

# Management Report

## Industry Overview

### Macroeconomic Development

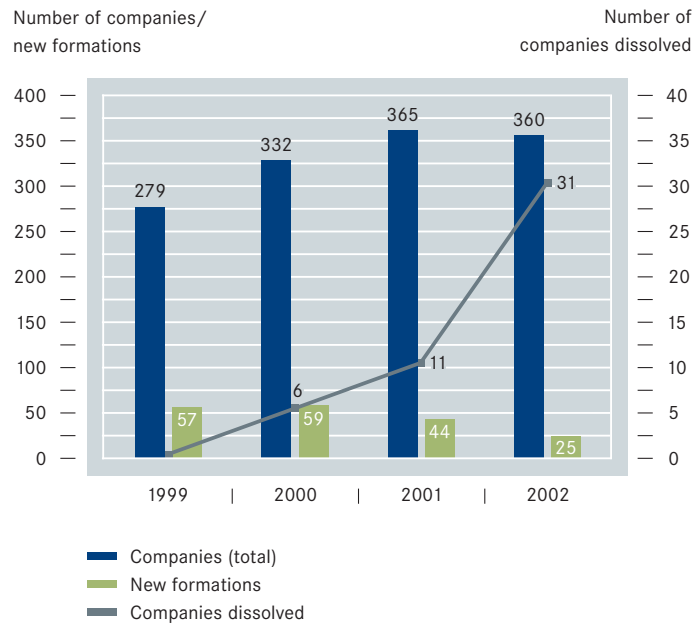
Europe's economic growth remained modest in the first half of 2003. However, global economic expansionary forces, which had gained the upper hand in the early part of the year, accelerated in the second half of the year. The most powerful expansive impetus was provided by the U.S. economy, which in the third quarter posted the highest quarterly growth since 1984. The Japanese economy benefited from strong demand for imports from its neighbors in Asia and from the U.S.A. as well as from brisk domestic demand. Although the Eurozone could not keep up with the faster economic pace in the U.S.A. and the strong growth in Japan, there are many factors that indicate a gradual cyclical revival may have taken root in Europe.

The underlying economic conditions for a continuation of the recovery process developed favorably, in part because of low interest rate levels. Short-term interest rates in the Eurozone have dropped from 2.9% to 2.1% during 2003, while short-term U.S. interest rates remained at 1.0% at year-end—interest rate levels whose depths have not been seen since 1958. Mirroring this development in reverse, equity prices on the leading stock exchanges for the most part displayed an upward trend, which was mainly associated with solid quarterly results in the corporate sector. For example, during 2003, the Dow Jones Index increased by 25%, the Nikkei by 24% and the DAX by 37%.

The U.S. dollar exchange rate came under considerable pressure in the fourth quarter of 2003. At the end of December 2003, the euro/U.S. dollar exchange rate rose to US\$ 1.26 per euro, thus reaching an all-time high since the introduction of the euro. Two reasons have been given for the euro's record-breaking run; first and foremost, the continuing high budget deficit in the U.S.A. weighs in on the mind of investors, and second, the possibility looms that Asian central banks' purchases of U.S. dollars may decline in the future.

### Development within the Biotech Sector

The situation and sentiment within the biotech sector have changed rather substantially over the past two years. In 2003, the total number of companies in Germany in the biotech sector decreased for the first time since the mid-1990s. In 2002 and 2003, the number of newly founded companies did not offset the number of new insolvencies, liquidations and acquisitions/mergers. The most telling statistics of the industry—total headcount, the level of spending on research and development, and revenues—have all also declined.



Source: Ernst&Young, Biotechnology-Report 2003

In contrast to the U.S.A., where seven biotech IPOs have taken place during the fourth quarter of 2003, no IPOs were successfully executed in Germany in 2003. Moreover, during the year, only a few companies in Europe, such as the Austrian company Intercell and U3 Pharma in Germany, reported the successful conclusion of equity financing. The inflow of capital in Europe to biotech companies amounted to US\$ 2.5 billion compared to US\$ 1.1 billion in the previous year. This compares to a total of US\$ 15.1 billion invested in the U.S.A., a year-on-year increase of 65%. Positive news generated through strong revenue growth for the larger established biotech companies such as Amgen and Gilead and by a series of new approvals for companies such as FluMist (MedImmune) and Raptiva (Genentech/XOMA) also contributed substantially to the upturn in fortunes in the U.S. biotech sector. Also a catalyst was news from Genentech in the form of Avastin, at the ASCO (American Society for Clinical Oncology) meeting in May 2003. The contrast between Europe and the U.S.A. in the biotech sector development was also reflected in the development of equity prices: the NASDAQ Biotech index rose by 46% in 2003, while the German Prime Pharma & Healthcare index increased by only 20%.

Nonetheless, pharmaceutical companies, irrespective of their geography, continue to remain under pressure to launch new products. Research spending of pharmaceutical companies has risen considerably since the 1980s. Nevertheless, productivity has decreased steadily in terms of the number of market approvals. Major pharmaceutical companies are investing increasingly in preclinical development products from the biotech sector, and no longer exclusively in product candidates in advanced stages of development. Wide-ranging research cooperation agreements signed in 2003, such as those between Aventis/ImmunoGen and Amgen/Biovitrum, are a clear sign of this development. Such alliances offer pharmaceutical companies the opportunity to outsource a part of their research and thus to spread the risks more efficiently. Many pharmaceutical companies now invest more than a fifth of their research budgets in such alliances.

In 2003, there was also uplifting news related to therapeutic antibodies. The number of approved therapeutic antibodies on the market increased from 12 to 16 by the end of the year. Two antibodies on the market, Rituxan and Remicade, are blockbuster drugs, meaning that they generated annual revenues of more than US\$ 1 billion each. In total, global revenues of therapeutic antibodies grew to more than US\$ 5 billion, a year-on-year growth of approximately 25%.

Although there were a few clinical development failures in 2003, such as Genmab's antibody Humax-CD4 for the treatment of psoriasis, Genentech presented positive findings for Avastin from a phase III study with colorectal cancer patients at the annual meeting of the American Society for Clinical Oncology (ASCO). The German company Merck also presented promising data at this meeting relating to their therapeutic antibody cancer drug Erbitux. Despite stumbling blocks encountered in the U.S., Erbitux was approved during the year in Switzerland.

