (2017: impairments of € 9.9 million in the Proprietary Development segment; 2016: impairments of € 10.1million in the Proprietary Development segment).

The Group's key customers are allocated to either the Proprietary Development or Partnered Discovery segments. As of December 31, 2018, the single most important customer represented accounts receivable with a carrying amount of € 5.9 million (December 31, 2017: € 5.1 million). The largest customer accounted for revenues in 2018 of € 49.5 million, the second largest for € 19.0 million and the third largest for € 3.9 million. The largest and third largest customers are allocated to the Proprietary Development segment and the second largest customer to the Partnered Discovery segment. In 2017, the largest customer accounted for € 36.9 million of the Group's total revenue, the second largest € 16.8 million and the third largest € 6.7 million. The largest and third largest customers were allocated to the Partnered Discovery segment, and the second largest customer to the Proprietary Development segment. The top three of the Group's customers that were all allocated to the Partnered Discovery segment accounted for € 42.1 million, € 2.5 million and € 2.5 million, respectively, of the total revenues in 2016.

The following overview shows the Group's regional distribution of revenue.

| in 000' € | 2018 | 2017 | 2016 |
|---|---|---|---|
| Germany | 309 | 851 | 1,621 |
| Europe and Asia | 56,784 | 57,229 | 43,046 |
| USA and Canada | 19,350 | 8,711 | 5,077 |
| **Total** | **76,443** | **66,791** | **49,744** |

The following overview shows the timing of the satisfaction of performance obligations in 2018.

| in 000' € | Proprietary Development | Partnered Discovery |
|---|---|---|
| At a Point in Time thereof performance obligations fulfilled in previous periods: € 0 in Proprietary Development and € 19.0 million in Partnered Discovery | 53,610 | 22,268 |
| Over Time | 0 | 564 |
| **Total** | **53,610** | **22,832** |

A total of € 136.1 million (December 31, 2017: € 42.2 million) and € 13.7 million (December 31, 2017: € 32.6 million) of the Group's non-current assets, excluding deferred tax assets, are located in Germany and the Netherlands, respectively. There are no non-current assets in the USA as of December 31, 2018. The Group's total investments of € 2.4 million (December 31, 2017: € 13.1 million) were made in Germany, except for € 0.1 million (December 31, 2017: € 0.1 million), which were made in the Netherlands. In accordance with internal definitions, investments only included additions to property, plant and equipment as well as intangible assets which are not related to business combinations.

## 4 Notes to Profit or Loss

### 4.1 REVENUES

In 2018, revenues consisted of milestone payments and royalties totaling € 19.3 million (2017: € 7.3 million; 2016: € 5.6 million). In 2018, 2017 and 2016 these were entirely generated by the Partnered Discovery segment.

Revenues from license fees (except milestone payments and royalties) amounted to € 51.2 million in 2018 (2017: € 37.5 million; 2016: € 22.8 million) and was attributable to the Proprietary Development segment in the amount of € 50.6 million (2017: € 16.8 million), and to the Partnered Discovery segment in the amount of € 0.6 million (2017: € 20.7 million; 2016: € 22.8 million).

Of the service fee revenues totaling € 5.9 million (2017: € 22.0 million; 2016: € 21.4 million), € 3.0 million (2017: € 0.8 million; 2016: € 0.6 million) was attributable to the Proprietary Development segment, and € 2.9 million (2017: € 21.2 million; 2016: € 20.8 million) to the Partnered Discovery segment. Substantially all service fee revenues relate to revenue on a gross basis (principal).

Of the total revenues in 2018, revenues of € 19.0 million were recognized from performance obligations that were fulfilled in previous periods and relate to milestone payments and royalties (2017: € 7.8 million; 2016: € 7.1 million).

## 4.2 OPERATING EXPENSES

### 4.2.1 COST OF SALES

Cost of sales consists of the items below.

| in 000' € | 2018 | 2017 | 2016 |
|---|---|---|---|
| Personnel Expenses | 1,797 | 0 | 0 |
| **Total** | **1,797** | **0** | **0** |

### 4.2.2 RESEARCH AND DEVELOPMENT EXPENSES

Research and development expenses are composed of the items below.

| in 000' € | 2018 | 2017 | 2016 |
|---|---|---|---|
| Personnel Expenses | 25,288 | 28,482 | 25,145 |
| Consumable Supplies | 2,310 | 2,588 | 2,321 |
| Other Operating Expenses | 2,761 | 2,757 | 2,608 |
| Impairment, Amortization and Other Costs of Intangible Assets | 22,760 | 13,503 | 13,689 |
| External Services | 47,889 | 61,119 | 44,311 |
| Depreciation and Other Costs for Infrastructure | 5,389 | 4,865 | 5,889 |
| **Total** | **106,397** | **113,314** | **93,963** |

### 4.2.3 SELLING EXPENSES

Selling expenses consist of the items below.

| in 000' € | 2018 | 2017 | 2016 |
|---|---|---|---|
| Personnel Expenses | 2,536 | 1,771 | 1,661 |
| Consumable Supplies | 3 | 1 | 1 |
| Other Operating Expenses | 538 | 386 | 444 |
| Amortization of Intangible Assets | 25 | 0 | 0 |
| External Services | 2,953 | 2,658 | 338 |
| Depreciation and Other Costs for Infrastructure | 328 | 0 | 0 |
| **Total** | **6,383** | **4,816** | **2,444** |

### 4.2.4 GENERAL AND ADMINISTRATIVE EXPENSES

General and administrative expenses included the items below.

| in 000' € | 2018 | 2017 | 2016 |
|---|---|---|---|
| Personnel Expenses | 15,016 | 11,797 | 9,208 |
| Consumable Supplies | 15 | 33 | 97 |
| Other Operating Expenses | 1,012 | 714 | 847 |
| Amortization of Intangible Assets | 97 | 112 | 111 |
| External Services | 4,475 | 2,224 | 2,244 |
| Depreciation and Other Costs for Infrastructure | 1,313 | 838 | 925 |
| **Total** | **21,928** | **15,718** | **13,432** |

### 4.2.5 PERSONNEL EXPENSES

Personnel expenses included the items below.

| in 000' € | 2018 | 2017 | 2016 |
|---|---|---|---|
| Wages and Salaries | 30,349 | 28,196 | 27,146 |
| Social Security Contributions | 4,341 | 4,542 | 4,570 |
| Share-based Payment Expense | 5,585 | 4,975 | 2,357 |
| Temporary Staff (External) | 1,241 | 881 | 1,061 |
| Other | 3,121 | 3,456 | 880 |
| **Total** | **44,637** | **42,050** | **36,014** |

Personnel expenses from share-based payment in 2018 included a one-time entitlement granted to related parties to receive treasury shares amounting to € 2.1 million. Further details can be found in Item 6.5.4 of the Notes.

In 2018, other personnel expenses mainly included costs for personnel recruitment as well as promotion and development measures. In 2017, this item consisted primarily of costs for severance payments and measures to recruit, promote and develop personnel. In 2016, other personnel expenses comprised mainly of recruitment costs.

Due to the increasing importance of selling expenses in connection with the planned preparations for the commercialization of MOR208, the existing functions presented in profit or loss were expanded in 2018 to include the area of "sales". In order to ensure the comparability of information, the previous year's figures have been adjusted accordingly. The average number of employees in the 2018 financial year was 327 (2017: 344; 2016: 354). Of the 329 employees on December 31, 2018 (December 31, 2017: 326; December 31, 2016: 345), 246 were active in research and development (December 31, 2017: 253; December 31, 2016: 280), 21 in sales (December 31, 2017: 14; December 31, 2016: 12), and 62 were engaged in general and administrative functions (December 31, 2017: 59 employees; December 31, 2016: 53 employees). As of December 31, 2018, there were 209 employees in the Proprietary Development segment and 49 employees in the Partnered Discovery segment while 71 employees were not allocated to a specific segment (December 31, 2017: 161 in the Proprietary Development segment, 105 employees in the Partnered Discovery segment and 60 employees were unallocated; December 31, 2016: 135 in the Proprietary Development segment, 156 employees in the Partnered Discovery segment and 54 employees were unallocated). Costs for defined-contribution plans amounted to € 0.7 million in 2018 (2017: € 0.6 million; 2016: € 0.5 million).

## 4.3 OTHER INCOME AND EXPENSES, FINANCE INCOME AND FINANCE EXPENSES

| in 000' € | 2018 | 2017 | 2016 |
|---|---|---|---|
| Grant Income | 153 | 157 | 327 |
| Gain on Foreign Exchange | 677 | 485 | 192 |
| Gain from recognition of previously unrecognized intangible assets | 350 | 0 | 0 |
| Reversal of Impairment for Accounts Receivable Previously Deemed Impaired | 0 | 76 | 15 |
| Miscellaneous Income | 465 | 402 | 175 |
| **Other Income** | **1,645** | **1,120** | **709** |
| Loss on Foreign Exchange | (457) | (844) | (400) |
| Impairment of Other Receivables | 0 | 0 | (7) |
| Miscellaneous Expenses | (232) | (827) | (147) |
| **Other Expenses** | **(689)** | **(1,671)** | **(554)** |
| Gain on Financial Assets at Fair Value through Profit or Loss (2017 and 2016: Gain on Available-for-sale Financial Assets and Bonds) | 5 | 35 | 294 |
| Interest Income on Other Financial Assets at Amortized Cost | 91 | 236 | 1,017 |
| Gain on Derivatives | 322 | 441 | 74 |
| **Finance Income** | **418** | **712** | **1,385** |
| Loss on Financial Assets at Fair Value through Profit or Loss (2017 and 2016: Loss on Available-for-sale Financial Assets and Bonds) | (85) | (120) | (1,209) |
| Interest Expenses for Other Financial Assets at Amortized Cost | (53) | (374) | (20) |
| Interest Expenses for Financial Liabilites at Amortized Cost | (126) | 0 | 0 |
| Loss on Derivatives | (444) | (1,360) | (44) |
| **Bank Fees** | **(46)** | **(41)** | **(35)** |
| **Finance Expenses** | **(754)** | **(1,895)** | **(1,308)** |

The following net gains or losses resulted from financial instruments in the fiscal year.

| in 000' € | 2018 | 2017 | 2016 |
|---|---|---|---|
| Financial Assets at Fair Value through Profit or Loss | (202) | (919) | 30 |
| Other Financial Assets at Amortized Cost | (978) | 0 | 0 |
| Shares at Fair Value through Other Comprehensive Income | (127) | 0 | 0 |
| Financial Liabilities at Amortized Cost | (126) | 0 | 0 |
| Available-for-sale Financial Assets | 0 | (190) | (1,069) |
| Financial Assets classified as Loans and Receivables | 0 | (164) | 918 |
| **Total** | **(1,433)** | **(1,273)** | **(121)** |

Net gains or losses mainly comprised gains and losses on derivatives, interest income and expenses as well as valuation effects from changes in fair value.

## 4.4 INCOME TAX EXPENSES/BENEFIT

MorphoSys AG is subject to corporate taxes, the solidarity surcharge and trade taxes. The Company's corporate tax rate in 2018 remained unchanged (15.0%) as did the solidarity surcharge (5.5%) and the effective trade tax rate (10.85%).

MorphoSys US Inc. is subject to Federal Corporate Income Tax (21%) and the State Income Tax for Princeton, New Jersey (9%).

The Dutch entities Lanthio Pharma B.V. and LanthioPep B.V. are subject to an income tax rate of 25% on annual income exceeding € 200,000; annual income below € 200,000 is subject to a tax rate of 20%. Depending on

certain conditions, a tax rate of previously 5 % and from January 1, 2018, 7 % may be applicable under what is known as the "Innovation Box."

Income taxes consist of the items listed below.

| in 000' € | 2018 | 2017 | 2016 |
|---|---|---|---|
| Current Tax Income / (Expense) (Thereof Regarding Prior Years: k€ 1; 2017: k€ 171; 2016: k€ (60)) | 1 | (534) | 45 |
| Deferred Tax Benefit / (Expenses) | 4,304 | (502) | (564) |
| **Total Income Tax Benefit / (Expenses)** | **4,305** | **(1,036)** | **(519)** |
| Total Amount of Current Taxes Resulting from Entries Directly Recognized in Other Comprehensive Income | 0 | 0 | (82) |
| Total Amount of Deferred Taxes Resulting from Entries Directly Recognized in Other Comprehensive Income | 0 | 0 | (112) |
| **Total Amount of Tax Effects Resulting from Entries Directly Recognized in Equity or Other Comprehensive Income** | **0** | **0** | **(194)** |

The deferred tax benefit in 2018 mainly resulted from the impairment on intangible assets within the cash-generating unit, the Lanthio Group (€ 3.8 million). Further information can be found in Item 5.7.5 in the Notes.

The following table reconciles the expected income tax expense to the actual income tax expense as presented in the consolidated financial statements. The combined income tax rate of 26.675% in the 2018 financial year (2017: 26.675%) was applied to profit before taxes to calculate the statutory income tax expense. This rate consisted of corporate income tax of 15.0%, a solidarity surcharge of 5.5% on the corporate tax and an average trade tax of 10.85% applicable to the Group.

| in 000' € | 2018 | 2017 | 2016 |
|---|---|---|---|
| **Earnings Before Income Taxes** | **(60,477)** | **(68,790)** | **(59,864)** |
| Expected Tax Rate | 26,675% | 26,675% | 26,675% |
| **Expected Income Tax** | **16,132** | **18,350** | **15,969** |
| **Tax Effects Resulting from:** | | | |
| Share-based Payment | (363) | (290) | 5 |
| Non-Tax-Deductible Items | (126) | (134) | (135) |
| Differences in Profit or Loss-Neutral Adjustments | 3,716 | 37 | 812 |
| Non-Recognition of Deferred Tax Assets on Temporary Differences | (349) | 3,256 | (3,766) |
| Non-Recognition of Deferred Tax Assets on Current Year Tax Losses | (14,497) | (22,007) | (13,354) |
| Tax Rate Differences to Local Tax Rates | (268) | (71) | (46) |
| Prior Year Taxes | 1 | (171) | 0 |
| Other Effects | 59 | (6) | (4) |
| **Actual Income Tax** | **4,305** | **(1,036)** | **(519)** |

The differences in profit or loss-neutral adjustments mainly contained the permanent differences of the issuance costs from the Nasdaq IPO.

As of December 31, 2018, neither deferred tax assets on tax loss carryforwards in the amount of € 51.0 million (December 31, 2017: € 37.4 million) nor deferred tax assets on temporary differences in the amount of € 0.7 million (December 31, 2017: € 0.5 million) were recognized by MorphoSys Group due to losses to be incurred as a result of continued substantial investments in proprietary product development and related business development.

