



2002 ANNUAL REPORT

Short Version



» Focusing Our Resources –
Investing in the Future «

Pharmaceuticals	Sales	EUR 3,226 million
Our pharmaceuticals business comprises prescription drugs (ethicals, e.g. for the treatment of metabolic and cardiovascular diseases), generics, and consumer health care products. Sales in Pharmaceuticals declined 2.9%. Investments in research and development rose 4.2% to EUR 499 million. Ethicals R&D totaled EUR 423 million or 24% of the division's sales. The Pharmaceuticals business sector contributed 43% of the Merck Group's total sales, its share of the total operating result was 44%.	Operating result	EUR 272 million
	Return on sales	8.4%
	EBIT	EUR 272 million

Chemicals	Sales	EUR 1,782 million
The Chemicals business sector consists of five divisions which supply high-tech products: liquid crystals for displays; effect pigments and specialty chemicals for the technical industry; electronic chemicals for chip manufacture; analytical reagents and test kits for the chemical and food industries and environmental analysis; products and services for the entire process chain of pharmaceutical companies. Sales rose 5.0%. The operating result increased 27%. Excluding intra-group sales with Laboratory Distribution, Chemicals contributed 21% of the Merck Group's total sales and 42% of the total operating result.	Operating result	EUR 260 million
	Return on sales	EUR 14.6%
	EBIT	EUR 208 million

Laboratory Distribution	Sales	EUR 2,711 million
With its laboratory chemicals, equipment and consumables, and its comprehensive service offering, Merck is the world's leading full-service provider for the life science industry. The Laboratory Distribution business sector, operating under the name VWR International, Inc., recorded a decline in sales of 1.6%. The operating result decreased 8.2%. Laboratory Distribution contributed 36% of the Merck Group's total sales and 14% of the total operating result.	Operating result	EUR 84 million
	Return on sales	3.1%
	EBIT	EUR 79 million

Merck Group	Sales	7,473 Mio EUR
The Merck Group's sales declined 0.7% to EUR 7,473 million compared to the record year 2001. After adjustment for currency effects and divestitures sales were up 5.0%, despite generic competition in the United States for Merck's top-selling product, the oral antidiabetic Glucophage®. Our expenditure for research and development, which has been quite substantial for a number of years, increased 5.4% to EUR 608 million in the year under review. The operating result dropped 29.7% to EUR 616 million from EUR 877 million in 2001 – the most successful year in Merck's 335-year history.	Operating result	616 Mio EUR
	Return on sales	8.2%
	EBIT	559 Mio EUR

Merck Business Development 2001/2002

<i>EUR million</i>	2002	2001	Change in %
Sales	7,473	7,528	-0.7
Pharmaceuticals	3,226	3,323	-2.9
Chemicals	1,782	1,697	5.0
Laboratory Distribution	2,711	2,754	-1.6
Intragroup sales	-246	-246	0.1
Operating result	616	877	-29.7
Pharmaceuticals	272	581	-53.2
Chemicals	260	204	27.4
Laboratory Distribution	84	92	-8.2
Earnings before interest and tax (EBIT)	559	1,286	-56.5
Profit before tax	412	1,078	-61.8
Profit after tax	215	655	-67.1
Free cash flow	441	664	-33.5
EBITDA <i>(EBIT before depreciation and amortization)</i>	985	1,694	-41.9
Investments in property, plant and equipment	377	470	-19.8
Research and development	608	577	5.4
Balance sheet total	7,511	8,255	-9.0
Net equity	2,054	2,336	-12.1

Employees (number as of Dec. 31)		34,504	34,294	0.6
Return on sales	%	8.2	11.6	
<i>(ROS: operating result/sales)</i>				
Return on capital employed	%	9.6	13.5	
<i>(ROCE: operating result/average operating assets)</i>				
Earnings per share	EUR	1.18	3.66	-67.8
<i>(for calculation see p. 19)</i>				
Dividend per share	EUR	1.00	0.95	5.3

Merck will be number one in its core businesses through innovations created by talented, entrepreneurial employees.

Our Vision

| Michael Hanrahan | Operating an investigational cell culture bioreactor | Merck develops proteins for cancer therapy |



Billerica, MA (USA) | August 22, 2002 | EMD Pharmaceuticals

The true value drivers at Merck are our 34,504 employees worldwide. For *generations*, people at Merck have worked together as a team and experienced the *fascination* of cutting-edge science and technology as they improve the health and quality of life for millions of people. The *courage* needed to maintain our founders' *pioneering spirit* is an integral part of our company's unique and successful *tradition*. These corporate values are at the very heart of our identity and are the key to making our vision come true.