## Financial Analysis

### Operating Revenues

Compared to the same period of the previous year, revenues for the full year 2003 decreased by 9% to € 15.3 million (2002: € 16.8 million). Reasons behind the decline included later than anticipated timing for deal signing and milestone achievements, as well as foreign exchange effects. Using constant exchange rates (2002), MorphoSys 2003 revenues would have been € 0.6 million, or 4% higher.

A substantial majority of revenues recorded in 2003 relate to annual licensing fees received from existing partners. In this regard, milestone revenues amounted to € 0.5 million or 3% for the full year 2003 compared to 10% in the prior year. The Company also recorded grant revenues, arising from the German Federal Ministry of Education and Research ("Bundesministerium für Bildung und Forschung"), amounting to € 0.1 million during the reporting period, and remained essentially unchanged to the same period in the previous year.



**Michael Grau**  
Senior Director  
Finance & Accounting

Of total revenues, approximately 82% related to therapeutic antibody collaborations, 17% to antibody research collaborations, and 0.2% to the “Antibodies by Design” initiative. For purposes of classification, the following partners were considered to be therapeutic antibody collaborations: Bayer, Centocor, GPC Biotech, ImmunoGen, ProChon, Roche, Schering and Pfizer. Target research collaborations consisted of: Biogen Idec, Bristol-Myers Squibb (formerly DuPont), ImmunoGen (expansion) and Oridis Biomed. Approximately 81% (2002: 77%) of total Company revenues arose from MorphoSys’ three largest alliances with Centocor, Bayer and Schering.

Geographically, 81% of MorphoSys’ commercial (non-grant) revenues in the amount of € 12.4 million were generated with biotechnology and pharmaceutical companies located in the United States and 19% in Europe, compared to 76% and 24% respectively for the prior year.

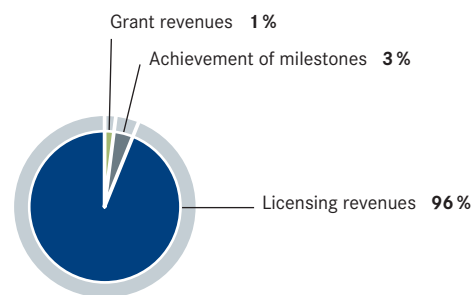
### Operating Expenses

For the full year 2003, total operating expenses, including stock-based compensation expenses, substantially decreased by 56% to € 18.8 million (2002: € 42.3 million), a reduction of € 23.5 million, and was appreciably better than expected. A significant reduction in expense resulted from lower patent and licensing expenses arising from the settlement agreement with Cambridge Antibody Technology (“CAT”) and license agreement with XOMA. In addition, the Company’s restructuring plan implemented during the year 2003 also led to lower personnel-related costs and reduced product development-related costs.

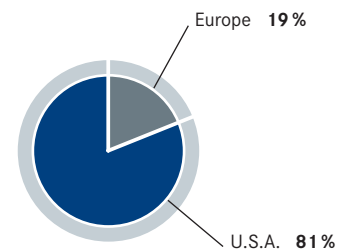
### Research and Development Expenses

Costs for research and development fell by € 10.6 million to € 9.0 million (2002: € 19.6 million). This decrease resulted chiefly from lower licensing costs as a result of the licensing and settlement agreements with CAT and XOMA in the prior year, as well as the Company’s decision to refocus efforts in proprietary product development. Under the Company’s restructuring plan, proprietary products will be outlicensed at the preclinical stage, thereby resulting in notably lower product development costs.

### Revenues: Licenses vs. Milestones



### Revenues by Region



#### Sales, General and Administrative Expenses

Sales, general and administrative expenses amounted to € 7.6 million compared to € 18.7 million in the previous year. The decrease in general and administrative expenses was largely due to lower patent litigation costs with the amount of € 0.3 million (2002: € 7.0 million), arising as a result of the settlement with CAT in December 2002. Also substantially contributing to cost savings was the closing of MorphoSys U.S.A., Inc., with net savings to MorphoSys of approximately € 1.8 million for the year 2003.

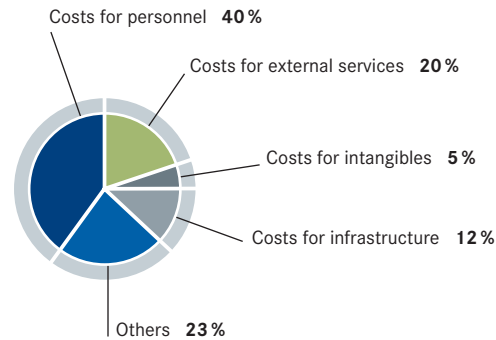
#### Stock-Based Compensation

Stock-based compensation in the amount of € 2.2 million for the year 2003 was recorded as a non-cash charge (2002: € 3.9 million), resulting from application of SFAS No. 123 "Accounting for Stock-Based Compensation" under U.S. GAAP accounting. MorphoSys has been expensing stock options since fiscal year 1999. The decrease in stock-based compensation was mainly due to declining expenses from options and convertible bonds granted in prior periods. Stock-based compensation for new grants was also lower through the reduced stock price of MorphoSys shares underlying the programs at the time of grant, as well as forfeitures and reduced numbers of new grants.

#### Cost by Expenditure Type

Personnel costs (excluding expenses arising from stock-based compensation) amounted to € 7.5 million (2002: € 10.1 million) or 40% of total costs, and were the largest cost block within operating expenses in 2003. The reduced levels in 2003 compared to the prior year resulted from leaner staff structures arising from the Company's restructuring plan implemented in 2003. External services, which include external lab funding and various outsourced administrative services, amounted to € 3.8 million (2002: € 8.1 million), or 20% of total costs, and were primarily reduced by lower levels of external lab funding and legal expenses. Intangible costs, which include patent litigation costs and amortization of licenses and patents, amounted to € 0.9 million (2002: € 15.1 million), or 5% of the total in 2003. Intangible costs were sharply lower in 2003 mainly due to savings arising from patent and licensing settlements entered into from the prior year. Infrastructure costs, which mainly include rent, utilities and equipment depreciation costs, amounted to € 2.3 million (2002: € 2.6 million), or 12% of total costs, and remained largely unchanged compared to the prior year.