Deferred tax assets and deferred tax liabilities are composed as follows.

| in 000's €, as of December 31 | Deferred Tax Asset 2018 | Deferred Tax Asset 2017 | Deferred Tax Liability 2018 | Deferred Tax Liability 2017 |
|---|---|---|---|---|
| Intangible Assets | 0 | 0 | 4,317 | 8,297 |
| Receivables and Other Assets | 319 | 0 | 0 | 0 |
| Prepaid Expenses and Deferred Charges | 0 | 0 | 0 | 3 |
| Other Provisions | 278 | 253 | 0 | 0 |
| Other Liabilities | 213 | 236 | 0 | 0 |
| **Total** | **810** | **489** | **4,317** | **8,300** |

| | Changes in Deferred Taxes in 2018 | |
|---|---|---|
| in 000's €, as of December 31 | Recognized in Profit or Loss Income / (Expense) | Recognized in Other Comprehensive Income |
| Intangible Assets | 3,980 | 0 |
| Receivables and Other Assets | 319 | 0 |
| Prepaid Expenses and Deferred Charges | 3 | 0 |
| Other Provisions | 25 | 0 |
| Other Liabilities | (23) | 0 |
| **Total** | **4,304** | **0** |

As of December 31, 2018, temporary differences of € 1.0 million (December 31, 2017: € 0.2 million) existed in connection with investments in subsidiaries (known as outside basis differences) for which no deferred tax assets were recognized (2017: no deferred tax liabilities).

## 4.5 EARNINGS PER SHARE

Earnings per share are computed by dividing the 2018 consolidated net loss of € 56,172,121 (2017: consolidated net loss of € 69,826,469; 2016: consolidated net loss of € 60,382,776) by the weighted-average number of ordinary shares outstanding during the respective year (2018: 31,338,948; 2017: 28,947,566; 2016: 26,443,415).

The table below shows the calculation of the weighted-average number of ordinary shares.

| | 2018 | 2017 |
|---|---|---|
| **Shares Issued on January 1** | **29,420,785** | **29,159,770** |
| Effect of Treasury Shares Held on January 1 | (319,678) | (396,010) |
| Effect of Share Issuance | 2,208,146 | 0 |
| Effect of Transfer of Treasury Stock to Members of the Management Board | 0 | 7,759 |
| Effect of Transfer of Treasury Stock / Shares Issued in January | 278 | 0 |
| Effect of Transfer of Treasury Stock / Shares Issued in February | 0 | 0 |
| Effect of Transfer of Treasury Stock / Shares Issued in March | 0 | 0 |
| Effect of Transfer of Treasury Stock / Shares Issued in April | 1,863 | 154,250 |
| Effect of Transfer of Treasury Stock / Shares Issued in May | 4,128 | 3,778 |
| Effect of Transfer of Treasury Stock / Shares Issued in June | 756 | 1,094 |
| Effect of Transfer of Treasury Stock / Shares Issued in July | 1,874 | 2,038 |
| Effect of Transfer of Treasury Stock / Shares Issued in August | 17,754 | 2,669 |
| Effect of Transfer of Treasury Stock / Shares Issued in September | 2,818 | 3,976 |
| Effect of Transfer of Treasury Stock / Shares Issued in October | 76 | 2,566 |
| Effect of Transfer of Treasury Stock / Shares Issued in November | 85 | 5,549 |
| Effect of Transfer of Treasury Stock / Shares Issued in December | 63 | 127 |
| **Weighted-average Number of Shares of Common Stock** | **31,338,948** | **28,947,566** |

In 2018 and 2017, diluted earnings per share equaled basic earnings per share. The effect of 52,930 potentially dilutive shares in 2018 (2017: 87,904 dilutive shares; 2016: 99,764 dilutive shares) resulting from stock options granted to the Management Board, the Senior Management Group and employees of the Company who are not members of the Senior Management Group, has been excluded from the diluted earnings per share because it would result in a decrease in the loss per share and is therefore not to be treated as dilutive.

## 5 Notes to the Assets of the Balance Sheet

### 5.1 CASH AND CASH EQUIVALENTS

| in 000' € | 12/31/2018 | 12/31/2017 |
|---|---|---|
| Bank Balances and Cash in Hand | 45,476 | 76,589 |
| Impairment | (16) | 0 |
| **Cash and Cash Equivalents** | **45,460** | **76,589** |

Restricted cash of € 0.7 million mainly consisted of rent deposits (2017: € 1.1 million). The presentation of the development of the expected twelve-month loss for cash and cash equivalents to be recognized under IFRS 9 can be found in Item 2.3.1 of the Notes.

### 5.2 FINANCIAL ASSETS AT FAIR VALUE, WITH CHANGES RECOGNIZED IN PROFIT OR LOSS AND OTHER FINANCIAL INCOME AT AMORTIZED COSTS

| in 000' € | Maturity | Cost | Gains | Gross Unrealized Losses | Market Value |
|---|---|---|---|---|---|
| **December 31, 2018** | | | | | |
| Money Market Funds | daily | 44,718 | 0 | (137) | 44,581 |
| **Total** | | | | | **44,581** |
| **December 31, 2017** | | | | | |
| Money Market Funds | daily | 86,644 | 0 | (106) | 86,538 |
| **Total** | | | | | **86,538** |

As of January 1, 2019, realized and unrealized gains and losses on money market funds held or sold were recognized in the finance result in profit or loss in accordance with IFRS 9. The sale of financial assets in 2018 resulted in net losses of less than € 0.1 million. In 2017, in accordance with IAS 39, the Group recognized a net gain of less than € 0.1 million in profit or loss resulting from the sale of financial assets previously recognized in equity (2016: net gain of € 0.3 million).

| in 000' € | Maturity | Cost | Unrealized Interest Gain | Impairment | Carrying amount |
|---|---|---|---|---|---|
| **December 31, 2018** | | | | | |
| Term Deposits, Current Portion | 4 - 12 Months | 219,720 | 2 | (744) | 218,978 |
| Commercial Papers | 4 - 12 Months | 50,000 | 0 | (55) | 49,945 |
| Term Deposits, Net of Current Portion | More than 12 Months | 96,090 | 12 | (353) | 95,749 |
| Total | | | | | **364,672** |
| **December 31, 2017** | | | | | |
| Term Deposits, Current Portion | 4 - 12 Months | 149,000 | 59 | 0 | 149,059 |
| **Total** | | | | | **149,059** |

In 2018, current and non-current financial assets were categorized as "at amortized cost" in accordance with IFRS 9 "Financial Instruments", and in 2017 as "loans and receivables" in accordance with IAS 39 "Financial Instruments". These assets mainly consisted of term deposits with fixed or variable interest rates as well as corporate bonds without interest, in which the nominal value invested is credited at their maturity. The increase in financial assets resulted mainly from the capital increases executed in April 2018 in connection with the IPO on the Nasdaq.

Interest income from financial assets "at amortized cost" in 2018 amounted to € 0.1 million in 2018 (2017: € 0.2 million from financial assets "loans and receivables"; 2016: € 0.9 million from financial assets "loans and receivables") and were recorded in the finance result.

The risk associated with these financial instruments primarily resulted from bank credit risks. The presentation of the development of the expected twelve-month loss and the lifetime expected credit loss for term deposits and commercial papers which must be recognized under IFRS 9 can be found in Item 2.3.1 of the Notes.

Further information on the accounting for financial assets is provided in Item 2.8.1 in the Notes.

## 5.3 ACCOUNTS RECEIVABLE

All accounts receivable are non-interest bearing, and generally have payment terms of between 30 and 45 days. As of December 31, 2018 and December 31, 2017, accounts receivable included unbilled receivables amounting to € 14.1 million and € 5.3 million, respectively. Unbilled receivables increased mainly due to unbilled amounts related to royalties and the provision of services in connection with the transfer of projects to customers.

The presentation of the development of the risk provisions to be recognized in accordance with IFRS 9 in the 2018 financial year for accounts receivable using the simplified impairment model can be found in Item 2.3.1 of the Notes.

Based on the Management Board's assessment, no net loss for allowances for doubtful receivables was recognized in profit or loss in 2017.

## 5.4 OTHER RECEIVABLES

Other receivables as of December 31, 2018, mainly consisted of receivables from unrealized gross gains on forward rate agreements in the amount of € 0.1 million (December 31, 2017: € 0.3 million unrealized gross loss, included under provisions for onerous contracts. This can be found in Item 6.2 of the Notes.). The forward rate agreements were classified as financial assets at fair value through profit or loss in accordance with IFRS 9.

As of December 31, 2018 and December 31, 2017, there were no impairments recognized for other receivables.

## 5.5 INCOME TAX RECEIVABLES, INVENTORIES, PREPAID EXPENSES AND OTHER CURRENT ASSETS

As of December 31, 2018 income tax receivables amounted to € 0.2 million (December 31, 2017: € 0.7 million) and consisted of receivables from capital gain taxes withheld and income taxes for prior years.

Inventories amounting to € 0.2 million as of December 31, 2018 (December 31, 2017: € 0.3 million) were stored at the Planegg location and consisted of raw materials and supplies. As in the previous year, there were no inventories recognized at fair value less selling costs as of the reporting date.

As of December 31, 2018, prepaid expenses and other current assets mainly consisted of combination compounds in the amount of € 5.4 million (December 31, 2017: € 11.2 million), receivables towards tax authorities from

input tax surplus of € 2.7 million (December 31, 2017: € 2.4 million), upfront fees for external laboratory services of € 1.9 million (December 31, 2017: € 0.6 million), upfront fees for sublicenses of € 0.4 million (December 31, 2017: € 0.4 million), restricted cash for rent deposits of € 0.0 million (December 31, 2017: € 0.4 million) and other prepayments amounting to € 1.3 million (December 31, 2017: € 1.1 million). An impairment of € 4.8 million was recognized on combination compounds in 2018.

## 5.6 PROPERTY, PLANT AND EQUIPMENT

| in 000' € | Office and Laboratory Equipment | Furniture and Fixtures | Total |
|---|---|---|---|
| Cost | | | |
| **January 1, 2018** | **17,335** | **2,501** | **19,836** |
| Additions | 1,780 | 41 | 1,821 |
| Disposals | (1,457) | (1,603) | (3,060) |
| **31. Dezember 2018** | **17,658** | **939** | **18,597** |
| Accumulated Depreciation and Impairment | | | |
| **January 1, 2018** | **14,490** | **1,820** | **16,310** |
| Depreciation Charge for the Year | 1,723 | 89 | 1,812 |
| Disposals | (1,455) | (1,601) | (3,056) |
| **December 31, 2018** | **14,758** | **308** | **15,066** |
| Carrying Amount | | | |
| **January 1, 2018** | **2,845** | **681** | **3,526** |
| **December 31, 2018** | **2,900** | **631** | **3,531** |
| Cost | | | |
| **January 1, 2017** | **16,658** | **2,389** | **19,047** |
| Additions | 1,205 | 112 | 1,317 |
| Disposals | (528) | 0 | (528) |
| **December 31, 2017** | **17,335** | **2,501** | **19,836** |
| Accumulated Depreciation and Impairment | | | |
| **January 1, 2017** | **13,120** | **1,738** | **14,858** |
| Depreciation Charge for the Year | 1,887 | 82 | 1,969 |
| Impairment | 0 | 0 | 0 |
| Disposals | (517) | 0 | (517) |
| **December 31, 2017** | **14,490** | **1,820** | **16,310** |
| Carrying Amount | | | |
| **January 1, 2017** | **3,538** | **651** | **4,189** |
| **December 31, 2017** | **2,845** | **681** | **3,526** |

No impairment losses on property, plant and equipment were recognized in the 2018, 2017 and 2016 financial years.

No borrowing costs were capitalized during the reporting period, and there were neither restrictions on retention of title nor property, plant and equipment pledged as security for liabilities. There were no material contractual commitments for the purchase of property, plant and equipment as of the reporting date.

Depreciation is included in the following line items of profit or loss.

| in 000' € | 2018 | 2017 | 2016 |
|---|---|---|---|
| Research and Development | 1,398 | 1,672 | 1,518 |
| Selling | 87 | 0 | 0 |
| General and Administrative | 327 | 297 | 268 |
| Total | **1,812** | **1,969** | **1,786** |

## 5.7 INTANGIBLE ASSETS

| in 000' € | Patents | License Rights | In-process R&D Programs | Software | Goodwill | Total |
|---|---|---|---|---|---|---|
| Cost | | | | | | |
| **January 1, 2018** | **16,995** | **23,896** | **52,159** | **5,853** | **11,041** | **109,944** |
| Additions | 590 | 0 | 0 | 55 | 0 | 645 |
| Disposals | 0 | 0 | 0 | (264) | 0 | (264) |
| **December 31, 2018** | **17,585** | **23,896** | **52,159** | **5,644** | **11,041** | **110,325** |
| Accumulated Amortization and Impairment | | | | | | |
| **January 1, 2018** | **12,326** | **20,897** | **0** | **5,198** | **3,676** | **42,097** |
| Amortization Charge for the Year | 1,320 | 112 | 0 | 506 | 0 | 1,938 |
| Impairment | 0 | 360 | 15,140 | 0 | 3,689 | 19,189 |
| Disposals | 0 | 0 | 0 | (264) | 0 | (264) |
| **December 31, 2018** | **13,646** | **21,369** | **15,140** | **5,440** | **7,365** | **62,960** |
| Carrying Amount | | | | | | |
| **January 1, 2018** | **4,669** | **2,999** | **52,159** | **655** | **7,365** | **67,847** |
| **December 31, 2018** | **3,939** | **2,527** | **37,019** | **204** | **3,676** | **47,365** |
| Cost | | | | | | |
| **January 1, 2017** | **16,419** | **23,896** | **60,960** | **5,800** | **11,041** | **118,116** |
| Additions | 640 | 0 | 11,140 | 53 | 0 | 11,833 |
| Disposals | (64) | 0 | (19,941) | 0 | 0 | (20,005) |
| **December 31, 2017** | **16,995** | **23,896** | **52,159** | **5,853** | **11,041** | **109,944** |
| Accumulated Amortization and Impairment | | | | | | |
| **January 1, 2017** | **11,096** | **20,749** | **10,141** | **4,515** | **3,676** | **50,177** |
| Amortization Charge for the Year | 1,230 | 148 | 0 | 683 | 0 | 2,061 |
| Impairment | 64 | 0 | 9,800 | 0 | 0 | 9,864 |
| Disposals | (64) | 0 | (19,941) | 0 | 0 | (20,005) |
| **December 31, 2017** | **12,326** | **20,897** | **0** | **5,198** | **3,676** | **42,097** |
| Carrying Amount | | | | | | |
| **January 1, 2017** | **5,323** | **3,147** | **50,819** | **1,285** | **7,365** | **67,939** |
| **December 31, 2017** | **4,669** | **2,999** | **52,159** | **655** | **7,365** | **67,847** |

Impairment losses of € 0.4 million were recognized on licenses in the 2018 financial year. In the 2017 financial year, € 0.1 million of impairment losses were recognized on patents and licenses. No impairment on patents and licenses was recognized in the 2016 financial year.

As of December 31, 2018, in-process research and development programs were subject to an impairment test as required by IAS 36. This test indicated a need for impairment. Further details on the impairment of in-process research and development programs and goodwill can be found in Items 5.7.3 and 5.7.5 in the Notes.

The carrying amount of intangible assets pledged as security amounts to € 13.1 million and relates to a government grant in the amount of € 1.5 million.