Our Values



We are known as Merck
around the world,
except in North America



In North America
we operate under
the name EMD

2	Merck in Transition
4	Bernhard Scheuble: Letter to the Shareholders
7	Business Sectors and Divisions
8	Management of Merck KGaA
10	Matthew W. Emmens on Our Ethicals Business
14	Thomas Schreckenbach on Our Chemicals Business
18	The Merck Share
20	Management Report
23	Pharmaceuticals Business Sector
25	Generics Division: Growing Success in a Growing Market
27	Chemicals Business Sector
29	Liquid Crystals – We Make Bits and Bytes Visible
31	Laboratory Distribution Business Sector
33	Result of the Merck Group
36	Employees, Investments, Research & Development ...
43	Risk Report of the Merck Group
44	Outlook 2003
46	Balance Sheet
47	Income Statement
47	Statement of Changes in Net Equity
48	Cash Flow Statement

Cover photo: Izumi Saito and Malgorzata Rillich
test a new e-book with a special
LC mixture developed by Merck



Headquarters in Darmstadt | October 27, 2001 | Laying the foundation

» We are holding firmly to
our ambitious goals
despite this difficult phase. «

Bernhard Scheuble | Chairman of the Executive Board |
Born in 1953 | Ph.D. in physics from the University of Freiburg |
| With Merck for 21 years |



stone of a pharmaceuticals building, in operation since August 2002

— A strong performance by Generics and Liquid Crystals was not enough to offset the effects of an overall negative business environment in 2002. With the strongest pharmaceutical pipeline in its history and important investments in employees and facilities, Merck aims to create long-term value.

Dear Shareholders and Friends of Merck,

“A solid performance in a difficult environment” – This is how 2002 can be summed up. Considering the weak economy and currency exchange rates that developed to our disadvantage, we are proud to report that we were able to maintain last year’s record sales level of EUR 7.5 billion. Two divisions were particularly successful: Liquid Crystals and Generics – the mainstays of our business in 2002 – grew organically by 47 % and 36 %, respectively. The excellent performance by Liquid Crystals is attributable to our continually enhanced, patented liquid crystals, which enable our customers to produce even bigger and better LCDs. One example is Sharp’s new three-dimensional LCD. Crucial to this mutual success is the support we provide to our customers, including on-site development expertise and service. Our customer support efforts were considerably enhanced during 2002 with the inauguration of our new Liquid Crystals center in Korea. The impressive sales growth of Generics is due to the timely launch of numerous new products, in particular omeprazole. In addition, our strategy of quickly establishing a presence in important new markets is paying off. This includes the very positive development in Portugal, as well as the acquisition of Mohan in Japan, which is already bearing fruit.

During the past year, Merck found itself in a difficult environment. This was intensified by the expiration of the product protection for our most important drug, Glucophage. Through joint efforts with our U.S. partner Bristol-Myers Squibb (BMS), we were able to limit the effects of generic competition by launching improved products – Glucovance, Glucophage XR, and Metaglip. Nevertheless, our business with BMS came to an almost complete standstill due to overstocking in U.S. sales channels. In view of the forthcoming launch of innovative drugs, we have restructured and globalized our Ethicals business with a focus on research and marketing. The reorganization of production is expected to follow. In addition, our new U.S. pharmaceutical research center and pilot plant for protein production, the Campus 2002 located near Boston, became operational.



| Prof. Dr. Bernhard Scheuble |

Chairman of the
Executive Board of Merck KGaA

In spite of the decline in Glucophage sales, we were able to maintain a high level of investment in research and development, allowing continued progress of the projects in our impressive drug pipeline. The encouraging growth of our Chemicals business helped make these R&D investments possible and illustrates the wisdom of our balanced business model. Diversification enables us to pursue a medium- to long-term strategy. Beyond the contribution of Chemicals, the efficiency program implemented last year also allowed us to invest in the future. We decreased inventories and also reduced the number of employees at our main sites in Darmstadt and Lyon with careful consideration and without the need for lay-offs. Our guiding principle was to avoid endangering any projects crucial to long-term success. The successful reduction of costs also helped generate a positive free cash flow – without taking into account the Bracco unit receivable that we disposed of in 2002.

Other highlights include the reorganization of VWR, our Laboratory Distribution business. This company is now very cost-efficient. The preparations for its planned IPO in the United States were completed in good time. However, primarily due to unfavorable conditions in the equity markets, we decided not to go public with VWR in 2002. The timing of the IPO is now dependent on the expectation of getting a fair market value.

We entered the year 2003 with encouraging news for Erbitux. We remain confident that we will be able to submit the documentation for marketing authorization this year and launch the product on the European market in 2004. Erbitux is an innovative monoclonal antibody that

shows promise for the targeted therapy of certain types of cancer. We also plan to make important decisions this year regarding the further expansion of our successful Liquid Crystals business into related LCD components.

Despite the political and economic uncertainties, the continued progress of key R&D projects in Pharmaceuticals and the positive development of our Generics and Liquid Crystals businesses make us confident about 2003. Even in these challenging times, talented and entrepreneurial employees allow us to expect stable business development at the previous year's level, unless the euro significantly appreciates further.

I owe the following quotation to the highly esteemed former Head of our Patent Department, the late Brigitte Naumann: "Who has a future? Those who believe in themselves and, based on this belief, are prepared to constantly challenge themselves." We – the partners, management and employees of Merck – believe in ourselves and our company, and we are prepared to transform our beliefs into actions. Despite these turbulent times, we are confident in the future of Merck – and we have good reason.

Sincerely,

A handwritten signature in blue ink, appearing to read 'B. Scheuble', with a long, sweeping underline.