### Cost by Expenditure Type



### Non-Operating Items

Non-operating income decreased by € 1.8 million to a non-operating loss of € 0.7 million (non-operating income 2002: € 1.1 million), and was mainly due to interest expense. € 0.7 million resulted from the election to issue shares associated with the XOMA agreement and is a non-cash charge relating to the accounting of such conversion under U.S. GAAP accounting. Additionally, € 0.2 million interest expense was recorded during the period and arose in connection with interest expense on liabilities associated with the CAT settlement. Additionally, the Company recorded an impairment charge related to unrealized losses on available-for-sale securities in the amount of € 0.8 million in the year of 2003. MorphoSys considers all reductions in market value of its marketable securities (available-for-sale securities) which are longer than six months in duration to be deemed other than temporary decline in value unless facts and circumstance indicate otherwise. Since the date of the write-off, the securities have regained their value by € 0.6 million, 75% of the original loss, at year-end 2003.

In December 2003, the Company recorded an unrealized gain of € 0.3 million as part of its hedging program to protect against foreign exchange exposure from the U.S. dollar reflected as non-operating income.

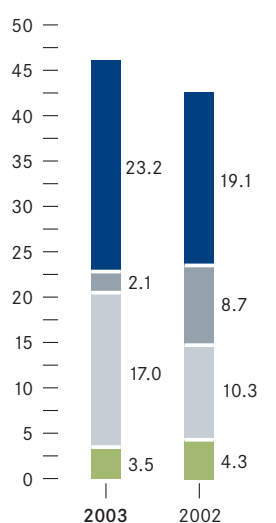
### Net Loss

The Company posted a loss from operations in 2003 of € 3.5 million (2002: € 25.5 million), with sharply lower operating expenses responsible for the reduced loss levels. EBITDA (earnings before interest, taxes, depreciation and amortization and stock-based compensation) amounted to € 1.2 million; the first time MorphoSys has achieved a positive EBITDA result (2002: € (18.7) million). Mirroring this trend, the net loss of € 4.1 million in 2003 (2002: 24.4 million), was markedly lower due to lower operating expenses. The resulting loss per share for the full year 2003 amounted to € 0.96 (2002: € 6.35), a reduction of 85%.

### Liquidity/Cash Flows

On December 31, 2003, the Company had € 23.2 million in cash, cash equivalents and marketable securities, compared to a € 19.1 million balance at December 31, 2002—an increase of more than 20% over the prior year—and the first year in the Company's history that such an increase in cash and short-term investments from operating activities took place. In 2003, cash provided by operating activities was also positive for the first year ever. For the full year 2003, cash provided by operations amounted to € 5.8 million in comparison to cash used in operating activities of € 15.2 million in the year 2002. During the year 2003, the Company's current assets decreased by € 3.3 million to € 26.2 million compared to € 29.5 million at December 31, 2002, primarily as a result of lower receivables levels at year-end 2003.

### Total Assets (in million €)\*



■ Cash, cash equivalents, and marketable securities  
■ Accounts receivable  
■ Intangibles  
■ Other assets

\* Differences due to rounding up/down, see balance sheet page 87.

### Assets

Total assets increased by € 3.4 million to € 45.8 million in the year 2003, compared to € 42.4 million at December 31, 2002. The difference was attributable to the increase in intangible assets of € 8.3 million arising from the acquisition of the CAT license and was partly offset by a decrease in current assets of € 3.3 million.

### Liabilities

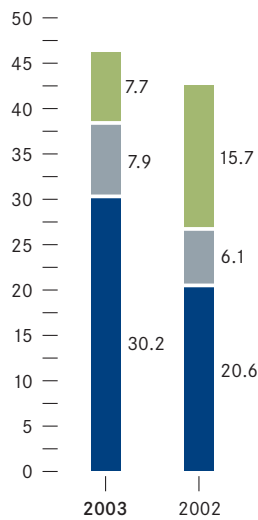
During the year 2003, total current liabilities fell by € 8.0 million, principally due to the settlement in licenses payable of € 4.9 million (of which € 3.8 million was non-cash) as well as a drop of other accounts payable by € 2.0 million. The decrease in licenses payable resulted from the payment of certain obligations under the settlement agreement with CAT and the payment of the XOMA license agreement with equity.

Deferred revenue increased by € 2.3 million to € 10.4 million, largely as a result of the collaborations entered into in the fourth quarter of 2003. The long-term portion of € 6.1 million for the year ending December 31, 2003 (2002: € 3.7 million) was reclassified into non-current liabilities.

### Equity

At year-end 2003, the total number of shares issued was 4,901,332 of which 4,841,570 were outstanding, compared to 3,949,706 and 3,889,944 in the prior year.

As part of the MorphoSys-XOMA licensing agreement signed in 2002, in October 2002 MorphoSys elected to issue 363,466 shares to XOMA as partial consideration for the XOMA license received. The capital increase was registered and the shares were issued to XOMA in the first half of the year 2003. In coordination with MorphoSys, XOMA successfully sold all their MorphoSys shares of stock by the third quarter of 2003.

**Liabilities (in million €)\***

■ Current liabilities  
■ Non-current liabilities  
■ Stockholders' equity

\* Differences due to rounding up/down, see balance sheet page 87.

In December 2002, MorphoSys signed a settlement with CAT to resolve longstanding patent litigation issues. As part of the agreement, MorphoSys agreed to issue 588,160 shares to CAT as partial consideration for the CAT license. The license and subscription agreements were executed in July 2003 and the capital increase was registered in August 2003. The shares issued to CAT were subject to a lockup and CAT remained a shareholder at year-end.

Both aforementioned share issuances excluded stockholders' preemptive rights as allowed under the Company's Articles of Association and respective shareholder resolutions.

In May 2003, the annual stockholders' assembly authorized the Company to increase its Conditional Capital II, IV and V up to 1,275,000, 450,269 and 111,447 shares respectively.