Amortization is included in the following line items of profit or loss.

| in 000' € | 2018 | 2017 | 2016 |
|---|---|---|---|
| Research and Development | 1,822 | 1,958 | 1,872 |
| Research and Development (Write-off) | 19,189 | 9,864 | 10,141 |
| Selling | 25 | 0 | 0 |
| General and Administrative | 91 | 103 | 106 |
| **Total** | **21,127** | **11,925** | **12,119** |

### 5.7.1 PATENTS

In the 2018 financial year, the carrying amount of patents declined by € 0.8 million from € 4.7 million to € 3.9 million. This was the result of additions amounting to € 0.6 million for patent applications, particularly for proprietary programs and technologies, which were offset by straight-line amortization of € 1.3 million.

### 5.7.2 LICENSES

In the 2018 financial year, the carrying amount of licenses declined by € 0.5 million from € 3.0 million to € 2.5 million as a result of scheduled and unscheduled amortization.

### 5.7.3 IN-PROCESS R&D PROGRAMS

The carrying amount of in-process R&D programs decreased in 2018 by € 15.1 million to € 37.0 million. This was due to impairments in a total amount of € 15.1 million. These included € 1.7 million in the second quarter of 2018 and € 13.4 million in the fourth quarter of 2018 (see section Lanthio Group in Item 5.7.5 of these Notes).

As of December 31, 2018, this balance sheet item contained capitalized upfront payments from the in-licensing of one compound for the Proprietary Development segment as well as subsequent milestone payments for this compound that were paid at a later point in time. This line item also included one compound resulting from an acquisition (see Item 5.7.5 in the Notes).

#### MOR208

As an intangible asset with indefinite useful life (no foreseeable limit to the period over which this compound is expected to generate cash flows) and a carrying amount of € 23.9 million, MOR208 was subject to an annual impairment test on September 30, 2018, as required by IAS 36. The recoverable amount of the MOR208 cash-generating unit was determined on the basis of value-in-use calculations, which concluded that the recoverable amount of the cash-generating unit exceeded its carrying amount. The cash flow forecasts took into account expected cash inflows from the potential commercialization of MOR208, the cash outflows for anticipated

research and development, and the costs for MOR208's commercialization. The cash flow forecasts are based on the period of patent protection for MOR208. For this reason, a planning horizon of approximately 20 years is considered appropriate for the value-in-use calculation. The values of the underlying assumptions were determined using both internal (past experience) and external sources of information (market information). Based on the updated cash flow forecast, the value-in-use was determined as follows: A beta factor of 1.2 (2017: 1.2) and WACC before taxes of 10.0% (2017: 9.4%). A detailed sensitivity analysis was performed for the discount rate. A sensitivity analysis for changes in the cash flows was not performed since the cash flows from research and development and the commercialization of the compound have already been probability-adjusted in the value-in-use calculations so as to reflect the probabilities of success in phases of clinical trials. The analysis did not reveal any need for impairment. The values ascribed to the assumptions correspond to the Management Board's forecasts for future development and are based on internal planning scenarios as well as external sources of information. No indicators of impairment were identified at December 31, 2018.

### 5.7.4 SOFTWARE

In the 2018 financial year, additions to this line item totaled € 0.1 million. The carrying amount decreased by € 0.5 million from € 0.7 million in 2017 to € 0.2 million in 2018. Additions were offset by amortization of € 0.6 million.

### 5.7.5 GOODWILL

The annual goodwill impairment test was performed on September 30, 2018.

#### SLONOMICS TECHNOLOGY

As of September 30, 2018, goodwill of € 3.7 million from the 2010 acquisition of Sloning BioTechnology GmbH was subject to an impairment test as required by IAS 36. The recoverable amount of the cash-generating unit Slonomics technology, which is part of the Partnered Discovery segment, was determined on the basis of value-in-use calculations. The calculation showed that the recoverable amount was higher than the carrying amount of the cash-generating unit. The cash flow forecasts took into account the payments expected under existing contracts as well as the future free cash flows from the contribution of the Slonomics technology to partnered programs and was offset by expected personnel and administrative expenses. Cash flow forecasts are based on a period of ten years because the Management Board believes that commercialization through licensing agreements, upfront payments, milestone payments, funded development services and royalties is only feasible by means of medium- to long-term contracts. For this reason, a planning horizon of ten years is considered appropriate for the value-in-use calculation. The cash flow forecasts are largely based on the assumption that the Slonomics technology is very beneficial for existing customers. The values of the underlying assumptions were determined using both internal (past experience) and external sources of information (market information). Based on the updated ten-year cash flow forecast, the value-in-use was determined as follows: A beta factor of 1.2 (2017: 1.2), WACC before taxes of 9.6% (2017: 10.6%) and a perpetual growth rate of 1% (2017: 1%). A detailed sensitivity analysis was performed for the growth rate and the discount rate for calculating value-in-use. The sensitivity analysis took into account the change in one assumption, with the remaining assumptions remaining unchanged from the original calculation. A sensitivity analysis for changes in the cash flows has not been performed since the cash flows have already been probability-adjusted in the value-in-use calculations so as to reflect the probabilities of success in phases of clinical trials. This analysis did not reveal any need for impairment. The values ascribed to the assumptions correspond to the Management Board's forecasts for future development and are based on internal planning scenarios as well as external sources of information.

#### LANTHIO GROUP

As a result of a regular review of the Company's proprietary portfolio it was decided in the second quarter of 2018 to discontinue a project in the research stage of the cash-generating unit, the Lanthio Group, in the

Proprietary Development operating segment. Accordingly, an impairment of € 1.7 million was recorded in research and development expenses as of June 30, 2018.

On September 30, 2018, goodwill of € 3.7 million and the related intangible asset with indefinite useful life (no foreseeable limit to the period over which MOR208 is expected to generate cash flows) of € 26.5 million from the Lanthio Group acquisition were subject to an annual impairment test. This did not result in an impairment loss as of September 30, 2018.

In the fourth quarter of 2018, updated study data led to the need for further studies, and the existing development plan was adjusted accordingly. This resulted in the expectation of a delayed market entry and a delay in the occurrence of future cash flows compared to previous assumptions. The cash flow forecasts included planned cash inflows from the potential sale of compounds based on lanthipeptides expected to achieve market approval. These cash inflows were offset by expected operating expenses for compound development and clinical trials as well as sales and administrative expenses. The duration and likelihood of individual stages of the study were taken into consideration. Cash flow forecasts are based on a period of 30 years as the Management Board believes that after the successful approval of compounds, the drugs that follow can generate free cash flows within that period of time. The recoverable amount resulting from this adjusted cash flow forecast of the cash-generating unit Lanthio Group, which is part of the Proprietary Development segment, was determined on the basis of value-in-use calculations and amounted to € 13.3 million, i.e., the recoverable amount of the cash-generating unit was lower than its carrying amount. This resulted in an impairment of € 17.1 million, consisting of € 3.7 million attributed to goodwill and € 13.4 million to in-process R&D programs. After impairment, the carrying amount of in-process R&D programs amounted to € 13.1 million. The values of the underlying assumptions were determined using both internal (past experience) and external sources of information (market information). On the basis of the updated cash flow forecast, the value-in-use was determined as follows: A beta factor of 1.2 (2017: 1.2) and WACC before taxes of 11.5% (2017: 12.1%). A detailed sensitivity analysis was performed with regard to the discount rate. A sensitivity analysis for changes in the cash flows has not been performed since the cash flows had already been probability-adjusted in the value-in-use calculations so as to reflect the probabilities of success in phases of clinical trials. This analysis did not reveal the need for any additional impairment. The values ascribed to the assumptions correspond to the Management Board's forecasts for future development and are based on internal planning scenarios as well as external sources of information.

No indicators for additional impairments were identified at December 31, 2018.

## 5.8 INVESTMENTS AT FAIR VALUE, WITH CHANGES RECOGNIZED IN OTHER COMPREHENSIVE INCOME

This line item consisted of an investment in adivo GmbH, Martinsried, amounting to 19.9%, which was purchased by MorphoSys AG in July 2018 in the context of start-up financing. MorphoSys paid a cash contribution of € 9,458 and a contribution in kind of € 350,000, which consisted of the adivo brand and a license to a fully synthetic canine-based antibody library.

The change in investments in the 2018 financial year is shown below.

| in 000' € | 01/01/2018 | Additions | Disposals | Through Other Comprehensive Income | Through Profit or Loss | 12/31/2018 |
|---|---|---|---|---|---|---|
| Shareholdings | 0 | 359 | 0 | (127) | 0 | 232 |

As of December 31, 2018, the fair value of the investment was measured at € 0.2 million. The decrease of € 0.1 million was recognized directly in equity.

The significant unobservable input parameters used in the measurement were corporate planning assumptions, the probability-weighted estimate of cash flows and the discount rate. From the information currently available, a material change in corporate planning is not considered likely and therefore the cash flow forecasts used are

considered as a suitable basis for determining the fair value. A change in the pre-tax WACC of +/- 1.0% would cause a € 0.1 million lower or € 0.1 million higher amount of equity. A sensitivity analysis for changes in cash flows was not performed because the cash flows have already been probability-adjusted in the fair value calculation to reflect the probabilities of success in the various stages of development. There are no significant relationships between the significant unobservable input parameters.

### 5.9 PREPAID EXPENSES AND OTHER ASSETS, NET OF CURRENT PORTION

This line item included the non-current portion of prepaid expenses and other assets and mainly resulted from prepaid rent for the premises in Semmelweisstraße 7 in Planegg. The Group classified certain line items in other assets as "restricted cash" that are not available for use in the Group's operations (see Items 2.8.1 and 5.1 in the Notes). As of December 31, 2018, the Group held long-term restricted cash in the amount of € 0.7 million for issued rent deposits (December 31, 2017: € 0.7 million) and of € 0.1 million for convertible bonds granted to employees (December 31, 2017: € 0.1 million).

The breakdown of this line item is shown in the table below.

| in 000' € | 12/31/2018 | 12/31/2017 |
|---|---|---|
| Prepaid Expenses, Net of Current Portion | 2,199 | 2,546 |
| Other Current Assets | 783 | 798 |
| **Total** | **2,982** | **3,344** |

## 6 Notes to Equity and Liabilities of the Balance Sheet

### 6.1 ACCOUNTS PAYABLE AND ACCRUALS

Accounts payable and licenses payable were non-interest-bearing and, under normal circumstances, have payment terms of no more than 30 days.

Accounts payable are listed in the table below.

| in 000' € | 12/31/2018 | 12/31/2017 |
|---|---|---|
| Trade Accounts Payable | 7,215 | 4,622 |
| Licenses Payable | 184 | 196 |
| Accruals | 36,530 | 36,408 |
| Other Liabilities | 832 | 3,586 |
| **Total** | **44,761** | **44,812** |

Accruals consisted mainly of accruals for external laboratory services in the amount of € 26.2 million (December 31, 2017: € 26.3 million), accrued personnel expenses for payments to employees and management amounting to € 5.1 million (December 31, 2017: € 5.0 million), provisions for outstanding invoices in the amount of € 2.8 million (December 31, 2017: € 2.6 million), expenses for legal advice in the amount of € 1.5 million (December 31, 2017: € 2.1 million), audit fees and other audit-related costs in the amount of € 0.5 million (December 31, 2017: € 0.2 million) and license payments in the amount of € 0.1 million (December 31, 2017: € 0.2 million).

At the Company's Annual General Meeting in May 2018, the PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft (PwC GmbH), Munich, was appointed as the auditor. The Supervisory Board engaged the PwC GmbH to audit the financial statements.

In the 2018 financial year, PwC GmbH received a total fee from MorphoSys in the amount of € 1,274,165, including audit fees in the amount of € 468,803, audit-related fees of € 516,408, as well as all other fees for other services in the amount of € 288,954. PwC GmbH did not provide tax services in 2018.

## 6.2 TAX PROVISIONS AND OTHER PROVISIONS

As of December 31, 2018, the Group recorded tax provisions and other provisions of € 0.4 million (2017: € 1.5 million).

Tax provisions mainly consisted of income tax expenses and other provisions mainly included expenses for personnel recruitment.

As of December 31, 2018, tax provisions and other provisions were uncertain in their amount and are expected to be utilized in 2019.

The table below shows the development of tax provisions and current and non-current other provisions in the 2018 financial year.

| in 000' € | 01/01/2018 | Additions | Utilized | Released | 12/31/2018 |
|---|---|---|---|---|---|
| Tax Provisions | 315 | 0 | 72 | 35 | 208 |
| Other Provisions | 1,209 | 773 | 1,192 | 606 | 184 |
| **Total** | **1,524** | **773** | **1,264** | **641** | **392** |

## 6.3 CONTRACT LIABILITIES

Contract liabilities related to transaction prices paid by customers, which were allocated to the performance obligations not fulfilled as of December 31, 2018. It is expected that current contract liabilities will be realized in the 2019 financial year and non-current contract liabilities mainly in the 2020 financial year. The changes in this item are set out below.

| in 000' € | 2018 | 2017 |
|---|---|---|
| **Opening Balance before Application of IFRS 15** | **1,695** | **2,905** |
| Application of IFRS 15 | (1,135) | 0 |
| **Opening Balance after Application of IFRS 15** | **560** | **2,905** |
| Prepayments Received in the Fiscal Year | 2,386 | 18,386 |
| Revenues Recognized in the Reporting Period that was included in the Contract Liability at the Beginning of the Period | (306) | 0 |
| Revenues Recognized for Received Prepayments and Services Performed in the Fiscal Year | (1,688) | (19,596) |
| **Closing Balance** | **952** | **1,695** |
| thereof short-term | 794 | 1,389 |
| thereof long-term | 158 | 306 |

## 6.4 OTHER LIABILITIES

Other liabilities exclusively consisted of the deferred amount related to the rent-free period for the building located at Semmelweisstraße 7, Planegg, as agreed in the lease contract. This item is released over the contractually agreed minimum rent period.

The current portion amounting to € 0.1 million of this liability was included in the item accounts payable and accruals.

## 6.5 STOCKHOLDERS' EQUITY

### 6.5.1 COMMON STOCK

As of December 31, 2018, the Company's common stock including treasury stock amounted to € 31,839,572, which represents an increase of € 2,418,787 compared to € 29,420,785 on December 31, 2017. Each share of common stock grants one vote. The increase in common stock resulted from the capital increases carried out in April 2018 following the IPO on the Nasdaq Global Market. The capital increases were made through American Depositary Shares ("ADS"), with each ADS representing 1/4 of a MorphoSys ordinary share. A total of 2,075,000 new shares were issued from Authorized Capital 2017-II on April 18, 2018 followed by 311,250 new shares on April 26, 2018. Common stock also increased by € 32,537 as a result of the exercise of 32,537 convertible bonds that were granted to the Management Board and the Senior Management Group. The weighted-average exercise price of the convertible bonds exercised amounted to € 31.88.