Prof. Dr. Bernhard Scheuble

Business Sectors

Divisions

Indications/Products

Pharmaceuticals

Ethicals

Diabetes (type 2 diabetes: *Glucophage*[®], *Glucovance*[®], *Glucophage XR*[®], *Metaglip*[™] ...)

Oncology (developmental products against cancer: *Erbix*[™], *Theratope*[®] ...)

Established Products (cardiovascular: *Concor*[®] family of products, *Lodoz*[®], *Nicorandil* ...; thyroid preparations: *Euthyrox*[®] ...; central nervous system: *Campral*[®] ...)

Other Indication Areas (developmental products, e.g. *vilazodone* (depression), *sarizotan* (Parkinson's disease) ...)

Women's Health (hormone replacement therapy: *Lutényl*[®], *Fem7*[®] ...)

Respiratory Diseases (respiratory diseases and allergies: *EpiPen*[®], *DuoNeb*[®] ...)

Generics

Off-patent high-quality low-price drugs

Consumer Health Care

Vitamins, minerals, supplements
(*Multibionta*[®], *Cebion*[®], *Bion*[®]3, *Seven Seas*[®] ...)

Chemicals

Liquid Crystals

Components (LCs, ITO glass ...) for liquid crystal displays (LCDs) in monitors, notebooks, mobile phones ...

Pigments

Effect pigments (*Iriodin*[®], *Colorstream*[®], *Xirallic*[®] ...), cosmetics, optics (*Patinal*[®] ...)

Electronic Chemicals

Process chemicals including supply systems for chip manufacture, functional materials

Analytics & Reagents

Analytical reagents and test kits/assays for the chemical and food industries and for environmental analysis

Life Science Products

Raw materials, active ingredients, and services for the pharmaceutical and biotech industries

Laboratory Distribution

VWR International, Inc.

Distribution of laboratory chemicals and equipment in North America and in Europe



| Bernhard Scheuble | Chairman

Born in 1953, Ph.D. in physics from the University of Freiburg; with Merck for 21 years

Pharmaceuticals
Laboratory Distribution (VWR)
Law, Patents, Trademarks
Corporate Auditing
Corporate Development

| Michael Römer |
Vice Chairman

Born in 1946, Ph.D. in chemistry from the Technical University of Darmstadt; with Merck for 25 years

Operations, Purchasing and Logistics
Environmental Protection, Safety and Health
Central Process Development – Chemistry
Production Sites in Germany



| Matthew W. Emmens |

Born in 1951, B.S. in business management from Fairleigh Dickinson University, New Jersey; with Merck for 3 years

Global Ethicals
United States, France,
United Kingdom, Italy, Spain

| Merck KGaA | Management as of December 31, 2002

Executive Board

- Prof. Dr. Bernhard Scheuble, Chairman
- Dr. Michael Römer, Vice Chairman
- Dr. Michael Becker
- Matthew W. Emmens
- Prof. Dr. Thomas Schreckenbach
- Dr. Jan Sombroek

┆ Thomas Schreckenbach ┆

Born in 1946, Ph.D. in biochemistry from the University of Munich; with Merck for 16 years

Global Chemicals
(incl. United States and Canada)
China, Japan, Korea, Singapore,
Malaysia, Taiwan



┆ Michael Becker ┆

Born in 1948, Ph.D. in law from the University of Augsburg; with Merck for 4 years

Accounting and Controlling
Finance, Taxes, Insurance
Middle East, Africa, and some
European countries

┆ Jan Sombroek ┆

Born in 1947, Ph.D. in chemistry from the University of Cologne; with Merck for 27 years

Human Resources, Information Services
Corporate Communications
Latin America, Australia/New Zealand,
and some Asian countries



Supervisory Board

Dr. Heinrich Hornef, Chairman
Flavio Battisti*, Vice Chairman
Jon Baumhauer
Klaus Brauer*
Prof. Dr. Christoph Clemm
Claudia Flauaus*

Michael Fletterich*
Dr. Reinhart Freudenberg
Dr. Michael Kasper*
Dr. Arend Oetker
Hans Schönhals*
Peter Zühlsdorff

* Employee representative



Biotechnology laboratory, Darmstadt | December 10, 2002

» Strong pipeline investments
and heightened global
focus in marketing will secure
future success. «

Matthew W. Emmens | Head of Ethics | Born in 1951 |
| B.S. in business management from Fairleigh Dickinson
University, New Jersey | With Merck for 3 years |



| Analyzing protein expression of potential cancer genes

— Generic competition to Glucophage® led to a decline in sales and profits. Other established products developed well, and we licensed in two new drugs. Our high R&D resources have been focused to quickly move innovative drugs through the pipeline. In key markets like the United States, pre-marketing activities for new products have begun.

The year 2002 was a year of *changes, challenges, and opportunities* – and our ethicals business rose to the occasion: meeting the challenges, making the changes, and taking advantage of the opportunities to better position ourselves for the future.