**Capital Expenditure**

During 2003, total investment in intangibles amounted to € 8.4 million (2002: € 3.7 million). A large majority of the increase related to the acquisition of the CAT license in 2003 acquired with MorphoSys equity. Amortization of capitalized intangibles for the year 2003 was € 1.6 million compared to € 1.2 million in the previous year.

Investment in property and equipment amounted to € 0.7 million in the year 2003 compared to € 0.9 million in the previous year. Depreciation for 2003 of € 0.9 million remained unchanged to the same period last year.

**Subsidiaries/Segments/Organizational Structure**

MorphoSys' global headquarters is located in Martinsried/Munich, Germany. The Company's R&D center and all administrative departments are currently located at its headquarters. The Company currently possesses two wholly owned subsidiaries:

**MorphoSys U.S.A., Inc.**

MorphoSys U.S.A., Inc. was formed in the year 2000 for the purpose of assisting MorphoSys AG in marketing and commercializing its technologies. The U.S. subsidiary, with its office in Charlotte, North Carolina, was responsible for all marketing and corporate development activities of MorphoSys. In November 2002, the Company announced restructuring measures with the aim of reducing expenditures related to the development of proprietary drug candidates and refocusing its commercial strategy. In line with these measures, the activities of MorphoSys U.S.A., Inc. were transferred to MorphoSys AG in Germany and the operations in Charlotte, NC, were substantially closed by year-end 2002. Termination of all leased office space was finalized in August 2003, and represented the last significant expenditure associated with the subsidiary.

All costs, actual and estimated, which are associated with MorphoSys U.S.A., Inc. have been included in the financial statements and notes thereof.

#### **MorphoSys IP GmbH**

In November 2002, MorphoSys formed MorphoSys IP GmbH, whose purpose is to administer the internally generated intellectual property of MorphoSys AG. To this end, MorphoSys AG sold at fair market value the rights to certain internally generated intellectual property in 2002. MorphoSys IP GmbH is a wholly owned subsidiary of MorphoSys AG, and a profit-pooling agreement exists between those two companies. In order to fulfill its operational needs, MorphoSys IP GmbH has contracted administrative services from MorphoSys AG and entered into a sublicensing agreement with MorphoSys AG, in order to enable MorphoSys AG to commercialize said patents/technologies.

### **Commercial Partnerships and Alliance Development**

MorphoSys possesses one of the leading technologies in the field of human antibodies. The Company makes use of its technology not only in the development of its own products, but also in collaborations with internationally renowned pharmaceutical and biotech companies.

In 2003, the Company was able to report progress in its existing partnerships. In addition, existing collaborations were expanded and new collaborations signed. The following partnerships were either established or expanded in the 2003 fiscal year (in alphabetical order):

#### **Boehringer Ingelheim GmbH**

MorphoSys AG and Boehringer Ingelheim GmbH (“Boehringer Ingelheim”) signed a cross-licensing agreement in February 2003. Under the agreement, MorphoSys obtained the exclusive worldwide license for patents which are in possession or control of Boehringer Ingelheim, in order to develop, manufacture and sell therapeutic and diagnostic antibodies against ICAM-1 (intercellular adhesion molecule-1). For the sale of therapeutic or diagnostic antibodies against ICAM-1, MorphoSys will pay milestone payments and royalties to Boehringer Ingelheim. In return, Boehringer Ingelheim will receive exclusive licenses for therapeutic antibodies against two undisclosed target molecules that MorphoSys will develop with its HuCAL® GOLD antibody technology. Should antibodies be further developed by Boehringer Ingelheim, MorphoSys will receive milestone payments and royalties from Boehringer Ingelheim for the development and sale of these HuCAL® GOLD antibodies.



**Dr. Barbara Krebs**  
Director  
Business Development

**Lonza Biologics**

In January 2003, MorphoSys AG signed an agreement with Lonza Biologics (“Lonza”) for the production of clinical-grade HuCAL<sup>®</sup> antibodies. The term of the contract is five years and provisions in the contract guarantee MorphoSys access to Lonza’s antibody manufacturing capacities. The agreement comprises future development projects both for MorphoSys’ own antibody projects and for antibodies from collaborations. Under the scope of the collaboration, MorphoSys can offer its partners manufacturing capacities at Lonza and thereby substantially increase the value of its antibody projects.

**Pfizer, Inc.**

In December 2003, MorphoSys AG and Pfizer, Inc. (“Pfizer”) announced a collaboration for the development of therapeutic antibodies. Under the collaboration, MorphoSys will use its HuCAL<sup>®</sup> GOLD library to generate therapeutic antibodies against multiple targets from Pfizer. Pfizer is to carry out the preclinical and clinical development and the subsequent marketing of resultant products. MorphoSys received an upfront payment and, for each antibody developed in the collaboration, research support and milestone payments. MorphoSys also stands to receive royalty payments on any antibody products coming out of the collaboration. The potential value to MorphoSys in committed funding and potential developmental milestone payments on future products is estimated to be in excess of US\$ 50 million, not including royalties.

**Antibodies by Design**

The Company launched a new business initiative, “Antibodies by Design,” in 2003. This new initiative was created to leverage MorphoSys’ core technological capabilities in the design and manufacture of antibodies for research purposes; it will commercialize the HuCAL<sup>®</sup> technology focusing on the custom generation of research antibodies for partners on an individual basis. The Company expects that it will partner Antibodies by Design’s “sequence-to-antibody” services with established catalog antibody providers and, subsequently, with protein array providers. Antibodies by Design’s “sequence-to-antibody” services are expected to allow for the development of custom antibodies from only the antigen sequence information with a lead time of approximately ten to twelve weeks, in comparison to the current market benchmark of six months.

## Manufacturing

As a result of its partnership with Lonza Biologics, MorphoSys has gained a competent partner in the production of antibody material. Lonza has many years of experience in the field of process optimization and production of biological agents. The production of clinical antibody material is a time-consuming and expensive procedure, which is strictly controlled by the relevant authorities.