### 6.5.2 AUTHORIZED CAPITAL

Compared to December 31, 2017, the number of authorized ordinary shares increased from 14,579,885 to 14,684,291. This overall change comprised a decline in the number of authorized ordinary shares as a result of the two capital increases from Authorized Capital 2017-II totaling 2,386,250 ordinary shares in April 2018 in the context of the IPO in the United States. At the Annual General Meeting on May 17, 2018, Authorized Capital 2018-I in the amount of € 11,768,314 was created and the remaining Authorized Capital 2017-II in the amount of € 9,277,658 was canceled. Under the terms of Authorized Capital 2018-I, the Management Board, with the Supervisory Board's consent, was authorized to increase the Company's share capital once or several times until April 30, 2023, (inclusive) by a total of € 11,768,314 by issuing up to 11,768,314 new no-par-value bearer shares.

Pursuant to the Company's articles of association, the shareholders may authorize the Management Board to increase the share capital with the consent of the Supervisory Board within a period of five years by issuing shares for a certain total amount, which are referred to as authorized capital (genehmigtes Kapital) and are a concept under German law that enables the Company to issue shares without going through the process of obtaining another shareholders' resolution. The aggregate nominal amount of the authorized capital created by the shareholders may not exceed half of the share capital existing at the time of registration of the authorized capital with the commercial register.

### 6.5.3 CONDITIONAL CAPITAL

The number of ordinary shares of conditional capital compared to December 31, 2017 decreased from 6,491,683 to 6,459,146 shares due to the exercise of 32,537 conversion rights in 2018. The reduction in ordinary shares of conditional capital through the exercise of 32,537 conversion rights was entered in the commercial register in February 2019.

The shareholders may resolve to amend or create conditional capital (Bedingtes Kapital). However, they may do so only to issue conversion or subscription rights to holders of convertible bonds, in preparation for a merger with another company or to issue subscription rights to employees and members of the Management Board of the Company or of an affiliated company by way of a consent or authorization resolution. According to German law, the aggregate nominal amount of the conditional capital created at the shareholders' meeting may not exceed half of the share capital existing at the time of the shareholders' meeting adopting such resolution. The aggregate nominal amount of the conditional capital created for the purpose of granting subscription rights to employees and members of the management of our Company or of an affiliated company may not exceed 10% of the share capital existing at the time of the shareholders' meeting adopting such resolution.

### 6.5.4 TREASURY STOCK

In the years 2018 and 2017, the Group did not repurchase any of its own shares. The composition and development of this line item is listed in the following table.

| | Number of Shares | Value |
|---|---|---|
| As of 12/31/2010 | 79,896 | 9,774 |
| Purchase in 2011 | 84,019 | 1,747,067 |
| As of 12/31/2011 | 163,915 | 1,756,841 |
| Purchase in 2012 | 91,500 | 1,837,552 |
| As of 12/31/2012 | 255,415 | 3,594,393 |
| Purchase in 2013 | 84,475 | 2,823,625 |
| As of 12/31/2013 | 339,890 | 6,418,018 |
| Purchase in 2014 | 111,000 | 7,833,944 |
| As of 12/31/2014 | 450,890 | 14,251,962 |
| Purchase in 2015 | 88,670 | 5,392,931 |
| Transfer in 2015 | (104,890) | (3,816,947) |
| As of 12/31/2015 | 434,670 | 15,827,946 |
| Purchase in 2016 | 52,295 | 2,181,963 |
| Transfer in 2016 | (90,955) | (3,361,697) |
| As of 12/31/2016 | 396,010 | 14,648,212 |
| Transfer in 2017 | (76,332) | (2,821,231) |
| As of 12/31/2017 | 319,678 | 11,826,981 |
| Transfer in 2018 | (38,642) | (1,428,208) |
| As of 12/31/2018 | 281,036 | 10,398,773 |

As of December 31, 2018, the Company held 281,036 shares of treasury stock valued at € 10,398,773, representing a decline of € 1,428,208 compared to December 31, 2017 (319,678 shares; € 11,826,981). The reason for this decline was the transfer of 17,219 shares of treasury stock to the Management Board and Senior Management Group from the 2014 Long-Term Incentive plan (LTI plan) in the amount of € 636,414. The vesting period for this LTI program expired on April 1, 2018 and all beneficiaries had or have the option within six months to receive a total of 17,219 shares.

In May 2018, the Management Board, the Senior Management Group and certain employees of the Company who are not members of the Senior Management Group received a one-time entitlement in a total fixed amount of € 2.1 million. This entitlement was settled in treasury shares of the Company when the option was exercised by the beneficiaries. Beneficiaries were free to choose the exercise day within a vesting period expiring on December 31, 2018. Upon exercise, the fixed amount of the entitlement was divided by the XETRA closing price on the exercise date and the resulting number of treasury shares was transferred to the beneficiary. As of December 31, 2018, a total of 20,105 shares valued at € 2.1 million were transferred as part of this entitlement.

In addition, a total of 1,318 treasury shares in the amount of € 48,713 were transferred to related parties. As a result, the number of MorphoSys shares owned by the Company as of December 31, 2018, was 281,036 (December 31, 2017: 319,678). The repurchased shares may be used for all purposes named in the authorization of the Annual General Meeting on May 23, 2014 and particularly for any existing or future employee participation schemes and/or to finance acquisitions. The shares may also be redeemed.

### 6.5.5 ADDITIONAL PAID-IN CAPITAL

On December 31, 2018, additional paid-in capital amounted to € 619,908,453 (December 31, 2017: € 438,557,857). The total increase of € 181,350,597 resulted mainly from two capital increases in April 2018 with total proceeds of € 176,189,256. The allocation of personnel expenses resulting from share-based payments

amounted to € 5,584,969, and the exercise of convertible bonds totaled an amount of € 1,004,580. There was an offsetting effect from the decline in the reclassification of treasury shares in the context of the allocation of shares under the 2014 performance-based share plan in the amount of € 636,414 and the allocation of treasury shares to related persons in the amount of € 763,076.

### 6.5.6 REVALUATION RESERVE

On December 31, 2018, the revaluation reserve amounted to € 0 (December 31, 2017: € -105,483). The change by € 105,483 resulted from the adoption of the new IFRS 9 standard for financial instruments. Hence, since January 1, 2018, the reporting of this equity position is no longer required.

### 6.5.7 OTHER COMPREHENSIVE INCOME RESERVE

The other comprehensive income reserve is being reported for the first time as of January 1, 2018. On December 31, 2018, this reserve contained changes in the fair value of equity instruments through other comprehensive income in the amount of € 127,458, and currency losses from consolidation of € 83,432. The currency losses from consolidation include exchange differences from the revaluation of foreign currency financial statements of Group companies and differences between the exchange rates used in the balance sheet and profit or loss. As of December 31, 2017, the Group consisted solely of companies with financial statements prepared in euros.

### 6.5.8 ACCUMULATED DEFICIT

The consolidated net loss for the year of € -56,172,121 is reported under accumulated deficit. The first-time adoption of IFRS 9 and IFRS 15 resulted in an adjustment of € -248,000 and € 1,135,014, respectively. Further details can be found in Item 2.1.2 of the Notes. The accumulated deficit being a result of the effects above therefore increased from € -97,375,138 in 2017 to € -152,765,728 in 2018.

## 7 Remuneration System for the Management Board and Employees of the Group

### 7.1 STOCK OPTION PLANS

### 7.1.1 2017 STOCK OPTION PLAN

On April 1, 2017, MorphoSys established a stock option plan (SOP) for the Management Board, the Senior Management Group and selected employees of the Company who are not members of the Senior Management Group (beneficiaries). In accordance with IFRS 2, the program is considered an equity-settled share-based payment and is accounted for accordingly. The grant date was April 1, 2017 and the vesting period/performance period is four years. Each stock option grants up to two subscription rights to shares of the Company. The subscription rights vest each year by 25% within the four-year vesting period, provided that the performance criteria specified for the respective period have been 100% fulfilled. The number of subscription rights vested per year is calculated based on the key performance criteria of the absolute MorphoSys share price performance and the relative MorphoSys share price performance compared to the Nasdaq Biotechnology Index and the TecDAX Index. The performance criteria can be met annually up to a maximum of 200%. If the share price development falls short of the program's performance parameters, the target achievement for that year is 0 %.

The exercise price, derived from the average market price of the Company's shares in the XETRA closing auction on the Frankfurt Stock Exchange from the 30 trading days prior to the issue of the stock options, is € 55.52.

MorphoSys reserves the right to settle the exercise of stock options through newly created shares from Conditional Capital 2016-III, the issuance of treasury shares or in cash. The exercise period is three years after the end of the four-year vesting period/performance period, which is March 31, 2024.

If a member of the Management Board ceases to hold an office at the MorphoSys Group through termination (or the Management Board member terminates the employment contract), resignation, death, injury, disability or the attainment of retirement age (receipt of a standard retirement pension, early-retirement pension or disability pension, as long as the requirements for the disability pension entitlement are met) or under other circumstances subject to the Supervisory Board's discretion, the Management Board member (or the member's heirs) is entitled to a precise daily pro rata amount of subscription rights.

If a member of the Management Board ceases to hold an office at MorphoSys Group for good reason as defined by Section 626 (2) of the German Civil Code (BGB), all unexercised stock options will be forfeited without any entitlement to compensation.

If a change of control occurs during the four-year vesting period, the stock options will become fully vested. In this case, however, the right to exercise the stock options arises only at the end of the four-year vesting period.

As of April 1, 2017, a total of 81,157 stock options had been granted to the beneficiaries, of which 40,319 had been granted to the Management Board (further details can be found in the "Stock Options" table in Note 7.4 "Related Parties"), 37,660 to the Senior Management Group and 3,178 to selected Company employees who do not belong to the Senior Management Group**.** The original number of stock options granted was based on 100% target achievement. Based on the performance criteria that have been met to date, the target achievement is expected to be 125 %. For performance criteria that have not yet been met, 100 % target achievement is assumed. Under this assumption, the total number of subscription rights to be exercised, i.e., the total number of shares to be issued at the end of the four-year holding period/performance period would currently increase to 90,949 shares. The fair value of the stock options on the grant date (April 1, 2017) was € 21.41 per stock option. In the period from the grant date to December 31, 2018, seven beneficiaries left MorphoSys, resulting in the forfeiture of 8,398 stock options. For the calculation of personnel expenses resulting from share-based payment under the 2017 Stock Option Plan, the assumption is that two beneficiaries would leave the Company during the four-year period. This assumption was updated in 2018.

In 2018, personnel expenses from stock options under the Group's 2017 SOP amounted to € 436,154 (2017: € 801,330).

### 7.1.2 2018 STOCK OPTION PLAN

On April 1, 2018, MorphoSys established a stock option plan (SOP) for the Management Board, the Senior Management Group and selected Company employees who are not members of the Senior Management Group (beneficiaries). In accordance with IFRS 2, the program is considered an equity-settled share-based payment and is accounted for accordingly. The grant date was April 1, 2018 and the vesting period/performance period is four years. Each stock option grants up to two subscription rights to shares of the Company. The subscription rights vest each year by 25% within the four-year vesting period, provided that the performance criteria specified for the respective period have been 100% fulfilled. The number of subscription rights vested per year is calculated based on the key performance criteria of the absolute MorphoSys share price performance and the relative MorphoSys share price performance compared to the Nasdaq Biotechnology Index and the TecDAX Index. The program's performance criteria can be met annually up to a maximum of 200%. If the share price development falls short of the performance parameters, the target achievement for that year is 0 %.

The exercise price, derived from the average market price of the Company's shares in the XETRA closing auction on the Frankfurt Stock Exchange from the 30 trading days prior to the issue of the stock options, is € 81.04.

MorphoSys reserves the right to settle the exercise of stock options through either newly created shares from Conditional Capital 2016-III or, alternatively, through the issuance of treasury shares or in cash should the exercise from Conditional Capital 2016-III not be possible. The exercise period is three years after the end of the four-year vesting period/performance period, which is March 31, 2025.

If a member of the Management Board ceases to hold an office at the MorphoSys Group prior to the end of the four-year vesting period/performance period, the Management Board member (or the member's heirs) is entitled to a precise daily pro rata amount of subscription rights.

If a member of the Management Board ceases to hold an office at MorphoSys Group for good reason as defined by Section 626 (2) of the German Civil Code (BGB), all unexercised stock options will be forfeited without any entitlement to compensation.

If a cumulative absence of more than 90 days occurs during the four-year vesting period/performance period, the beneficiary is entitled to a precise daily pro rata amount of subscription rights. Absence is defined as either a continued period of lost work time due to illness or inactivity of a beneficiary or employment relationship without continued pay.

If a change of control occurs during the four-year vesting period, the stock options will become fully vested. In this case, however, the right to exercise the stock options arises only at the end of the four-year vesting period.

As of April 1, 2018, a total of 67,778 stock options had been granted to beneficiaries, of which 29,312 had been granted to the Management Board (further details can be found in the "Stock Options" table in Note 7.4 "Related Parties"), 34,276 to the Senior Management Group and 4,190 to selected Company employees who do not belong to the Senior Management Group. The stated number of stock options granted is based on 100% target achievement. The fair value of the stock options on the grant date (April 1, 2018) was € 30.43 per stock option. In the period from the grant date to December 31, 2018, two beneficiaries left MorphoSys, resulting in the forfeiture of 2,136 stock options. For the calculation of personnel expenses resulting from share-based payment under the 2018 Stock Option Plan, the assumption is that four beneficiaries would leave the Company during the four-year period.

In 2018, personnel expenses from stock options under the Group's 2018 SOP amounted to € 925,635.

The fair value of the stock options from the 2018 and 2017 stock option plans was determined using a Monte Carlo simulation. The expected volatility is based on the development of the share volatility of the last four years. Furthermore, the calculation of fair value equally considered the performance criteria of the absolute and relative performance of MorphoSys shares compared to the development of the Nasdaq Biotech Index and the TecDAX Index. The parameters of each program are listed in the table below.

| | April 2017 Stock Option Plan | April 2018 Stock Option Plan |
|---|---|---|
| Share Price on Grant Date in € | 55.07 | 81.05 |
| Strike Price in € | 55.52 | 81.04 |
| Expected Volatility of the MorphoSys share in % | 37.49 | 35.95 |
| Expected Volatility of the Nasdaq Biotech Index in % | 25.07 | 25.10 |
| Expected Volatility of the TecDAX Index in % | 16.94 | 17.73 |
| Performance Term of Program in Years | 4.0 | 4.0 |
| Dividend Yield in % | n/a | n/a |
| Risk-free Interest Rate in % | between 0.03 and 0.23 | between 0.02 and 0.15 |

## 7.2 CONVERTIBLE BONDS - 2013 PROGRAM

On April 1, 2013, MorphoSys AG granted the Management Board and members of the Senior Management Group (beneficiaries) convertible bonds with a total nominal value of € 225,000, divided into 449,999 no-par-value bearer bonds with equal rights from "Conditional Capital 2008-III". The beneficiaries have the right to convert the bonds into Company shares. Each convertible bond can be exchanged for one of the Company's

no-par-value bearer shares equal to the proportional amount of common stock, which currently stands at € 1. Exercise of the convertible bonds is subject to several conditions, such as the achievement of performance targets, the expiration of vesting periods, the exercisability of the conversion rights, the existence of an employment or service contract that is not under notice and the commencement of the exercise period.