The most significant *change* was the complete restructuring of the Ethicals (branded prescription drugs) division. We have carefully examined the three key processes of this division – drug discovery and development, manufacturing, and marketing and sales – identified opportunities for improvement, and implemented changes to enhance our efficiency and profitability. Today, our research and development is globally integrated with greater coordination between our primary sites in Darmstadt (Germany), Lyon (France), Boston (Massachusetts), and Durham (North Carolina). We have a robust pipeline and are aggressively moving compounds through clinical development. We also initiated a major re-evaluation of our manufacturing processes, and programs are underway to rationalize our manufacturing, increase production efficiency, and reduce costs. In marketing and sales, we have created a global organization capable of launching and supporting a new product simultaneously in the world's largest markets, with an emphasis on the therapeutic areas of diabetes and oncology. Overall, these changes have improved the integration of our worldwide business and better positioned us as a global player in the growing ethical pharmaceuticals market.

The most acute *challenge* was managing the financial impact resulting from the expiration of the product protection for our anti-diabetic drug Glucophage® (metformin) in the United States, where it is marketed by Bristol-Myers Squibb. We have met this challenge by introducing new products that extend the Glucophage® franchise. Glucovance® and Glucophage® XR have allowed us to maintain a share of about 45 percent of the metformin prescriptions in the type 2 diabetes market in the United States. Other challenges included aggressive competition for market share, which resulted in lower prices, unfavorable pricing actions by various governments, and the entry of several of our drug candidates into the later – and more expensive – stages of development.

But the continued development of our pipeline is also one of the *opportunities* Merck is presented with. In the therapeutic area of cancer, our pivotal trial for the drug candidate Erbitux™ (cetuximab, C225), our monoclonal antibody against certain types of cancer, has concluded, and we expect to submit for European registration mid-year 2003. We remain encouraged that Erbitux™ may well offer new hope for many patients with cancer, and we are working diligently to gain registration and prepare for rapid market introduction and acceptance. New trials for EMD 72000, a fully humanized anticancer antibody, are planned for 2003, and a phase III trial for Theratope®, a cancer vaccine we are co-developing with our Canadian partner Biomira, will conclude in mid-2003. We will continue our search for innovative substances for the oral treatment of type 2 diabetes to find new options for a disease that is growing at epidemic proportions.

We also demonstrated that there are good opportunities for growth in existing markets and with existing products. Bisoprolol-containing products such as Lodoz® and ConcorCOR® are still increasingly attractive for the medical community. They are experiencing excellent growth and remain patent-protected. Our U.S. subsidiary Dey has achieved solid growth with the epinephrine autoinjector Epipen® and has effectively established DuoNeb®, a new product for the treatment of chronic obstructive pulmonary disease.

Yes, 2002 was a challenging year full of change and opportunities, but our division's 13,000 dedicated employees in 55 countries met the challenge. Today, we are even more committed and better able to bring innovative therapeutic approaches to patients in need throughout the world.

» We pay particular attention
to global launch readiness
for our new drugs. «

Thomas Schreckenbach | Head of Chemicals business sector |
| Born in 1946 | Ph.D. in biochemistry from the University of Munich |
| With Merck for 16 years |



Pigments Center, Darmstadt | December 11, 2002

» Through innovation, we want to become the No. 1 for high-quality specialty chemicals. «



| Presentation of new Colorstream® pigments

— Innovative effect pigments and liquid crystals for flat-screen displays are our core businesses – our Liquid Crystals division had another record year. The refocusing of our chemicals business led to sustained growth in the Life Science Products division, for example.

The manufacture of chemicals has a century-old tradition at Merck: The original Merck pharmacy, which began as a producer of reagents and pure plant-based active substances, has evolved into what is now a leading global manufacturer of standard and specialty chemicals for the laboratory and industry. This experience, which has evolved over time, and our flexible product development that is close to the markets have enabled us to achieve a good result in 2002, despite a difficult economic environment and a chemical industry that was weak overall.

Our *Liquid Crystals* division was particularly successful, increasing its sales from an already high level (EUR 276 million in 2001) by a further 37 % to EUR 377 million in 2002 after increase rates of 60 % (1999) and 80 % (2000) – organic sales also grew by an impressive 47 %. A decisive factor in this improvement was the increase in sales of high-quality liquid crystal mixtures for TFT displays in computer monitors, but also our sales of display glass. In the previous year, we invested in a third coating line in Taiwan for color display glass. In August 2002, we opened our new technology center for liquid crystals in South Korea. This investment, amounting to EUR 10 million, enables the preparation of more than 30 tons of liquid crystal mixtures per year in Korea. In our *Electronic Chemicals* division, we achieved organic growth of 4.2 % in our core business with process chemicals. In the course of focusing on supplying chip manufacturers, we exited from the equipment business. In the future we want to operate our restructured business in a company of its own.

Double-digit growth was also achieved in the *Pigments* division after adjustment for currency effects. Our production facilities for the mica pigments, Iridin®, in Gernsheim (Germany), Savannah (United States), and Onahama (Japan) were well utilized. Investments in state-of-the-art facilities for the new, more high-tech pigments Colorstream® and Xirallic® ensure our market leadership for innovative effect pigments for the printing, paints, and cosmetics industry. The general color and finish trend for high-quality consumer goods, as well as new technical applications, promise huge growth potential. Our Optics and Cosmetics businesses were successful in niche markets: As market leader for vapor deposition chemicals, we are substantially involved in technological innovations; innovative cosmetic effect pigments and a new encapsulation technology for substances that protect the skin have future potential in the field of cosmetics.