For its own preclinical investigations, MorphoSys produces antibodies in milligrams. The new business initiative “Antibodies by Design” also produces antibodies for its customers in this quantity. The current MorphoSys capacity is fully capable of producing antibodies in these amounts, and these materials are used exclusively for research and are therefore not subject to any particular production guidelines. MorphoSys currently has no plans to build its own production facilities for the manufacture of clinical antibody material due to the investment and expense involved with such production sites.

## Human Resources

### People at MorphoSys

At MorphoSys, there is a very high focus on Company personnel, as the Company’s future success is in large part due to the commitment and performance of the people working there. In order to achieve maximum corporate success, it is of central significance for the Company to hire the most highly qualified and motivated employees and to be able to retain them for the long term.

Various measures currently in place at the Company serve to create optimum working conditions for all employees. As an example, employees with personnel management responsibilities attend leadership and management skill seminars. In addition, technical or specialist training forms an important part of each employee’s experience at MorphoSys. As part of the Company’s international orientation, MorphoSys offers English courses to all its employees.

As in previous years, stock options and convertible bonds were offered to all employees as part of a long-term incentive scheme. The aim of this program is to give employees a long-term stake in the success of the Company. In addition, all employees take part in a Company-wide management-by-objectives program. The program’s targets include both Company and personal goals. The achievement of each employee’s goal is linked to the annual bonus program. Such measures guarantee a goal-orientated culture across the Company.



**Silvia Dermietzel**  
Senior Director  
Human Resources

In 2003, MorphoSys employees also produced a Company “Credo”. This credo is the model for interaction and communication within the Company as well as for cooperation with partners and customers. Intensive and open dialog across all levels of the hierarchy is promoted to ensure that all employees understand, promote and implement the Company’s essential values.

### **Significant Appointments**

#### **Supervisory Board of MorphoSys AG**

At the ordinary stockholders’ assembly of May 16, 2003, the two members of the Supervisory Board Prof. Jürgen Drews and Prof. Andreas Plückthun were reelected. Prof. Jürgen Drews, Managing Director of the Bear Stearns Health Innoventure Fund, is Deputy Chairman of the Supervisory Board and has been on the MorphoSys AG Supervisory Board since 1997. Prof. Andreas Plückthun, Professor of Biochemistry at the University of Zurich, Switzerland, is a co-founder of MorphoSys AG.

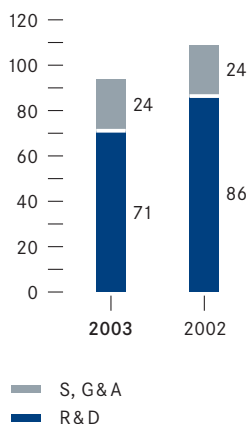
#### **Antibodies by Design**

In order to establish the new business initiative, MorphoSys was able to recruit two new employees, experienced in the area of marketing and sales of research reagents during the year.

Dieter Lingelbach joined MorphoSys on April 1, 2003 from Roche Diagnostics, where he was responsible for global marketing and sales of biochemicals. He heads the new business initiative “Antibodies by Design” and serves as Senior Vice President. Mr. Lingelbach has almost 20 years of professional experience in management consulting at Booz, Allen & Hamilton and in diagnostics, health care and biotechnology at Roche Diagnostics (formerly Boehringer Mannheim), mostly in the areas of strategy development, marketing and sales.

Joanne Crowe joined MorphoSys in May 2003 from Qiagen, where she was International Marketing Director responsible for the management of global marketing activities and planning and administration of Qiagen’s marketing budget. At MorphoSys, she was appointed as Senior Director Marketing & Sales responsible for all marketing and sales activities of “Antibodies by Design.” Ms. Crowe has more than 12 years’ experience in marketing and marketing communications to the life science research industry.

## Employees



## Number and Qualification of Employees

On December 31, 2003, the MorphoSys Group employed 95 employees (December 31, 2002: 110). The MorphoSys Group employed an average of 93 employees for the full year 2003 (2002: 116): For Q4 2003, the average was 95 employees (Q4 2002: 116).

Of the 95 employees, 71 worked in research and development and 24 in administration and sales. At the end of 2003, 35 of MorphoSys' employees had a Ph.D. degree (December 31, 2002: 45).

On December 31, 2003, MorphoSys employed 2 trainees as "technical information processors in the area of information technology" (December 31, 2002: 2 trainees).

## Environment and Health Protection

MorphoSys carries out its research in safety level "Bio I" and "Bio II" laboratories and under observance of all relevant legal guidelines. Internal standards are more stringent than those guidelines which are legally required. One designated full-time employee for work safety is part of the competent team of employees specifically responsible for work safety, biological safety and fire prevention. Employees are given regular training to inform them of the latest guidelines. To date, no official inspections have resulted in any requirement to change procedures. Due to regular maintenance by internal employees, all laboratory equipment adheres to the highest possible standard of safety.

A detailed waste management concept which has been extensively documented, ensures that disposal of laboratory waste is always in line with valid limits and guidelines.

Regular medical checks are carried out for all MorphoSys employees. An initial medical check is carried out for all new employees in the research department. Such checks are repeated yearly. Furthermore, employees are routinely vaccinated against hepatitis A and B.



**Dr. Günter Wellenhofer**  
Director  
Technical Operations

## Research and Development

MorphoSys uses its own HuCAL<sup>®</sup> technology for development of therapeutic antibodies and research reagents. This technology has been thoroughly tried and tested in numerous partnerships.

In the course of its therapeutic antibody collaborations, MorphoSys generates human antibodies for its partners which are then optimized according to their requirements. In the context of these partnerships, MorphoSys is responsible for the manufacture and optimization of the antibodies whereas the partner is responsible for preclinical and clinical development.

More recently, MorphoSys has been developing its own proprietary therapeutic antibodies as candidates for outlicensing to potential partners, prior to their entry into clinical development.

### **Collaborations**

In the course of the 2003 fiscal year, MorphoSys made significant progress in various existing collaborations.

#### **Bayer AG**

In January 2003, Bayer AG (“Bayer”) purchased an exclusive license to further develop a HuCAL<sup>®</sup> antibody. This antibody targets an undisclosed solid tumor target molecule. The antibody was selected from the HuCAL<sup>®</sup> library by Bayer Biotechnology, Berkeley, California, U.S.A and characterized in detail. Furthermore, the antibody demonstrated to be significantly effective in various cancer-animal models. Bayer is currently planning to further characterize the most promising candidate in further preclinical studies and then to proceed to clinical development in the indication of solid tumors.