The conversion price amounted to € 31.88 and was derived from the Company's share price in the XETRA closing auction of the Frankfurt Stock Exchange on the trading day preceding the issue of the convertible bonds. The exercise of the conversion rights is admissible since, on at least one trading day during the lifetime of the convertible bonds, the share price of the Company has risen to more than 120% of the price in the XETRA closing auction of the Frankfurt Stock Exchange on the trading day preceding the issue of the convertible bonds.

The following table shows the development of the convertible bond plans for Group employees in the 2018, 2017 and 2016 financial years.

| | Convertible Bonds | Weighted-average Price (€) |
|---|---|---|
| **Outstanding on January 1, 2016** | **449,999** | **31.88** |
| Granted | 0 | 0.00 |
| Exercised | 0 | 0.00 |
| Forfeited | (13,414) | 31.88 |
| Expired | 0 | 0.00 |
| **Outstanding on December 31, 2016** | **436,585** | **31.88** |
| **Outstanding on January 1, 2017** | **436,585** | **31.88** |
| Granted | 0 | 0.00 |
| Exercised | (261,015) | 31.88 |
| Forfeited | 0 | 0.00 |
| Expired | 0 | 0.00 |
| **Outstanding on December 31, 2017** | **175,570** | **31.88** |
| **Outstanding on January 1, 2018** | **175,570** | **31.88** |
| Granted | 0 | 0.00 |
| Exercised | (32,537) | 31.88 |
| Forfeited | 0 | 0.00 |
| Expired | 0 | 0.00 |
| **Outstanding on December 31, 2018** | **143,033** | **31.88** |

From the grant date until December 31, 2018, one beneficiary left MorphoSys and, therefore, 13,414 convertible bonds were forfeited. As of December 31, 2018, the number of vested convertible bonds totaled 143,033 shares (December 31, 2017: 175,570 shares; December 31, 2016: 327,439 shares).

The following overview includes the weighted-average exercise price as well as information on the contract duration of significant groups of convertible bonds as of December 31, 2018.

| Range of Exercise Prices | Number Outstanding | Remaining Contractual Life (in Years) | Weighted-average Exercise Price (€) | Number Exercisable | Weighted-average Exercise Price (€) |
|---|---|---|---|---|---|
| € 25.00 - € 40.00 | 143,033 | 1.25 | 31.88 | 143,033 | 31.88 |
| | **143,033** | **1.25** | **31.88** | **143,033** | **31.88** |

The Group recognized personnel expenses resulting from convertible bonds on a straight-line basis in accordance with IFRS 2 and IAS 32.28. The equity component of the convertible bonds is presented separately under additional paid-in capital. The corresponding amount was recognized as personnel expenses from convertible

bonds. Compensation expenses related to convertible bonds amounted to € 0 in 2018, to € 287.601 in 2017 and to € 40.375 in 2016.

## 7.3 LONG-TERM INCENTIVE PROGRAMS

### 7.3.1 2013 LONG-TERM INCENTIVE PLAN

On April 1, 2013, MorphoSys established a long-term incentive plan (LTI plan) for the Management Board and the Senior Management Group (beneficiaries). The vesting period of this plan expired on April 1, 2017. According to IFRS 2, this program is considered a share-based payment program with settlement in equity instruments and is accounted for accordingly. The LTI plan is a performance-related share plan and is paid out in ordinary shares (performance shares) of MorphoSys AG if predefined key performance criteria are achieved. The key performance criteria are based on the absolute MorphoSys share price performance and the relative MorphoSys share price performance compared to the Nasdaq Biotechnology Index and the TecDAX Index. These criteria are approved annually by the Supervisory Board. The fulfillment of these criteria was set at 200 % for one year, 54 % for one year and 0 % for two years. The Supervisory Board set the "company factor" at 1.57, meaning the number of performance shares to be allocated was scaled by a factor of 1.57. This factor resulted in an adjustment of previously recognized personnel expenses of € 1.0million in the 2017 financial year. Previously, personnel expenses resulting from the 2013 LTI program were recognized based on the assumption of a company factor of 1.0. Based on these terms and the company factor, a total of 61,323 performance shares of MorphoSys AG was transferred to beneficiaries until October 2, 2017 after the expiration of the four-year vesting period. The Management Board received 36,729 performance shares (for further information, please see the tables titled "Shares" and "Performance Shares" in Item 7.4* "Related Parties"), the Senior Management Group received 21,248 performance shares and former members of the Senior Management Group who have since left the Company received 3,346 performance shares.

On October 1, 2013, MorphoSys established another long-term incentive plan (LTI plan) for Senior Management Group members (beneficiaries). The vesting period of this plan expired on October 1, 2017. The terms of this plan were identical to the plan granted as of April 1, 2013. The fulfillment of the performance criteria was set at 200 % for one year, 54.8 % for one year and 0 % for two years. The Supervisory Board set the "company factor" at 1.57, meaning the number of performance shares to be allocated was scaled by a factor of 1.57. This factor resulted in an adjustment of previously recognized personnel expenses of € 0.02 million in the 2017 financial year. Previously, personnel expenses resulting from the 2013 LTI program were recognized based on the assumption of a company factor of 1.0. Based on these terms and the company factor, a total of 548 performance shares of MorphoSys AG was allocated to beneficiaries after the expiration of the four-year vesting period in December 2017. The Senior Management Group received all of the 548 performance shares.

In 2018, personnel expenses from performance shares under the Group's 2013 LTI plan amounted to € 0 (2017: € 1,038,639; 2016: €– 23,571).

### 7.3.2 2014 LONG-TERM INCENTIVE PLAN

On April 1, 2014, MorphoSys established a Long-Term Incentive plan (LTI plan) for the Management Board and the Senior Management Group (beneficiaries). The vesting period of this plan expired on April 1, 2018. According to IFRS 2, this program is considered a share-based payment program with settlement in equity instruments and is accounted for accordingly. The LTI plan is a performance-related share plan and is paid out in ordinary shares (performance shares) of MorphoSys AG if predefined key performance criteria are achieved. The key performance criteria are based on the absolute MorphoSys share price performance and the relative MorphoSys share price performance compared to the Nasdaq Biotechnology Index and the TecDAX Index. These criteria are approved annually by the Supervisory Board. The fulfillment of these criteria was set at 200% for one year, 54% for one year and 0% for two years. The Supervisory Board set the "company factor" at 1.0, meaning the number of performance shares to be allocated was scaled by a factor of 1.0. Based on these terms

and the company factor, a total of 17,219 performance shares of MorphoSys AG was transferred to beneficiaries until October 10, 2018 after the expiration of the four-year vesting period. The Management Board received 6,969 performance shares (for further information, please see the tables titled “Shares” and “Performance Shares” in Item 7.4 “Related Parties”), the Senior Management Group received 8,216 performance shares and former members of the Management Board and Senior Management Group, who have since left the Company, received 2,034 performance shares.

In 2018, personnel expenses resulting from performance shares under the Group’s 2014 LTI plan amounted to € 6.388 (2017: € 55,759; 2016: € 178.518).

### 7.3.3 2015 LONG-TERM INCENTIVE PLAN

On April 1, 2015, MorphoSys established a Long-Term Incentive plan (LTI plan) for the Management Board and the Senior Management Group (beneficiaries). According to IFRS 2, this program is considered a share-based payment program with settlement in equity instruments and is accounted for accordingly. The LTI plan is a performance-related share plan and will be paid out in ordinary shares (performance shares) of MorphoSys AG if predefined key performance criteria are achieved. These criteria are evaluated annually by the Supervisory Board. The grant date was April 1, 2015 and the vesting/performance period is four years. If the predefined key performance criteria for the respective period are fully met, 25% of the performance shares become vested in each year of the four-year vesting period. The number of performance shares vested per year is calculated based on key performance criteria comprising the absolute MorphoSys share price performance and the relative MorphoSys share price performance compared to the Nasdaq Biotechnology Index and the TecDAX Index. The number of performance shares vested each year will be reduced or increased to the extent that the performance criteria of the respective year have been achieved between only 50% and 99.9% (<100%) or the achievement of the performance criteria has exceeded 100% (maximum 200%). If in one year the performance criteria are met by less than 50%, no performance shares will become vested in that year. In any case, the maximum pay-out at the end of the four-year period is limited by a factor determined by the Group, which generally amounts to 1. However, in justified cases, the Supervisory Board may set this factor freely between 0 and 2, for example, if the level of payment is regarded as unreasonable in view of the general development of the Company. The right to receive a certain allocation of performance shares under the LTI plan, however, occurs only at the end of the four-year vesting period.

At the end of the four-year waiting period, there is a six-month exercise period during which the Company can transfer the shares to the beneficiaries. Beneficiaries are free to choose the exercise date within this exercise period.

If the number of repurchased shares is not sufficient for servicing the LTI plan, MorphoSys reserves the right to pay a certain amount of the LTI plan in cash in the amount of the performance shares at the end of the vesting period, provided the cash amount does not exceed 200% of the fair value of the performance shares on the grant date.

If a member of the Management Board ceases to hold an office at MorphoSys Group because of termination (or if the Management Board member terminates the employment contract), resignation, death, injury, disability, by reaching retirement age (receipt of a normal retirement pension, early-retirement pension or disability pension, as long as the requirements for the disability pension entitlement are met) or under other circumstances subject to the Supervisory Board’s discretion, the Management Board member (or the member’s heirs) is entitled to a precise daily pro rata amount of performance shares.

If a member of the Management Board ceases to hold an office at MorphoSys Group for good reason as defined by Section 626 (2) of the German Civil Code (BGB) and/or as defined by Section 84 (3) of the German Stock Corporation Act (AktG), the beneficiary will not be entitled to performance shares.

If a change of control occurs during the four-year vesting period, all performance shares will become fully vested. In this case, the right to receive a certain allocation of performance shares under the LTI plan occurs only at the end of the four-year vesting period.

A total of 40,425 of these shares were allocated to beneficiaries on April 1, 2015 with 21,948 performance shares allocated to the Management Board (further details may be found in the table titled "Performance Shares" in Item 7.4 "Related parties") and 18,477 performance shares to the Senior Management Group. The originalnumber of performance shares allocated was based on the full achievement of the performance criteria and a company factor of 1. Based on the performance criteria that have been met to date, the overall achievement of the target is expected to be 123.5 %. For performance criteria that have not yet been met, 100 % target achievement is assumed. Under this assumption, the total number of performance shares to be allocated at the end of the four-year holding period/performance period would currently increase to 44,599 shares. The fair value of the performance shares on the grant date (April 1, 2015) was € 61.40 per share. No dividends were included in the determination of the fair value of the performance shares because the Group does not intend to distribute any dividends in the foreseeable future. From the grant date until December 31, 2018, five beneficiaries left MorphoSys, and therefore 3,093 performance shares were forfeited. For the calculation of the personnel expenses from share-based payment under the 2015 LTI plan, it was initially assumed that one beneficiary would leave the Company during the four-year period. This assumption was updated in 2018.

In 2018, personnel expenses resulting from performance shares under the Group's 2015 LTI plan amounted to € 109,511 (2017: € 201,608: 2016: € 837.153).

### 7.3.4 2016 LONG-TERM INCENTIVE PLAN

On April 1, 2016, MorphoSys established a Long-Term Incentive plan (LTI plan) for the Management Board and the Senior Management Group (beneficiaries). According to IFRS 2, this program is considered a share-based payment program with settlement in equity instruments and is accounted for accordingly. The LTI plan is a performance-related share plan and will be paid out in ordinary shares (performance shares) of MorphoSys AG if predefined key performance criteria are achieved. These criteria are evaluated annually by the Supervisory Board. The grant date was April 1, 2016 and the vesting/performance period is four years. If the predefined key performance criteria for the respective period are fully met, 25% of the performance shares become vested in each year of the four-year vesting period. The number of performance shares vested per year is calculated based on key performance criteria comprising the absolute MorphoSys share price performance and the relative MorphoSys share price performance compared to the Nasdaq Biotechnology Index and the TecDAX Index. The number of performance shares vested each year will be reduced or increased to the extent that the performance criteria of the respective year have been achieved between only 50% and 99.9% (<100%) or the achievement of the performance criteria has exceeded 100% (maximum 200%). If in one year the performance criteria are met by less than 50%, no performance shares will become vested in that year. In any case, the maximum pay-out at the end of the four-year period is limited by a factor determined by the Group, which generally amounts to 1. However, in justified cases, the Supervisory Board may set this factor freely between 0 and 2, for example, if the level of payment is regarded as unreasonable in view of the general development of the Company. The right to receive a certain allocation of performance shares under the LTI plan, however, occurs only at the end of the four-year vesting/performance period.

At the end of the four-year waiting period, there is a six-month exercise period during which the Company can transfer the shares to the beneficiaries. Beneficiaries are free to choose the exercise date within this exercise period.

If the number of repurchased shares is not sufficient for servicing the LTI plan, MorphoSys reserves the right to pay a certain amount of the LTI plan in cash in the amount of the performance shares at the end of the vesting period, provided the cash amount does not exceed 200% of the fair value of the performance shares on the grant date.

If a member of the Management Board ceases to hold an office at MorphoSys Group because of termination (or if the Management Board member terminates the employment contract), resignation, death, injury, disability, by reaching retirement age (receipt of a normal retirement pension, early-retirement pension or disability pension, as long as the requirements for the disability pension entitlement are met) or under other circumstances subject to the Supervisory Board's discretion, the Management Board member (or the member's heirs) is entitled precise daily pro rata amount of performance shares.

If a member of the Management Board ceases to hold an office at MorphoSys Group for good reason as defined by Section 626 (2) of the German Civil Code (BGB) and/or as defined by Section 84 (3) of the German Stock Corporation Act (AktG), the beneficiary will not be entitled to performance shares.

If a change of control occurs during the four-year vesting period, all performance shares will become fully vested. In this case, the right to receive a certain allocation of performance shares under the LTI plan occurs only at the end of the four-year vesting period.

A total of 68,143 of these shares were allocated to beneficiaries on April 1, 2016 with 35,681 performance shares allocated to the Management Board (further details may be found in the table titled "Performance Shares" in Item 7.4 "Related parties") and 32,462 performance shares to the Senior Management Group. The originalnumber of performance shares allocated was based on the full achievement of the performance criteria and a company factor of 1. Based on the performance criteria that have been met to date, the overall achievement of the target is expected to be 123.5 %. For performance criteria that have not yet been met, 100 % target achievement is assumed. Under this assumption, the total number of performance shares to be allocated at the end of the four-year holding period/performance period would currently increase to 68,595 shares. The fair value of the performance shares on the grant date (April 1, 2016) was € 46.86 per share. No dividends were included in the determination of the fair value of the performance shares because the Group does not intend to distribute any dividends in the foreseeable future. From the grant date until December 31, 2018, eight beneficiaries left MorphoSys, and therefore 10,998 performance shares were forfeited. For the calculation of the personnel expenses from share-based payment under the 2016 LTI plan, it was initially assumed that one beneficiary would leave the Company during the four-year period. This assumption was updated in 2018.