As the market leader for analytical reagents, our products can be found in almost every chemical laboratory in the world; our *Analytics & Reagents* division benefits from a business that is not very dependent on economic factors. We see growth potential in rapid tests for food analysis and industrial microbiology – our products enable our customers to meet the growing legislative demands for effective controls. Our *Life Science Products* division, whose strategic focus

is on being a partner for the entire value chain of the life sciences industry, supplies research-based companies in the pharmaceutical, biotechnology, and agrochemical sector ("Life Sciences") with a full range of products and services. This division was successful with the customized synthesis of research substances and with active substances and auxiliaries for the pharmaceutical industry, but also with biochemicals and chromatography products for bioprocessing. In turn, our U.S. subsidiary, which now operates under the name EMD Biosciences, developed a particularly large number of innovative products for biomedical research. As part of our ongoing strategic process of focusing on core businesses, the Life Science Products division has parted with its rodenticide business.

Our Laboratory Distribution company, VWR International, enables our Analytics & Reagents and Life Science Products divisions to use cutting-edge sales channels in the two key regions, Europe and North America. Companies of the Merck Group are also developing growth potential in other markets, in particular in the emerging countries of Eastern Europe and Asia.

We regard innovation as the key to further growth in our most important markets worldwide. By being innovative, we are able to consistently offer our customers the best possible solutions. Our employees face competition on the highest international level with pioneering spirit. They are supported by state-of-the-art technologies on their quest to find better and better solutions in a global network of research partnerships. Combined with improved manufacturing processes, these factors make us the partner of choice for high-tech industries in the electronics, optics, and life sciences sectors. Our scientists and marketing experts work closely with customers from industry all over the world in order to develop new products for the market requirements of the future.

» The future potential of our chemicals business lies in branches of industry with a strong need for innovation. «

The Merck Share

True Value Not Reflected

With stock markets declining sharply in 2002, our share price was hit exceptionally hard. While a late recovery and the company performance at the end of the year brought some consolation, we remain dissatisfied with the current price level.

Merck KGaA's shares have been listed on the Frankfurt Stock Exchange since October 1995. The free float is 45,000,000 shares; the holding of the general partners represents 127,000,000 theoretical shares (further information on Merck KGaA is provided in our full version of the Annual Report 2002 or at www.merck.de). The average daily turnover during the year was 140,000 shares. We are conscious of the restrictions caused by the low liquidity of our stock. Improvements in this respect remain an important target for us. About 30 % of our shares are held each in Germany, the United Kingdom, and the United States. In Germany, two thirds of the shares are in the hands of private investors. In the United Kingdom and the United States, nearly all shares are held by institutional investors.

The company's share price was strongly affected by the introduction of generic versions of Glucophage® in the United States and underperformed the German DAX for a long time. By the end of the year, however, we had caught up with the DAX. Our share price decreased 39 % for the year while the DAX dropped 44 %.

Earnings per share after tax and minority interest for fiscal year 2002 were EUR 1.18 compared to EUR 3.66 in the previous year. We will propose to pay a dividend of EUR 1.00 at our Annual General Meeting on March 28, 2003. This would raise the dividend yield to a very attractive level.

It is our aim for the share price to reflect the company's true value and growth potential. In order to keep the market informed, we regularly meet and conduct telephone conferences with investors throughout Europe and the United States. In addition, we continually update and expand the information on our web site.

Share Data¹⁾

	2002	2001
Earnings per share after tax and minority interest in EUR	1.18	3.66
Dividend in EUR ²⁾	1.00	0.95
Price-earnings ratio (Dec. 30/Dec. 28)	21.53	11.34
High share price for the year in EUR	40.55	49.70
Low share price for the year in EUR	18.03	37.55
Year-end share price in EUR (Dec. 30/Dec. 28)	25.40	41.49
Market capitalization in millions of EUR (Dec. 30/Dec. 28)	4,369	7,136
Theoretical number ²⁾ of shares in millions	172	172
Actual number of shares in millions	45	45

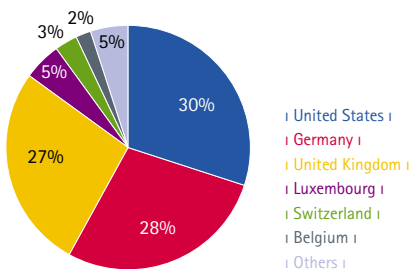
1) All figures relate to the closing price in XETRA trading on the Frankfurt Stock Exchange.

2) The calculation of the theoretical number of shares is based on the fact that the general partner's equity capital is not represented by shares. Because the share capital of EUR 117 million is divided into 45 million shares, the corresponding calculation for the general partner's capital of EUR 330.2 million leads to 127 million theoretical shares.