In December 1999, MorphoSys and Bayer signed an extensive partnership agreement for the development of antibodies. In July 2001, the collaboration was extended for a further four years. The collaboration focuses on the manufacture of human antibodies for therapeutics, diagnostics, and genome research. Bayer is focusing on the development of therapeutic antibodies derived from HuCAL<sup>®</sup> and currently has several antibody programs in various indications. The acquisition of this exclusive license is Bayer’s second such license from MorphoSys. Moreover, Bayer retains further options for exclusive licenses for the development of therapeutic HuCAL<sup>®</sup> antibodies.

MorphoSys AG announced an agreement with Bayer HealthCare for the cross-licensing of certain technologies. Under the agreement, MorphoSys received the human cell line HKB 11 for production of HuCAL<sup>®</sup> antibodies. MorphoSys also received the right to use the cell line for its own research and an option for the commercial production of antibodies using the HKB 11 cell line. In exchange, Bayer will switch its in-house R&D programs to the MorphoSys HuCAL<sup>®</sup> GOLD antibody technology. Additionally, MorphoSys received an installation fee from Bayer HealthCare.

#### **Boehringer Ingelheim GmbH**

In the context of the partnership agreement signed in February 2003, Boehringer Ingelheim selected its first option for development of a therapeutic antibody in November 2003. MorphoSys will develop a therapeutic antibody against an undisclosed target molecule in the field of inflammatory diseases and select this antibody from the HuCAL<sup>®</sup> GOLD library. Boehringer Ingelheim will be responsible for the further preclinical and clinical development as well as for the subsequent marketing of any resulting products.

#### Centocor, Inc.

In July 2003, MorphoSys achieved the third milestone in the collaboration with Centocor, Inc. ("Centocor"), a subsidiary of the U.S. company Johnson & Johnson. MorphoSys generated several antibodies against a Centocor target molecule in the inflammatory diseases indication. The antibodies, which were systematically optimized by MorphoSys, met all eight predefined success criteria, and thus triggered the milestone.

In December 2000, MorphoSys and Centocor undertook to collaborate on the development of human antibodies in various indications. In the context of the collaboration, Centocor was granted the option of developing therapeutic antibodies against up to 30 different target molecules. In March 2002, Centocor AutoCAL™ ordered the system developed by MorphoSys for the automated screening of the HuCAL® antibody library.

#### F. Hoffmann-La Roche

MorphoSys and F. Hoffmann-La Roche ("Roche") presented successful and promising animal data from their collaboration on Alzheimer's disease at the "33rd Annual Meeting of the Society for Neuroscience" in New Orleans, Louisiana, U.S.A. Within the collaboration, MorphoSys, using its HuCAL® library, generated antibodies against Roche's Alzheimer target molecule amyloid  $\beta$ -peptide (A $\beta$ ). The antibodies bound very specifically to human amyloid plaques (protein deposits). In the Alzheimer animal model performed by Roche, the systemically administered antibodies demonstrated highly specific binding to the amyloid plaques in the brains of transgenic mice. Massive accumulations of amyloid plaques in the brain are symptomatic of Alzheimer patients. The use of antibodies against such amyloid plaques could therefore be a possible method of treatment for Alzheimer patients.

MorphoSys and Roche have been collaborating since September 2000 on developing antibodies for the treatment of Alzheimer's disease. Using its proprietary HuCAL® library, MorphoSys generated various antibodies against the target molecule of Roche. Between December 2000 and March 2001, a total of four milestones were reached in the collaboration. MorphoSys provided a series of HuCAL® antibodies which bound selectively to human cerebral tissue affected by Alzheimer's disease. Both in *in vitro* studies and in the Alzheimer animal model, the HuCAL® antibodies generated by MorphoSys showed a high affinity for the target molecule. Looking ahead, MorphoSys has the potential to receive milestone payments and royalties for end products derived from the collaboration.

#### Schering AG

In July 2003, MorphoSys and Schering AG ("Schering") announced successful results from their collaboration. Working under the collaboration, MorphoSys selected and optimized antibodies against a Schering oncological target molecule. These antibodies had previously shown effectiveness in an *in vitro* test system. Moreover, the antibody showed specific accumulation in tumor tissue in tumor localization studies with mice.

MorphoSys and Schering signed a strategic collaboration agreement in December 2001. As part of the collaboration, the companies are developing therapeutic antibodies and *in vivo* diagnostic agents, particularly in the oncology indication. The MorphoSys HuCAL<sup>®</sup> GOLD technology is used in Schering's plants in Berlin and also at Berlex Biosciences in Richmond, California, U.S.A.

### **Proprietary Antibody Development**

MorphoSys is developing human therapeutic antibodies in the indications of inflammatory diseases, cancer and infectious diseases. The Company intends to outlicense these candidates prior to the start of their clinical development. The pipeline with proprietary antibody products currently includes the following candidates:

#### **MOR101 and MOR102 (ICAM-1)**

MOR101 and MOR102 are human HuCAL<sup>®</sup> antibodies against the target molecule ICAM-1 (intercellular adhesion molecule-1), also known as CD54.

MOR101, a Fab fragment, is being developed for the indication of dermal burns. There is a significant medical need for this drug, as there are currently no drugs on the market which treat dermal burns.

MOR102, a HuCAL<sup>®</sup> IgG antibody, is currently being developed for the indication of psoriasis. Further development potential may arise from additional inflammation indications such as rheumatoid arthritis.

Due to their strong anti-inflammatory properties without related immune suppressive side effects, both anti-ICAM-1 antibodies have the potential to replace existing standard therapies.

In October 2003, MorphoSys published the first promising results from preclinical studies for MOR101 and MOR102.

In a preliminary animal model for MOR101, a chimeric Fab fragment derived from the murine BIRR-1 antibody was tested. The study demonstrated that this fragment displays the same effectiveness as the complete murine antibody BIRR-1. This study was performed in collaboration with Prof. Pallua and Dr. Fuchs, Plastic Surgery, University of Aachen.