In 2018, personnel expenses resulting from performance shares under the Group's 2016 LTI plan amounted to € 330,727 (2017: € 663,624; 2016: € 1.483.694).

### 7.3.5 2017 LONG-TERM INCENTIVE PLAN

On April 1, 2017, MorphoSys established another Long-Term Incentive plan (LTI plan) for the Management Board, the Senior Management Group and selected employees of the Company who are not members of the Senior Management Group (beneficiaries). According to IFRS 2, this program is considered a share-based payment program with settlement in equity instruments and is accounted for accordingly. The LTI plan is a performance-related share plan and will be paid out in ordinary shares (performance shares) of MorphoSys AG if predefined key performance criteria are achieved. The grant date was April 1, 2017 and the vesting/performance period is four years. If the predefined performance criteria for the respective period are fully met, 25% of the performance shares become vested in each year of the four-year vesting period. The number of performance shares vested per year is calculated based on key performance criteria comprising the absolute MorphoSys share price performance and the relative MorphoSys share price performance compared to the Nasdaq Biotechnology Index and the TecDAX Index. The performance criteria can be met annually up to a maximum of 300% and up to 200% for the entire four-year period. If the specified performance criteria are met by less than 0% in one year, no shares will be earned for that year (entitlement). In any case, the maximum pay-out at the end of the four-year period is limited by a factor determined by the Group, which generally amounts to 1. However, in justified cases, the Supervisory Board may set this factor freely between 0 and 2, for example, if the level of payment is regarded as unreasonable in view of the general development of the Company. The right to receive a certain allocation of performance shares under the LTI plan, however, occurs only at the end of the four-year vesting/performance period.

At the end of the four-year vesting period, there is a six-month exercise period during which the Company can transfer the shares to the beneficiaries. Beneficiaries are free to choose the exercise date within this exercise period.

If the number of repurchased shares is not sufficient for servicing the LTI plan, MorphoSys reserves the right to pay a certain amount of the LTI plan in cash in the amount of the performance shares at the end of the vesting period, provided the cash amount does not exceed 200% of the fair value of the performance shares on the grant date.

If a member of the Management Board ceases to hold an office at MorphoSys Group because of termination (or if the Management Board member terminates the employment contract), resignation, death, injury, disability, by reaching retirement age (receipt of a normal retirement pension, early-retirement pension or disability pension, as long as the requirements for the disability pension entitlement are met) or under other circumstances subject to the Supervisory Board's discretion, the Management Board member (or the member's heirs) is entitled to performance shares determined on a precise daily pro rata basis.

If a member of the Management Board ceases to hold an office at MorphoSys Group for good reason as defined by Section 626 (2) of the German Civil Code (BGB) and/or as defined by Section 84 (3) of the German Stock Corporation Act (AktG), the beneficiary will not be entitled to performance shares.

If a change of control occurs during the four-year vesting period, all performance shares will become fully vested. In this case, the right to receive a certain allocation of performance shares under the LTI plan occurs only at the end of the four-year vesting period.

A total of 31,549 of these shares were allocated to beneficiaries on April 1, 2017 with 15,675 performance shares allocated to the Management Board (further details may be found in the table titled "Performance Shares" in Item 7.4 "Related parties"), 14,640 performance shares allocated to the Senior Management Group and 1,234 performance shares allocated to selected employees of the Company who are not members of the Senior Management Group. The originalnumber of performance shares allocated was based on the full achievement of the performance criteria and a company factor of 1. Based on the performance criteria that have been met to date, the overall achievement of the target is expected to be 150 %. For performance criteria that have not yet been met, 100 % target achievement is assumed. Under this assumption, the total number of performance shares to be allocated at the end of the four-year holding period/performance period would currently increase to 43,196 shares. The fair value of the performance shares on the grant date (April 1, 2017) was € 70.52 per share. From the grant date until December 31, 2018, seven beneficiaries left MorphoSys, and therefore 1,711 performance shares were forfeited. For the calculation of the personnel expenses from share-based payment under the 2017 LTI plan, the assumption is that two beneficiaries would leave the Company during the four-year period. This assumption was updated in 2018.

In 2018, personnel expenses resulting from performance shares under the Group's 2017 LTI plan amounted to € 558,446 (2017: € 1,026,037).

### 7.3.6 2018 LONG-TERM INCENTIVE PLAN

On April 1, 2018, MorphoSys established another Long-Term Incentive plan (LTI plan) for the Management Board, the Senior Management Group and selected employees of the Company who are not members of the Senior Management Group (beneficiaries). According to IFRS 2, this program is considered a share-based payment program with settlement in equity instruments and is accounted for accordingly. The LTI plan is a performance-related share plan and will be paid out in ordinary shares (performance shares) of MorphoSys AG if predefined key performance criteria are achieved. The grant date was April 1, 2018 and the vesting/performance period is four years. If the predefined performance criteria for the respective period are fully met, 25% of the performance shares become vested in each year of the four-year vesting period. The number of performance

shares vested per year is calculated based on key performance criteria comprising the absolute MorphoSys share price performance and the relative MorphoSys share price performance compared to the Nasdaq Biotechnology Index and the TecDAX Index. The performance criteria can be met annually up to a maximum of 300% and up to 200% for the entire four-year period. If the specified performance criteria are met by less than 0% in one year, no shares will be earned for that year (entitlement). In any case, the maximum pay-out at the end of the four-year period is limited by a factor determined by the Group, which generally amounts to 1. However, in justified cases, the Supervisory Board may set this factor freely between 0 and 2, for example, if the level of payment is regarded as unreasonable in view of the general development of the Company. The right to receive a certain allocation of performance shares under the LTI plan, however, occurs only at the end of the four-year vesting/performance period.

At the end of the four-year vesting period, there is a six-month exercise period during which the Company can transfer the shares to the beneficiaries. Beneficiaries are free to choose the exercise date within this exercise period.

If the number of repurchased shares is not sufficient for servicing the LTI plan, MorphoSys reserves the right to pay a certain amount of the LTI plan in cash in the amount of the performance shares at the end of the vesting period, provided the cash amount does not exceed 200% of the fair value of the performance shares on the grant date.

If a member of the Management Board ceases to hold an office at MorphoSys Group prior to the end of the four-year vesting period, the Management Board member (or the member's heirs) is entitled to a precise daily pro rata amount of performance shares.

If a member of the Management Board ceases to hold an office at MorphoSys Group for good reason as defined by Section 626 (2) of the German Civil Code (BGB), the beneficiary will not be entitled to performance shares.

If a cumulative absence of more than 90 days occurs during the four-year vesting period/performance period, the beneficiary is entitled to a precise daily pro rata amount of performance shares. Absence is defined as either a continued period of lost work time due to illness or inactivity of a beneficiary or employment relationship without continued pay.

If a change of control occurs during the four-year vesting period, all performance shares will become fully vested. In this case, the right to receive a certain allocation of performance shares under the LTI plan occurs only at the end of the four-year vesting period.

A total of 20,357 of these shares were allocated to beneficiaries on April 1, 2018 with 8,804 performance shares allocated to the Management Board, 10,291 performance shares allocated to the Senior Management Group and 1,262 performance shares allocated to selected employees of the Company who are not members of the Senior Management Group. The number of performance shares allocated is based on 100% achievement of the performance criteria and a company factor of 1. The fair value of the performance shares on the grant date (April 1, 2018) was € 103.58 per share. From the grant date until December 31, 2018, two beneficiaries left MorphoSys, and therefore 641 performance shares were forfeited. For the calculation of the personnel expenses from share-based payment under the 2018 LTI plan, the assumption is that four beneficiaries would leave the Company during the four-year period.

In 2018, personnel expenses resulting from performance shares under the Group's 2018 LTI plan amounted to € 946,346.

The fair value of the performance shares from the Long-Term Incentive plans 2015 until 2018 has been determined using a Monte Carlo simulation. The expected volatility is based on the development of the share volatility of the last four years. Furthermore, the calculation of fair value equally considered the performance

criteria of the absolute and relative performance of MorphoSys shares compared to the development of the Nasdaq Biotech Index and the TecDAX Index. The parameters of each program are listed in the table below.

| | April 2015 Long-Term Incentive Program | April 2016 Long-Term Incentive Program | April 2017 Long-Term Incentive Program | April 2018 Long-Term Incentive Program |
|---|---|---|---|---|
| Share Price on Grant Date in € | 57.18 | 43.28 | 55.07 | 81.05 |
| Strike Price in € | n/a | n/a | n/a | n/a |
| Expected Volatility of the MorphoSys share in % | 33.09 | 34.637 | 37.49 | 35.95 |
| Expected Volatility of the Nasdaq Biotech Index in % | 20.70 | 23.39 | 25.07 | 25.10 |
| Expected Volatility of the TecDAX Index in % | 20.10 | 17.01 | 16.94 | 17.73 |
| Performance Term of Program in Years | 4.0 | 4.0 | 4.0 | 4.0 |
| Dividend Yield in % | n/a | n/a | n/a | n/a |
| Risk-free Interest Rate in % | 0.07 | 0.05 | between 0.03 and 0.23 | between 0.02 and 0.15 |

### 7.3.7 INITIAL EQUITY GRANT

On September 10, 2018, MorphoSys established an initial equity grant for one employee of MorphoSys US Inc. According to IFRS 2, this program is considered a share-based payment program with settlement in equity instruments (treasury shares of MorphoSys AG) and is accounted for accordingly. The grant date was September 25, 2018 and the total vesting/performance period is one year with the shares vesting on a monthly basis, provided that the beneficiary is still with the company as of the respective vesting date. A portion of the shares is transferred to the beneficiary as soon as a monthly vesting period has ended. The total number of shares granted was calculated by dividing the overall grant value of US $ 370,000 by the average closing price of MorphoSys shares as quoted in Xetra on the Frankfurt Stock Exchange on the 30 trading days prior to the start date of the grant (€ 102.95). As a result, the grant comprised a maximum of 3,104 shares. The fair value as of the grant date amounted to € 91.90 per share.

## 7.4 RELATED PARTIES

Related parties that can be influenced by the Group or can have a significant influence on the Group can be divided into subsidiaries, members of the Supervisory Board, members of management in key positions and other related entities.

The Group engages in business relationships with members of the Management Board and Supervisory Board as related parties responsible for the planning, management and monitoring of the Group. In addition to cash compensation, the Group has granted the Management Board convertible bonds and performance shares. The tables below show the shares, stock options, convertible bonds and performance shares held by the members of the Management Board and Supervisory Board, as well as the changes in their ownership during the 2018 financial year.

**Shares**

| | 01/01/2018 | Additions | Sales | 12/31/2018 |
|---|---|---|---|---|
| **Management Board** | | | | |
| Dr. Simon Moroney | 483,709 | 8,928 | 8,928 | 483,709 |
| Jens Holstein | 11,000 | 36,554 | 30,537 | 17,017 |
| Dr. Malte Peters | 9,505 | 3,313 | 0 | 12,818 |
| Dr. Markus Enzelberger | 7,262 | 3,248 | 8,834 | 1,676 |
| **Total** | **511,476** | **52,043** | **48,299** | **515,220** |
| **Supervisory Board** | | | | |
| Dr. Marc Cluzel | 500 | 0 | 0 | 500 |
| Dr. Frank Morich | 1,000 | 0 | 0 | 1,000 |
| Krisja Vermeylen | 350 | 0 | 0 | 350 |
| Wendy Johnson | 500 | 0 | 0 | 500 |
| Dr. George Golumbeski [1] | - | 0 | 0 | 0 |
| Michael Brosnan [1] | - | 0 | 0 | 0 |
| Dr. Gerald Möller [2] | 11,000 | 900 | 0 | - |
| Klaus Kühn [2] | 0 | 0 | 0 | - |
| **Total** | **13,350** | **900** | **0** | **2,350** |

**STOCK OPTIONS**

| | 01/01/2018 | Additions | Forfeitures [3] | Exercises | 12/31/2018 |
|---|---|---|---|---|---|
| **Management Board** | | | | | |
| Dr. Simon Moroney | 12,511 | 9,884 | 0 | 0 | 22,395 |
| Jens Holstein | 8,197 | 6,476 | 0 | 0 | 14,673 |
| Dr. Malte Peters | 8,197 | 6,476 | 0 | 0 | 14,673 |
| Dr. Markus Enzelberger | 5,266 | 6,476 | 0 | 0 | 11,742 |
| **Total** | **34,171** | **29,312** | **0** | **0** | **63,483** |

**CONVERTIBLE BONDS**

| | 01/01/2018 | Additions | Forfeitures [3] | Exercises | 12/31/2018 |
|---|---|---|---|---|---|
| **Management Board** | | | | | |
| Dr. Simon Moroney | 88,386 | 0 | 0 | 0 | 88,386 |
| Jens Holstein | 60,537 | 0 | 0 | 30,537 | 30,000 |
| Dr. Malte Peters | 0 | 0 | 0 | 0 | 0 |
| Dr. Markus Enzelberger | 0 | 0 | 0 | 0 | 0 |
| **Total** | **148,923** | **0** | **0** | **30,537** | **118,386** |

**PERFORMANCE SHARES**

| | 01/01/2018 | Additions | Forfeitures [3] | Allocations [4] | 12/31/2018 |
|---|---|---|---|---|---|
| **Management Board** | | | | | |
| Dr. Simon Moroney | 30,060 | 2,969 | 2,182 | 3,797 | 27,050 |
| Jens Holstein | 20,086 | 1,945 | 1,495 | 2,600 | 17,936 |
| Dr. Malte Peters | 3,187 | 1,945 | 0 | 0 | 5,132 |
| Dr. Markus Enzelberger | 5,987 | 1,945 | 329 | 572 | 7,031 |
| **Total** | **59,320** | **8,804** | **4,006** | **6,969** | **57,149** |

1 Dr. George Golumbeski and Michael Brosnan have joined the Supervisory Board of MorphoSys AG on May 17, 2018.

2 Dr. Gerald Möller and Klaus Kühn have left the Supervisory Board of MorphoSys AG on May 17, 2018. Changes in the number of shares after resignation from the Supervisory Board of MorphoSys AG are not presented in the tables.

3 Forfeited performance Shares are a result of the KPI achievement rate of 63.5 % and a company factor of 1.0 as determined at the end of the performance period of the LTI plan 2014.

4 Allocations are made as soon as performance shares are transferred within the six-month exercise period after the end of the four-year waiting period.

In May 2018, the Management Board was granted a one-time entitlement to treasury shares of the Company with a fixed total amount of € 1.5 million, which could be exercised by December 31, 2018. Further details can be found in Item 6.5.4 of the Notes. Dr. Moroney exercised 5,131 shares with a value of € 483,597 from this program, Mr. Holstein exercised 3,417 shares with a value of € 358,785, Dr. Peters exercised 3,313 shares with a value of € 354,822 and Dr. Enzelberger exercised 2,676 shares valued at € 285,600.