The Merck Share Compared to DAX/MDAX in 2002



Shareholder Structure by Country



Management Report

A Solid Performance in a Difficult Environment

General Economic Conditions

The global economy in 2002 was characterized by uncertainty. The risk of war and the related oil price hike, as well as the collapse of the stock markets all had an adverse effect on the economic situation. Although the increasing demand in spring 2002, in particular in the United States, and the tax relief to American households did lead to positive economic forecasts, the mood deteriorated considerably in the summer. Contributing factors were negative business prospects, the loss in confidence resulting from financial scandals and the slump in share prices on the stock markets, as well as the looming Iraq conflict.

Overall growth in gross domestic product (GDP) in the United States was 2.4 %. The situation in Latin America remained precarious not only because of the crisis in Argentina and Venezuela. The previously strong growth rate in the newly industrialized countries of East Asia declined, while Japanese GDP fell by 0.3 %. The growth rate in the euro area was 0.8 %. In particular the pressure to consolidate, both in the public and private sectors, played a decisive role in Europe's poor growth rate. A further contributing factor – in addition to low consumer acceptance – was the increasing appreciation of the euro against the dollar in the course of 2002 and the effects of this on exports.

Economic recovery in Germany was not as expected: Growth in GDP in 2002 was 0.2 % and thus fell short of the European average. The global economic environment with the factors mentioned above determines the basic economic trend. The situation on the labor market deteriorated in comparison with 2001, with the unemployment rate increasing strongly from 9.0 % in 2001 to 10.1 %.

The Merck Group: Steady in Challenging Times

Compared with the record year of 2001, consolidated sales of the Merck Group decreased in 2002 by 0.7 % to EUR 7,473 million. After adjustment for negative currency effects and acquisitions/divestitures, sales growth was 5.0 %, meeting our expecta-

Components of Growth

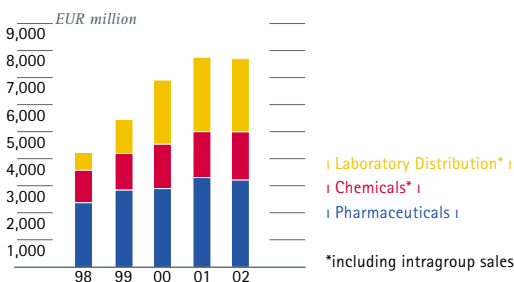
Compared to previous
year's quarters in %

	Quarter 1	Quarter 2	Quarter 3	Quarter 4	2002
Organic growth	6.3	3.0	3.8	7.2	5.0
Pharmaceuticals	10.5	-2.4	-1.3	8.4	3.5
Chemicals	3.2	15.7	14.0	16.2	12.3
Laboratory Distribution	2.9	1.8	3.9	0.6	2.3
Currency effects	1.4	-5.2	-6.1	-8.2	-4.6
Acquisitions/ divestitures	-0.9	-1.2	-3.1	0.7	-1.2
Total	6.8	-3.4	-5.4	-0.3	-0.7

tions. The unfavorable exchange rates caused by the weakening of the dollar had an adverse effect on all three business sectors. The drop in sales in Pharmaceuticals to EUR 3,226 million is primarily attributable to the decline in sales of Merck's best-selling antidiabetic agent Glucophage® in the United States. The Generics division successfully increased its sales to EUR 1,138 million, despite losing sales against the previous year as a result of the sale of Pharmaceutical Resources. In spite of significant currency effects, the Chemicals business sector grew 5.0 % to EUR 1,782 million, due especially to the success of Liquid Crystals. Our Laboratory Distribution VWR International reached organic sales growth of 2.3 % to sales of EUR 2,711 million.

In all four quarters, the organic sales increased compared to the year 2001. Currency effects and divestitures, by contrast, had a negative influence on sales. Changes in exchange rates showed increasingly negative effect in the last three quarters of 2002 and were -8.2 % in the fourth quarter.

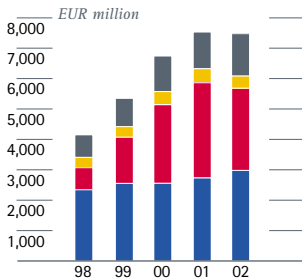
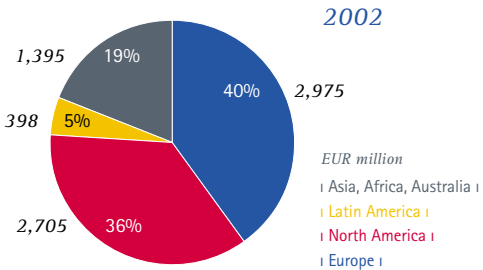
Sales by Business Sector



Fastest Regional Growth in Asia

Europe is again the Merck Group's most important market. With sales of EUR 2,975 million, we achieved a year-on-year increase of 9.0 %. Sales in the EU rose 8.6 % to EUR 2,723 million, while Germany showed a decline of 5.7 % to EUR 681 million. Europe's share in sales increased, contrary to the longstanding trend, from 36 % in the previous year to 40 % in 2002. Since sales declined by 14 %, North America became our second largest market. Sales in this region amounted to EUR 2,705 million, corresponding to 36 % of group sales, and were generated above all in Pharmaceuticals and Laboratory Distribution. In Latin America, sales decreased 13 % to EUR 398 million, corresponding to a share of 5.3 % of group sales. While sales in our largest market Mexico were maintained, sales in Brazil, Argentina and Venezuela decreased significantly. In Asia/Africa/Australia, we increased sales 16 % to EUR 1,395 million. Sales in this region now account for 19 % of Group sales, attributable in particular to strong growth of 25 % in Japan and 14 % in Australia.