In an animal model for psoriasis, it was shown that administration of MOR102 reduces epidermal swelling by 40%. The studies were performed in collaboration with Prof. Boehncke, Department of Dermatology, University of Frankfurt.

On the basis of these results, MorphoSys is planning to further develop the two antibody programs MOR101 and MOR102, and is currently looking for a partner to take over further preclinical and clinical development.

### Further Development Programs

MorphoSys currently has two further antibody programs. Both programs are still in the research phase:

- MOR202 is a human HuCAL<sup>®</sup> antibody against an undisclosed target molecule in the indication of oncology.
- Another program is currently in progress. No further information on this has been disclosed to date.

MorphoSys intends to outlicense its current therapeutic antibody programs to partners prior to clinical development.

### Intellectual Property

For biotech companies such as MorphoSys, it is of critical importance to establish an extensive international patent portfolio to protect its proprietary technologies. The centerpiece of this portfolio is the proprietary technologies pertaining to the HuCAL<sup>®</sup> antibody library. Moreover, all additional patents which are necessary for the use of our proprietary technology have been inlicensed.

At present, MorphoSys has six granted patents and more than 40 patent applications are pending throughout the world.

#### IP Highlights of 2003 include:

A positive recommendation in the patent dispute with Applied Molecular Evolution (AME): The Magistrate Judge recommended that the District Judge of the district court in Boston, Massachusetts, U.S.A. allow MorphoSys' petition for non-violation of AME's patents and overrule AME's petition for patent violation by MorphoSys. If the District Judge accepts the Magistrate Judge's recommendation, all counts of AME's charge will be decided in favor of MorphoSys.

The granting of the HuCAL<sup>®</sup> EST patent in the U.S.A.: the U.S. patent (U.S. 6,653,068) with the title of "Generation of Specific Binding Partners to (Poly)Peptides Encoded by Genomic DNA Fragments or ESTs" covers methods for expressing large quantities of EST-coded protein fragments as fusion proteins and the subsequent selection of HuCAL<sup>®</sup> antibodies against these proteins. The technology is currently employed in several of MorphoSys' collaborations with partners.

#### Ideas Database

In 2003, MorphoSys set up software to assemble a database of ideas. A reason for using this software tool is to systematically record and evaluate employees' ideas, notifications of inventions, and proposals for improvement. Through such a system, the creative potential of each employee can be noted, while at the same time a systematic workflow is ensured in order that interesting ideas are neither missed nor ignored.

## Risk Report

MorphoSys AG operates on a global basis. Its business activities comprise different risks, which are relevant to many business functions. The business, financial condition and results of operation of MorphoSys may be materially adversely affected by each of these risks. The Company has established a risk management system that is used regularly to identify, measure and control such risks as an integrated part of normal business activities.

### Product Development

MorphoSys is committed to generating therapeutic antibodies for its commercial partners and, more recently, its own account. Thus, the Company's product pipeline comprises both partnered and proprietary therapeutic antibody development programs. These programs are subject to a number of risks of failure inherent in the development of medical therapies. Product candidates require preclinical studies and clinical trials in humans as well as regulatory approval prior to commercialization. To date, none of the Company's licensees or partners has commercialized a product based on MorphoSys' HuCAL<sup>®</sup> technology, and HuCAL<sup>®</sup>-derived therapeutics are not expected to be commercially available for a number of years. In addition, none of the HuCAL<sup>®</sup>-derived product candidates has reached clinical development and thus has not yet proven that it may be able to successfully complete all stages of clinical testing and regulatory approval procedures. Preclinical studies may not predict and do not ensure safety or efficacy in humans, and are not necessarily indicative of the results that may be achieved in pivotal clinical trials with humans.

### Competition and Technological Change

MorphoSys' business environment is characterized by rapid change and intense competition. Its competitors include major pharmaceutical, chemical and biotech companies possessing greater financial, technical and marketing resources than those available to MorphoSys. In addition, certain biotech companies have formed collaborations with large established companies to support research, development and commercialization of products that may be competitive with those of MorphoSys. Moreover, certain research and academic institutions are also active in areas similar to MorphoSys. Some of MorphoSys' competitors currently focus their business efforts on gaining a share of the market and offer their technology at little or no cost to collaboration partners. The first pharmaceutical product to reach the market is often at a significant advantage to later entrants, particularly since subsequent potential entrants must prove an advantage of their product over products already in the market.

There is a risk that MorphoSys' competitors could succeed in developing technologies and products that are safer, less costly and more effective than its technologies or products. In addition, there is a risk that these technologies could produce products that reach the market earlier and could be more successful than those developed by MorphoSys.

#### **Dependence on Health Care and Pharmaceutical Spending**

MorphoSys is directly and indirectly dependent on various sources of income, including, in particular, fees, milestone payments and royalties from licensees and partners, the financial condition of public treasuries and the financial markets, the government and governmental health authorities, research institutions, private health insurers and other organizations.

Part of MorphoSys' revenue is derived from entering into collaborations with partners, including pharmaceutical companies. Many collaborative and/or outlicensing agreements provide for milestone payments and fees to be paid subject to the satisfaction of specific criteria. MorphoSys has no control over whether its partners or licensees will be able to meet such milestones, nor will MorphoSys be able to control whether products derived from its technology are being developed at all by its partners. Moreover, certain pharmaceutical companies may be more likely to seek to inlicense products which have already reached a relatively advanced stage of development, such as Phase II compounds, as opposed to less-advanced product candidates still in preclinical stages. Consequently, the products in MorphoSys' pipeline may not reach a sufficiently advanced stage of development to be of interest to these pharmaceutical companies for some time. Therefore the Company can offer no assurance that there will be a guaranteed revenue stream from current or future collaborations.