The Supervisory Board of MorphoSys AG does not hold any stock options, convertible bonds or performance shares.

The remuneration system for the Management Board is intended to encourage sustainable, results-oriented corporate governance. The Management Board's total remuneration consists of several components, including fixed compensation, an annual cash bonus that is dependent upon the achievement of corporate targets (short-term incentives – STI), variable compensation components with long-term incentives (LTI) and other remuneration components. Variable remuneration components with long-term incentive consist of Long-Term Incentive plans (LTI plan) from previous years and the current year, a convertible bond program from 2013 and stock option plans from the prior and current years. The members of the Management Board additionally receive fringe benefits in the form of benefits in kind, essentially consisting of a company car and insurance premiums. All total remuneration packages are reviewed annually by the Remuneration and Nomination Committee and compared to an annual Management Board remuneration analysis to check the scope and appropriateness of the remuneration packages. The amount of remuneration paid to members of the Management Board is based largely on the duties of the respective Management Board member, the financial situation and the performance and business outlook for the Company versus its competition. All resolutions on adjustments to the overall remuneration packages are passed by the plenum of the Supervisory Board. The remuneration of the Management Board and the pension contract were last adjusted in July 2018.

If a Management Board member's employment contract terminates due to death, the member's spouse or life partner is entitled to the fixed monthly salary for the month of death and the 12 months thereafter. In the event of a change of control, Management Board members are entitled to exercise their extraordinary right to terminate their employment contracts and receive any outstanding fixed salary and the annual bonus for the remainder of the agreed contract period, but at least 200 % of the annual gross fixed salary and the annual bonus. Moreover, in such a case, all stock options and performance shares granted will become vested immediately and can be exercised after the expiration of the statutory vesting periods. A change of control has occurred when

(i) MorphoSys transfers assets or a substantial portion of its assets to unaffiliated third parties, (ii) MorphoSys merges with an unaffiliated company, (iii) an agreement pursuant to § 291 AktG is entered into with MorphoSys as a dependent company or MorphoSys is incorporated pursuant to § 319 AktG or (iv) a shareholder or third party holds 30% or more of MorphoSys's voting rights.

While in the management report the remuneration of the Management Board and Supervisory Boards as members in key management positions is presented in accordance with the provisions of the German Corporate Governance Code, the following tables show the expense-based view in accordance with IAS 24.

**MANAGEMENT BOARD REMUNERATION FOR THE YEARS 2018 AND 2017 (IAS 24):**

| | Dr. Simon Moroney Chief Executive Officer | | Jens Holstein Chief Financial Officer | | Dr. Malte Peters Chief Development Officer | |
|---|---|---|---|---|---|---|
| | | | | | Appointment: March 1, 2017 | |
| | 2017 | 2018 | 2017 | 2018 | 2017 | 2018 |
| Fixed Compensation | 500,876 | 542,074 | 372,652 | 402,235 | 281,500 | 397,800 |
| Fringe Benefits [1] | 35,912 | 32,654 | 42,905 | 46,725 | 568,644 | 30,613 |
| One -Year Variable Compensation | 368,144 | 455,343 | 273,899 | 337,877 | 206,903 | 334,152 |
| **Total Short-Term Employee Benefits (IAS 24.17 (a))** | **904,932** | **1,030,071** | **689,456** | **786,837** | **1,057,047** | **762,565** |
| Service Cost | 149,567 | 158,788 | 99,949 | 111,233 | 60,967 | 76,190 |
| **Total Benefit Expenses – Post-Employment Benefits (IAS 24.17 (b))** | **149,567** | **158,788** | **99,949** | **111,233** | **60,967** | **76,190** |
| One-Time Bonus in Shares | 0 | 483,616 | 0 | 358,857 | - | 354,900 |
| Multi-Year Variable Compensation [2]: | | | | | | |
| 2013 Convertible Bonds Program (Vesting Period 4 Years) | 58,224 | 0 | 59,641 | 0 | 0 | 0 |
| 2013 Long-Term Incentive Program (Vesting Period 4 Years) | 202,349 | 0 | 138,585 | 0 | 0 | 0 |
| 2014 Long-Term Incentive Program (Vesting Period 4 Years) | 22,460 | 1,452 | 15,383 | 994 | 0 | 0 |
| 2015 Long-Term Incentive Program (Vesting Period 4 Years) | 67,635 | 26,657 | 46,324 | 18,257 | 0 | 0 |
| 2016 Long-Term Incentive Program (Vesting Period 4 Years) | 171,688 | 86,435 | 112,481 | 56,632 | 0 | 0 |
| 2017 Long-Term Incentive Program (Vesting Period 4 Years) | 163,906 | 104,449 | 107,395 | 68,437 | 107,395 | 68,437 |
| 2018 Long-Term Incentive Program (Vesting Period 4 Years) | 0 | 140,040 | 0 | 91,595 | 0 | 91,595 |
| 2017 Stock Option Plan (Vesting Period 4 Years) | 127,997 | 81,566 | 83,861 | 53,441 | 83,861 | 53,441 |
| 2018 Stock Option Plan (Vesting Period 4 Years) | 0 | 136,980 | 0 | 89,593 | 0 | 89,593 |
| **Total Share-Based Payment (IAS 24.17 (e))** | **814,259** | **1,061,195** | **563,670** | **737,806** | **191,256** | **657,966** |
| **Total Compensation** | **1,868,758** | **2,250,054** | **1,353,075** | **1,635,876** | **1,309,270** | **1,496,721** |

1 In 2017, the fringe benefits of Dr. Malte Peters und Dr. Markus Enzelberger each included a one-time compensation in the form of MorphoSys shares as an incentive to join the Management Board of MorphoSys AG.

2 The fair value was determined pursuant to the regulations of IFRS 2 “Share-based Payments”. This table shows the pro-rata share of personnel expenses resulting from share-based payment for the respective financial year. Further details can be found in Sections 7.1, 7.2. and 7.3.

| Dr. Markus Enzelberger [3] Chief Scientific Officer | | Dr. Marlies Sproll [4] Chief Scientific Officer | | Dr. Arndt Schottelius Chief Development Officer | | Total | |
|---|---|---|---|---|---|---|---|
| Appointment (Interim-CSO): April 15, 2017 Appointment: November 1, 2017 | | Temporary Leave: April 15, 2017 – October 31, 2017 Resignation: October 31, 2017 | | Resignation: February 28, 2017 | | | |
| 2017 | 2018 | 2017 | 2018 | 2017 | 2018 | 2017 | 2018 |
| 204,698 | 321,300 | 222,450 | - | 103,253 | - | 1,685,429 | 1,663,409 |
| 417,158 | 31,211 | 20,427 | - | 9,161 | - | 1,094,207 | 141,203 |
| 121,688 | 269,892 | 67,745 | - | 23,490 | - | 1,061,869 | 1,397,264 |
| **743,544** | **622,403** | **310,622** | **-** | **135,904** | **-** | **3,841,505** | **3,201,876** |
| 29,186 | 68,515 | 77,976 | - | 28,245 | - | 445,890 | 414,726 |
| **29,186** | **68,515** | **77,976** | **-** | **28,245** | **-** | **445,890** | **414,726** |
| - | 286,650 | 0 | - | 0 | - | 0 | 1,484,023 |
| 0 | 0 | 39,879 | - | 39,879 | - | 197,623 | 0 |
| 0 | 0 | 138,585 | - | 138,585 | - | 618,104 | 0 |
| 0 | 0 | 15,383 | - | (42,038) | - | 11,188 | 2,446 |
| 0 | 0 | 46,324 | - | (79,105) | - | 81,178 | 44,914 |
| 0 | 0 | 112,481 | - | (76,828) | - | 319,822 | 143,067 |
| 68,979 | 105,222 | 80,538 | - | - | - | 528,213 | 346,545 |
| 0 | 91,595 | 0 | - | - | - | 0 | 414,825 |
| 53,875 | 82,185 | 62,898 | - | - | - | 412,492 | 270,633 |
| 0 | 89,593 | 0 | - | - | - | | 405,759 |
| **122,854** | **655,245** | **496,088** | **-** | **(19,507)** | **-** | **2,168,620** | **3,112,212** |
| **895,584** | **1,346,163** | **884,686** | **-** | **144,642** | **-** | **6,456,015** | **6,728,814** |

[3] The figures presented for 2017 for Dr. Markus Enzelberger do not include any compensation granted for his activities as a member of the Senior Management Group as they do not relate to his appointment as a member of the Management Board.

[4] Dr. Marlies Sproll left the Management Board of MorphoSys AG on October 31, 2017. Since November 1, 2017, Dr. Marlies Sproll has taken on a new part-time role at MorphoSys as Special Adviser to the CEO. Therefore, the figures presented for Dr. Marlies Sproll do not include any remuneration granted for these activities.

In the years 2018 and 2017, there were no other long-term benefits in accordance with IAS 24.17 (c) or benefits upon termination of employment in accordance with IAS 24.17 (d) accruing to the Management Board or Supervisory Board.

In 2018, the total remuneration for the Supervisory Board, excluding reimbursed travel costs, amounted to € 525,428 (2017: € 523,015).

**SUPERVISORY BOARD REMUNERATION FOR THE YEARS 2018 AND 2017:**

| | Fixed Compensation | | Attendance Fees [1] | | Total Compensation | |
|---|---|---|---|---|---|---|
| in € | 2018 | 2017 | 2018 | 2017 | 2018 | 2017 |
| Dr. Marc Cluzel | 76,742 | 52,160 | 32,400 | 26,800 | 109,142 | 78,960 |
| Dr. Frank Morich | 61,004 | 57,240 | 23,200 | 23,200 | 84,204 | 80,440 |
| Krisja Vermeylen | 49,916 | 28,961 | 24,400 | 16,000 | 74,316 | 44,961 |
| Wendy Johnson | 46,160 | 46,160 | 37,400 | 38,000 | 83,560 | 84,160 |
| Dr. George Golumbeski [2] | 28,961 | - | 25,200 | - | 54,161 | - |
| Michael Brosnan [2] | 28,961 | - | 18,600 | - | 47,561 | - |
| Dr. Gerald Möller [3] | 36,558 | 95,156 | 11,800 | 36,800 | 48,358 | 131,956 |
| Klaus Kühn [3] | 17,326 | 46,160 | 6,800 | 22,000 | 24,126 | 68,160 |
| Karin Eastham [4] | - | 19,578 | - | 14,800 | - | 34,378 |
| **Total** | **345,628** | **345,415** | **179,800** | **177,600** | **525,428** | **523,015** |

1 The attendance fee contains expense allowances for the attendence at the Supervisory Board and the Committee meetings.
2 Dr. George Golumbeski and Michael Brosnan have joined the Supervisory Board of MorphoSys AG on May 17, 2018.
3 Dr. Gerald Möller and Klaus Kühn have left the Supervisory Board of MorphoSys AG AG on May 17, 2018.
4 Karin Eastham has left the Supervisory Board of MorphoSys AG AG on May 17, 2017.

No other agreements presently exist with current or former members of the Supervisory Board.

As of December 31, 2018, the Senior Management Group held 72,604 stock options (December 31, 2017: 35,978 shares), 11,233 convertible bonds (December 31, 2017: 13,233 convertible bonds) and 83,660 performance shares (December 31, 2017: 67,149 performance shares), which had been granted by the Company. In 2018, a new stock option program and a new performance share program were issued to the Senior Management Group (see paragraphs 7.1.2 and 7.3.6). In May 2018, the Senior Management Group was granted a one-time entitlement to treasury shares of the Company with a fixed total amount of € 0.5 million, which could be exercised by December 31, 2018. Further details can be found in Item 6.5.4 of the Notes. By December 31, 2018, 4,685 shares under this entitlement worth € 0.5 million had been transferred to the Senior Management Group. On April 1, 2018, the Senior Management Group was granted 9,360 shares under the 2014 LTI program, which had the option to receive these shares within six months. As of December 31, 2018, the option was exercised by the Senior Management Group for 9,360 shares.

## 8 Additional Notes

### 8.1 OBLIGATIONS ARISING FROM OPERATING LEASES, RENTAL AND OTHER CONTRACTS

The Group leases facilities and equipment under long-term operating leases. In financial years 2018 and 2017, leasing expenses amounted to € 3.2 million and € 2.6 million. Leasing expenses for the financial years 2018 and

2017 include expenses for company cars and machinery totaling € 0.2 million and € 0.2 million, respectively. The majority of these contracts can be renewed on a yearly or quarterly basis. Some of these agreements may be terminated prematurely.

In 2016 a rental agreement was signed for the premises at Semmelweisstraße 7, Planegg. The contract includes a minimum rental period of ten years.

The future minimum payments under non-terminable operating leases, insurance contracts and other services as of December 31, 2018 are shown in the table below.

| in 000' € | Rent and Leasing | Other | Total |
|---|---|---|---|
| Up to One Year | 2,935 | 1,577 | 4,512 |
| Between One and Five Years | 11,091 | 0 | 11,091 |
| More than Five Years | 8,504 | 0 | 8,504 |
| **Total** | **22,530** | **1,577** | **24,107** |

Additionally, the future payments shown in the table below may become due for outsourced studies after December 31, 2018. These amounts could be shifted or substantially lower due to changes in the study timeline or premature study termination.

| in million € | Total 2018 |
|---|---|
| Up to One Year | 51.4 |
| Between One and Five Years | 45.6 |
| More than Five Years | 0.0 |
| **Total** | **97.0** |

## 8.2 CONTINGENT ASSETS/CONTINGENT LIABILITIES

Contingent liabilities are potential obligations from past events that exist only when the occurrence of one or more uncertain future events – beyond the Company's control – is confirmed. Current obligations can represent a contingent liability if it is not probable enough that an outflow of resources justifies the recognition of a provision. Moreover, it is not possible to make a sufficiently reliable estimate of the amount of the obligations.

The Management Board is unaware of any proceedings that may result in a significant obligation for the Group and may lead to a material adverse effect on the Group's net assets, financial position or results of operations.

If certain milestones are achieved in the Proprietary Development segment, such as filing an application for an investigational new drug (IND) for specific target molecules, this may trigger milestone payments to licensors of up to an aggregate of US $ 287 million related to regulatory events and achievement of sales targets. The next milestone payment of US $ 12.5 million will presumably be due in approximately 12 to 18 months.

If a partner achieves certain milestones in the Partnered Discovery segment, for example, filing an application for an investigational new drug (IND) for specific target molecules or the transfer of technology, this may trigger milestone payments to MorphoSys. However, no further details can be published since the timing, and the achievement of such milestones are uncertain.

Obligations may arise from enforcing the Company's patent rights versus third parties. It is also conceivable that competitors may challenge the patents of MorphoSys Group or MorphoSys may also come to the conclusion that MorphoSys's patents or patent families have been infringed upon by competitors. This could prompt MorphoSys to take legal action against competitors or lead competitors to file counterclaims against MorphoSys. Currently, there are no specific indications such obligations have arisen.