Sales by Region



| PHARMACEUTICALS |

Market Conditions for the International Pharmaceutical Industry

In 2002, the major countries of the global pharmaceuticals market recorded a sales growth of about 7 %. As in the previous years, the North American market recorded the strongest growth rate and posted a 12 % growth, but was slowing down. The decreasing growth rates reflect lower new product launch activities and increasing generic prescriptions. With a market volume of USD 146 billion, the share of the United States in the sales of the 13 key pharmaceutical markets was 53 %. In the key European countries, with a market share of about one fifth, sales increased 6 % after adjustments for currency effects reaching USD 59 billion. The United Kingdom and Germany showed above-average growth rates of 10 % and 8 %, respectively.

Strong Performance of Merck's Generics Division

Our Pharmaceuticals business sector comprises ethicals (prescription drugs, e.g. for the treatment of metabolic and cardiovascular diseases), generics, and consumer health care products. The year 2002 was very successful for our Generics division, which recorded excellent growth. However, this was not enough to compensate for the expiration of the product protection on Glucophage®, our best-selling antidiabetic drug, in the United States. As expected, the resulting generic competition caused a sales decline for the Pharmaceuticals business sector of 2.9 % to EUR 3,226 million – in spite of a 3.5 % organic growth – and a sharp blow to the profitability of the pharmaceutical business. The operating result amounted to EUR 272 million, a 53 % decrease compared to the previous, record-breaking year. The licensing fees for Glucophage® in the United States were high-margin, and in their absence the Pharmaceuticals business sector's return on sales (ROS) dropped to 8.4 % and the return on

Pharmaceuticals – Key Figures

<i>EUR million</i>	2002	2001	Change in %	Share in %
Sales	3,226	3,323	-2.9	
Ethicals	1,779	2,084	-14.6	55
Generics	1,138	925	23.0	35
Consumer Health Care	309	314	-1.4	10
Operating result	272	581	-53.2	
Return on sales	8.4 %	17.5 %		
EBIT	272	1,067	-74.5	

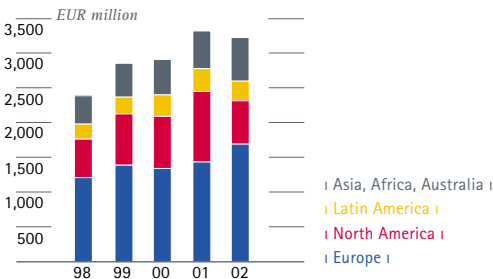
capital employed (ROCE) to 9.4 %, well below our ambitious target of 20 % for both of these key figures. Pharmaceuticals contributed 43 % of the Merck Group's total sales; its share of the total operating result was 44 %.

While the loss of exclusivity for our largest product caused sales in North America to drop 39 % to EUR 624 million from the previous record year, sales in Europe jumped a healthy 18 % to EUR 1,692 million while sales in Asia, Africa, and Australia increased 16 % to EUR 628 million. Sales in Latin America were down 14 % to EUR 282 million, largely due to currency effects.

The Ethicals division saw sales declining 15 % to EUR 1,779 million. At an organic growth rate of 36 %, sales in the Generics division remained strong, surpassing 2001's robust performance with an additional 23 % increase to EUR 1,138 million. This was attributable in part to new generic products like the ulcer medicine omeprazole. At EUR 309 million, sales by the Consumer Health Care division remained almost constant (-1.4 %).

Detailed information can be found in the full version of our Annual Report 2002 or at www.merck.de.

Pharmaceuticals – Regional Sales Development





| Kim Rasmussen

| Generics |

Working as a sales representative of Alphapharm – Australia's No. 1 generics company – she gives advice to doctor Sushil Kramer in Brisbane.

» *Merck Generics* – Growing Success in a Growing Market «

Rising healthcare costs, stricter governmental cost-containment measures, and further price regulations are making generics one of the fastest growing sectors in the global pharmaceutical business. The global market for generic pharmaceutical products is expected to grow annually by 13 % during the period to 2006, considerably more than the total pharmaceutical market growth of 10 %. A reason for this strong growth is the fact that as many as 15 of the world's leading drugs – so-called blockbusters – are losing their patent protection over the next few years. In the United States alone, drugs with total annual sales of more than EUR 60 billion face patent expiry over the next ten years. In all healthcare systems generics offer products equivalent in quality to the original brands at affordable prices. Their use creates the financial margin for prescribing innovative therapeutics addressing otherwise unmet medical needs. In the United States, for example, the average price for a generic drug is under EUR 20, for a patent protected drug more than EUR 70. Generics account for approximately 45 % of all prescriptions.