#### **IP Risks**

MorphoSys is or has been involved in legal proceedings in Germany and certain foreign jurisdictions, including the United States, including claims brought by and against it for license or patent infringement, which arise in the ordinary course of business. While the Company cannot predict the ultimate outcome of the still pending proceedings, management does not currently believe them to have a material adverse effect on the business, financial condition and results of operations of MorphoSys. However, the field of recombinant antibody libraries and phage display, in which the Company is active, is relatively new, and the intellectual property position of the various parties involved is becoming increasingly complex and litigious. Therefore, MorphoSys can offer no assurance that further patent suits will not be brought by companies possessing existing patents or patents which have not yet been granted or which the Company is currently not aware of. Any such proceedings, if brought and subsequently decided against MorphoSys, could have a material adverse effect on the business, financial condition and results of operations of MorphoSys.

**Additional Funding Requirements**

MorphoSys' future capital requirements will continue to be substantial and will be dependent on many factors, including its ability to find licensees and to enter into satisfactory collaboration agreements as well as the success of such collaborations in generating revenues (e.g., licensing fees, milestone payments and royalties). The costs of preclinical testing of MorphoSys' products and technologies as well as the costs associated with filing, defending and enforcing patent rights may exceed the returns from these products. MorphoSys may also need to raise additional funds in future years. The Company can offer no assurance that adequate funds will be available to MorphoSys when needed on satisfactory terms or at all. If adequate funds are not available or are not available on acceptable terms, MorphoSys may have to further reduce its expenditures for research and development, production or marketing. Any such development could have a material adverse effect on MorphoSys' business, financial condition and results of operations. If additional funds are raised by issuing shares, stockholders are likely to experience a dilution of their interests.

**Currency Risk**

The group accounts are administered in euros. While the expenses of MorphoSys are predominantly paid in euros, a significant part of the sales depend on the current exchange rate of US dollars and euros. Though the Company examines the necessity of hedging transaction to minimize those currency risks once a year and closes them if necessary to prevent the annual results from negative effects. Therefore, the gains and losses resulting from hedging transactions are offset from the revenue transactions, which are hedged. In addition, it is not contain, that hedging transactions will be sufficient to adjust extreme fluctuations in exchange rates.

## Outlook for 2004

### Outlook for the Biotech Sector

Looking ahead into 2004, approximately 30 drugs will be launched onto the market, including products such as Avastin (Genentech), Erbitux (Imclone Systems) and Cinacalcet (Amgen). In addition to the product launches, 45 FDA approvals are expected—a number which could reinvigorate the outlook for the entire industry. Other positive news from the sector, including regulatory approvals and clinical milestones, could also provide an impetus to attract further money flow into the sector.

### Strategy

MorphoSys will continue to execute its strategy of partnered and proprietary therapeutic antibody development in 2004. This strategy has served the Company well in 2003, providing a positive cash flow for the year while an ever-stronger pipeline of therapeutic antibodies is being created. Management will continue to focus on securing new partnerships within which the Company's proprietary HuCAL<sup>®</sup> technology can be applied to generating future product candidates as a means of increasing the Company's long-term value. An important aspect of these activities in 2004 will be securing a development partner for the Company's most advanced proprietary drug candidates MOR101 and MOR102. Additional proprietary product candidates, currently in the research phase, represent the next opportunities for outlicensing. The "Antibodies by Design" initiative, started in 2003, will continue to be pursued. The management of MorphoSys believes the Company is well positioned to execute its strategy and looks forward to a successful 2004.

### Revenues

As communicated in the previous year, 2003 was a year of consolidation after the restructuring at year-end 2002. Based on its market research, MorphoSys foresees an increase in demand for its technologies and products in 2004 as the pharma industry ramps its investment in external research and development. Company revenues are expected to increase in 2004 and achieve a double-digit percentage increase over the previous year. As such, these revenue projections are consistent with expectations for a growth company. Revenue sources, as in previous years, will consist of committed annual licensing fees arising from the Company's multiyear partnerships and success milestones achieved within these partnerships. Within the scope of these partnerships, it is anticipated that at least one HuCAL<sup>®</sup>-derived antibody will be taken by one of MorphoSys' partners into clinical development. Also expected is the acquisition of new business partners, in the context of therapeutic antibody collaborations.

New sources of revenue are expected in 2004 which include the outlicensing of MorphoSys preclinical programs, in particular, MOR101 and MOR102. Also newly contributing to revenue will be the "Antibodies by Design" initiative, formed in the year 2003, which focuses on the non-therapeutic antibody business and, in particular, on the generation of custom antibodies for research purposes.

**Expenses**

Expenses are expected to rise slightly over 2003 levels. Above all, intangibles expense is likely to rise over 2003 levels due to higher amortization charges on licenses acquired in 2003. The higher charges are related to changes in accounting estimates in 2003 on the size of the license payments, as well as, due to the fact that full-year amortization charges will be charged against income, as opposed to partial-year charges in 2003 on CAT and XOMA licenses acquired. The difference in magnitude of these charges relates to the timing of the license acquisitions during the year 2003. Revenue generation and milestone achievement in certain collaborations will also trigger higher payments to third-party licensors. Finally, expenses related to continuation of the AME litigation case are also expected to edge intangibles costs higher in 2004.

**Capital Investment**

Capital expenditures on property and equipment are expected to remain essentially constant, as compared to the previous year. The acquisition of substantial intangibles licenses, as was the case in the prior year, is currently not anticipated.

**Human Resources**

Headcount is currently anticipated to increase only modestly. All increases are contingent on new business/collaborations to support the same.

**R&D Activities**

In line with the previous year, MorphoSys' R&D team will focus on generating results and milestones within existing collaborations, and continue developing the existing portfolio of research/preclinical candidates for outlicensing. It is also planned that two new proprietary research/preclinical programs are to be started during the year, for eventual outlicensing.

**Marketing/Commercial**

The Company will continue to intensify its efforts to attract new therapeutic antibody partners. In addition, the outlicensing of MorphoSys' proprietary antibody candidates shall also be a priority going forward. Furthermore, the Company will continue to expand its marketing efforts relating to the "Antibodies by Design" initiative, in order to further develop the market for custom-generated non-therapeutic antibodies.

**Dividends**

Although MorphoSys expects to continue the trend of reducing its losses, the Company believes that the payment of dividends should be deferred until such time as its financial and liquidity position supports the same. As such, any profits generated by the business shall be reinvested into the operation of its business in order to create further growth opportunities for the future.