## 8.3 CORPORATE GOVERNANCE

The Group has submitted the Declaration of Conformity with the recommendations of the Government Commission on the German Corporate Governance Code for the 2018 financial year under Section 161 of the German Stock Corporation Act (AktG). This declaration was published on the Group's website (www.morphosys.com) on November 30, 2018 and made permanently available to the public.

## 8.4 RESEARCH AND DEVELOPMENT AGREEMENTS

The Group has entered numerous research and development agreements as part of its proprietary research and development activities and its partnered research strategy. The following information describes the agreements that have a material effect on the Group and the developments under the research and development agreements in the 2018 financial year.

### 8.4.1 PROPRIETARY DEVELOPMENT SEGMENT

In the Proprietary Development segment, partnerships are entered into as part of the Group's strategy to develop its own drugs in its core areas of oncology and inflammatory diseases. Our partners include (in alphabetical order): Galapagos, GlaxoSmithKline, I-Mab Biopharma, Immatics Biotechnologies, Merck Serono, MD Anderson Cancer Center, Novartis and Xencor.

In November 2008, MorphoSys and Galapagos announced a long-term drug discovery and co-development cooperation aimed at exploring novel mechanisms for the treatment of inflammatory diseases and developing antibody therapies against these diseases. The agreement covers all activities ranging from the probing of target molecules to the completion of clinical trials for novel therapeutic antibodies. After demonstrating clinical efficacy in humans, the programs may be out-licensed to partners for further development, approval, and commercialization. Both companies contributed their core technologies and expertise to the alliance. Along with the use of its adenovirus-based platform for the exploration of new target molecules for the development of antibodies, Galapagos provided access to target molecules already identified that are associated with bone and joint diseases. MorphoSys provided access to its antibody technologies used for generating fully human antibodies directed against these target molecules. Under the terms of the agreement, Galapagos and MorphoSys will share the research and development costs. In July 2014, the collaboration advanced into the preclinical development of MOR106, an antibody from MorphoSys' next-generation library Ylanthia directed against a novel Galapagos target molecule.

On July 19, 2018, MorphoSys announced an exclusive global agreement between MorphoSys and Galapagos with Novartis Pharma AG for the development and commercialization of MOR106. Under the agreement, the companies will work together to significantly expand the existing development plan for MOR106. Novartis exclusively holds all rights to the product's commercialization resulting from the agreement. With the signing of the agreement, all future research, development, manufacturing and marketing costs for MOR106 will be borne by Novartis. Included in this is the ongoing phase 2 trial "IGUANA" in patients with atopic dermatitis, as well as the phase 1 trial also initiated to evaluate the safety and efficacy of the subcutaneous administration of MOR106 in healthy volunteers and patients with atopic dermatitis. MorphoSys and Galapagos also intend to conduct further studies to support the development of MOR106 in atopic dermatitis. As part of this agreement, Novartis will explore the potential of MOR106 in other indications beyond atopic dermatitis. In addition to receiving financing from Novartis' for the current and future development program for MOR106, MorphoSys and Galapagos also jointly received an upfront payment of € 95 million. Of this amount, MorphoSys recognized its 50% share of € 47.5 million as revenue in 2018. MorphoSys and Galapagos will continue to jointly receive significant milestone payments of up to approximately US $ 1 billion (based on the current euro-dollar exchange rate at the time the agreement was signed) when specific development, regulatory, commercial and revenue milestones are met. MorphoSys and Galapagos also stand to jointly receive tiered royalties ranging up to a low 10% to low 20% range of net sales. According to their 2008 agreement, MorphoSys and Galapagos will share in all payments equally (50/50).

In June 2013, MorphoSys announced it had entered into a global agreement with GlaxoSmithKline (GSK) for the development and commercialization of MOR103. MOR103/GSK3196165 is MorphoSys's proprietary HuCAL antibody against the GM-CSF target molecule. Under the agreement, GSK assumes responsibility for the compound's entire development and commercialization. MorphoSys has already received an upfront payment of € 22.5 million under this agreement and, next to tiered double-digit royalties on net sales, is still eligible to receive additional payments from GSK in an amount of up to € 423 million, depending on the achievement of certain developmental stages and regulatory, commercial and revenue-related milestones. GSK has clinically tested MOR103 in rheumatoid arthritis (RA) and inflammatory hand osteoarthritis in, among others, a phase 2b study in RA and a 2a study in patients with inflammatory hand osteoarthritis. The respective study data was presented in October 2018 at the annual conference of the American College of Rheumatology (ACR). At the same time, GSK also announced that it does not intend to continue to pursue further development in the indication of hand osteoarthritis.

In 2017, MorphoSys announced it had signed an exclusive regional licensing agreement with I-Mab Biopharma to develop and commercialize MOR202 in China, Taiwan, Hong Kong and Macao. MOR202 is MorphoSys's proprietary antibody targeting CD38. MOR202 was evaluated in a phase 1/2a clinical trial in Europe in patients with multiple myeloma. MorphoSys is currently evaluating the further development of the antibody in autoimmune diseases. Under the terms of the agreement, I-Mab Biopharma has the exclusive rights for the later development and commercialization of MOR202 in the agreed regions. MorphoSys received an upfront payment of US $ 20.0 million and is also entitled to receive additional success-based clinical and commercial milestone payments from I-Mab of up to roughly US $ 100 million. In addition, MorphoSys will also be entitled to receive double-digit, staggered royalties on net revenue of MOR202 in the agreed regions. I-Mab now plans to launch a pivotal study in early 2019.

In the reporting year, MorphoSys announced the completion of an exclusive strategic development collaboration and regional licensing agreement with I-Mab Biopharma for the MOR210 antibody. MOR210 is a preclinical antibody candidate developed by MorphoSys against C5aR with the potential for development in immuno-oncology. I-Mab has exclusive rights to develop and market MOR210 in China, Hong Kong, Macao, Taiwan and South Korea, while MorphoSys retains the rights for the rest of the world. Under the terms of the agreement, I-Mab will exercise the exclusive rights to develop and market MOR210 in its contracted territories. With the support of MorphoSys, I-Mab will undertake and fund all global development activities, including clinical trials in China and the United States, to clinical proof of concept in cancer medicine. MorphoSys received an upfront payment of US $ 3.5 million and is further eligible to receive performance-related clinical and sales-based milestone payments of up to US $ 101.5 million. MorphoSys recognized the upfront payment of US $ 3.5 million (€ 3.1 million) as revenue in 2018. In addition, MorphoSys will receive tiered royalties in the mid-single-digit percentage range of net sales on the contracted territory of I-Mab. In return for conducting a successful clinical proof of concept trial, I-Mab is entitled to low-single-digit royalties on net sales of MOR210 outside the I-Mab territory, as well as staggered shares of proceeds from the further out-licensing of MOR210.

In August 2015, MorphoSys announced a strategic alliance in the field of immuno-oncology with the German company Immatics Biotechnologies GmbH. The alliance was formed to develop novel antibody-based therapies against a variety of cancer antigens that are recognized by T cells. The alliance agreement gives MorphoSys access to several of Immatics's proprietary tumor-associated peptides (TUMAPs). In return, Immatics receives the right to develop MorphoSys's Ylanthia antibodies against several TUMAPs. The companies will pay each other milestone payments and royalties on commercialized products based on the companies' development progress.

In June 2014, MorphoSys and Merck KGaA announced an agreement to identify and develop therapeutic antibodies against target molecules of the class of immune checkpoints. Under this agreement, both MorphoSys and Merck Serono, the biopharmaceutical division of Merck, will co-develop therapies intended to trigger the immune system to attack tumors. MorphoSys will use its proprietary Ylanthia antibody library and other technology platforms to generate antibodies directed against the selected target molecules. Merck Serono is

contributing its expertise in the field of immuno-oncology and clinical development and will assume full project responsibility starting with phase 1 of clinical development.

In May 2016, MorphoSys and the University of Texas MD Anderson Cancer Center announced a long-term strategic alliance. With MorphoSys applying its Ylanthia technology platform, the partners will work together to identify, validate and develop novel anti-cancer antibodies through to clinical proof of concept by researching targets in a variety of oncology indications. MorphoSys and MD Anderson will conduct early clinical studies of therapeutic antibody candidates after which MorphoSys has the option to continue developing selected antibodies in later stages of clinical development for its own proprietary pipeline.

In June 2010, MorphoSys AG and the US-based biopharmaceutical company Xencor signed an exclusive global licensing and cooperation agreement under which MorphoSys receives exclusive global licensing rights to the XmAb5574/MOR208 antibody for the treatment of cancer and other indications. The companies jointly conducted a phase 1/2a trial in the US in patients with chronic lymphocytic leukemia. MorphoSys is solely responsible for further clinical development after the successful completion of the phase 1 clinical trial. Xencor received an upfront payment of US $ 13.0 million (approx. € 10.5 million) from MorphoSys, which was capitalized under in-process R&D programs. Xencor is entitled to development, regulatory and commercially-related milestone payments as well as tiered royalties on product sales.

### 8.4.2 PARTNERED DISCOVERY SEGMENT

Commercial partnerships in the Partnered Discovery segment provide MorphoSys with various types of payments that are spread over the duration of the agreements or recognized in full as revenue when reaching a predefined target or milestone. These payments include upfront payments upon signature, annual license fees in exchange for access to MorphoSys's technologies and payments for funded research to be performed by MorphoSys on behalf of the partner. In addition, MorphoSys is entitled to development-related milestone payments and royalties on product sales for specific antibody programs.

Prior to the 2018 financial year, active collaborations with a number of partners had already ended because the agreements had expired. However, drug development programs initiated in the active phase are designed so that they can be continued by the partner and, therefore, still result in performance-based payments for the achievement of the defined milestones.

Partnerships in the Partnered Discovery segment that ended before the beginning of 2018 but where drug development programs were still being pursued, include (in alphabetical order): Astellas, Bayer AG, Boehringer Ingelheim, Daiichi-Sankyo, Fibron Ltd. (continuation of contract with Prochon Biotech Ltd.), Janssen Biotech, Merck & Co., Novartis, OncoMed Pharmaceuticals, Pfizer, Roche and Schering-Plough (a subsidiary of Merck & Co.).

Partnerships that were still active in 2018 include (in alphabetical order): GeneFrontier Corporation/Kaneka, Heptares and LEO Pharma.

In the year under review, MorphoSys announced that it expanded its existing strategic alliance with LEO Pharma to include peptide-based therapeutics. The goal of the partnership is to discover new, peptide-based drugs for the treatment of diseases with high unmet medical needs and that are a valuable addition to the development pipelines of both companies. The collaboration extends the two companies' partnership to discover and develop antibody-based therapies for dermatology, which has already been in place since November 2016. Under this agreement, LEO Pharma will select therapeutic target molecules against which MorphoSys will identify target molecules using its proprietary peptide technology platform. LEO Pharma will then either choose to further develop these target molecules or use them to create other drug candidates. LEO Pharma will retain exclusive worldwide rights to the active ingredients and be responsible for the development and commercialization of the dermatology medicines that result. MorphoSys will retain an exclusive option to secure worldwide rights to all oncology medicines stemming from the collaboration.

The Group's alliance with Novartis AG for the research and development of biopharmaceuticals came to an end in November 2017. The companies' collaboration began in 2004 and led to the creation of several ongoing therapeutic antibody programs against a number of diseases. MorphoSys receives performance-based milestones, contingent upon the successful clinical development and regulatory approval of several products. In addition to these payments, MorphoSys is also entitled to royalties on any future product sales.

## 8.5 SUBSEQUENT EVENTS

On January 26, 2019, we announced that in our lawsuit against Janssen Biotech and Genmab A/S, the United States (U.S.) District Court of Delaware, based on a hearing held November 27, 2018, ruled in a Court Order on January 25, 2019, that the asserted claims of three MorphoSys patents with U.S. Patent Numbers 8,263,746, 9,200,061 and 9,758,590 are invalid. The Court thus granted a motion for Summary Judgement of invalidity filed by Janssen Biotech and Genmab, A/S against the three patents held by MorphoSys. As a result of this decision, the jury trial scheduled for February 2019 to consider Janssen's and Genmab's alleged infringement and the validity of the MorphoSys patents did not take place. On January 31, 2019 we announced that we had settled the dispute with Janssen Biotech and Genmab A/S. The parties agreed to drop the mutual claims related to the litigation: MorphoSys dismissed claims for alleged patent infringement against Janssen Biotech and Genmab A/S and agreed not to appeal from the court order dated January 25, 2019. Janssen and Genmab dismissed their counterclaims against MorphoSys.

In early February 2019, we announced the appointment of David Trexler as President and Member of the Board of Directors of MorphoSys US Inc. effective February 6, 2019. Mr. Trexler will lead the further development of MorphoSys's U.S. subsidiary with a focus on building commercial capabilities. Mr. Trexler joins MorphoSys from EMD Serono, a subsidiary of Merck KGaA, Darmstadt. AT EMD Serono, he was responsible, among other things, for establishing the first commercial organization of Merck KGaA's oncology division in the U.S. and for the market launch of the cancer drug avelumab for the treatment of metastatic Merkel cell carcinoma.

On February 19, 2019, Simon Moroney, CEO and co-founder of MorphoSys AG (informed the Company's Supervisory Board that he has decided not to renew his contract as a member of the company's Management Board. As a result of his decision, Dr. Moroney will step down as CEO on expiry of his current contract on June 30, 2020, or when a successor is appointed, whichever comes sooner.

At the end of February 2019, our partner Janssen announced that it had received U.S. FDA approval for Tremfya® One-Press, a single-dose, patient-controlled injector for adults with moderate-to-severe plaque psoriasis. This is a device that allows patients to administer the drug subcutaneously by themselves and is thus intended to provide a higher convenience to psoriasis patients with respect to the treatment of their chronic disease.

On March 7, 2019 MorphoSys announced that during the first quarter of 2019, the Company in agreement with the FDA implemented an amendment of the B-MIND study by introducing a co-primary endpoint into the trial. The scientific rationale for the amendment is based on published literature as well as MorphoSys's own pre-clinical data, which indicate that MOR208 might be particularly active in patients who can be characterized by the presence of a certain biomarker. Discussions with the FDA regarding the biomarker assay are currently being planned and are expected to take place in the middle of 2019. The pre-planned, event-driven interim analysis of B-MIND remains projected to take place in the second half of 2019. Depending on the outcome of the interim analysis, an increase from 330 to 450 patients may be required, in which case an event-driven primary analysis of the study is expected in the first half of 2021.

## 8.6 RESPONSIBILITY STATEMENT

To the best of our knowledge, and in accordance with the applicable reporting principles, the consolidated financial statements give a true and fair view of the Group's net assets, financial position and results of operations, and the group management report provides a fair review of the development and performance of the business and the position of the Group together with a description of the principal opportunities and risks associated with the Group's expected development.

Planegg, March 13, 2019

| | |
|---|---|
| Dr. Simon Moroney<br>Chief Executive Officer | Jens Holstein<br>Chief Financial Officer |
| Dr. Malte Peters<br>Chief Development Officer | Dr. Markus Enzelberger<br>Chief Scientific Officer |