In this increasingly competitive market, the Merck Generics Group ranks among the world's leaders. Merck entered the generics business with the acquisition of a small group of companies in 1994. Immediately afterwards, the group supplemented its activities with a series of start-ups –

many with the help of sister companies in the ethical business. Additional market share has been achieved by way of acquisitions in Germany and Japan. The group is now broadly represented across the globe, with leading market positions in Australia, France, New Zealand, Portugal, and the United Kingdom. Merck Generics also invests in the smaller European markets that still have a low generic substitution rate but offer high growth potential. Although its strength lies in Europe, it is also represented in North and Latin America, Asia Pacific, Eastern Europe, the Middle East, and South Africa. The group is continuously looking for further acquisitions to increase critical mass or to access viable markets, including the United States.

The R&D strategy of our Generics division is to identify all significant products worldwide with a patent expiry in the near future, to ensure the availability of our generic version for sale in all relevant territories on the date of expiry. With significant investment in research and development across multiple sites, expert skills in the sourcing and acquisition of raw materials and leading international in-house patent expertise, the Merck Generics Group is one of the few truly global players in the generics business. Additionally, it has a comprehensive and sophisticated range of manufacturing and quality-control capabilities primarily centralized in its three operating regions, with packaging localized where economically feasible. The relationship with its customers is also of paramount importance and is well serviced by the sales and commercial functions in the countries in which we operate. The Merck Generics Group employs over 3,000 highly motivated people and excels in established markets, while continuing to make important inroads in new markets.

| CHEMICALS |

Market Conditions for the International Chemical Industry

The downward trend of the global chemical industry was halted at the end of 2001. In the first half of 2002 the business climate showed signs of improvement. The performance in the second half of 2002 was characterized by weak industrial demand and rising crude oil prices leading to cost pressure. With one-third market share, countries of the European Union remained the major producers of chemicals worldwide. Chemical production grew 2.7 % worldwide and 3.0 % in Europe, mainly on the basis of the continuing strong performance of pharmaceuticals. Germany holds about 25 % market share in Europe and saw an increase in chemical production of about 2.5 %, whereas sales declined 1.9 % due to the weak domestic demand, lack of stimulating exports as well as high raw material costs and the revaluation of the euro.

Good Growth Serving Innovation-Driven Industries

As of January 1, 2002, the Chemicals business sector consists of five divisions and comprises the business with chemicals for high-tech applications: liquid crystals for displays (Liquid Crystals), electronic chemicals for chip manufacture (Electronic Chemicals), effect pigments and specialty chemicals for the technical, optical, and cosmetic industry (Pigments). For analysis and chromatography in control and research laboratories, we offer reagents and test kits (Analytics & Reagents) and accompany the entire process chain of research-based pharmaceutical companies with chemicals and services (Life Science Products).

Chemicals sales rose 5.0 % to EUR 1,782 million as demand for our high-tech products improved. The organic growth rate was

Chemicals – Key Figures

<i>EUR million</i>	2002	2001*	Change in %	Share in %
Sales	1,782	1,697	5.0	
Liquid Crystals	377	276	36.8	21
Electronic Chemicals	192	216	-11.0	11
Pigments	327	314	4.3	18
Analytics & Reagents	504	508	-0.8	28
Life Science Products	382	383	0.0	22
Operating result	260	204	27.4	
Return on sales	14.6 %	12.0 %		
EBIT	208	129	61.7	

*adjusted to the structure of 2002

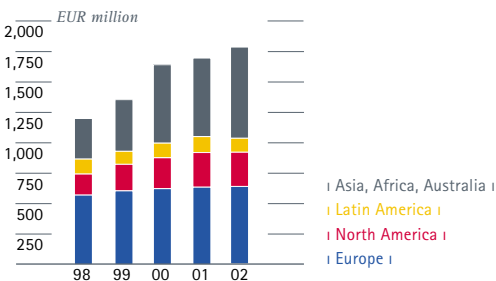
12 %. Since Asia and the United States account for more than half of the sales, currency effects had a strong influence. The operating result increased 27 % to EUR 260 million. The return on sales (ROS) of 14.6 % and the return on capital employed (ROCE) of 12.3 % came close to our ambitious target of 15 % for these key figures. The Chemicals business sector contributed 21 % of the Merck Group's total sales and 42 % of the total operating result.

Chemicals sales in Europe and in North America remained at previous year's levels amounting to EUR 636 million and EUR 281 million, respectively. In Latin America, sales decreased 12 % to EUR 115 million due to the economic situation in this region. In Asia, Africa, and Australia we achieved a strong growth of 16 % to EUR 750 million although currency effects had a significantly negative impact.

The Liquid Crystals division was very successful, increasing sales 37 % to EUR 377 million. Sales by the Electronic Chemicals division decreased 11 % to EUR 192 million, Analytics & Reagents, contributing the largest part with 28 % of total sales of this business sector, recorded unchanged sales of EUR 504 million. The Pigments division maintained its growth rate with sales rising 4.3 % to EUR 327 million. The new Life Science Products division achieved sales of EUR 382 million.

Detailed information can be found in the full version of our Annual Report 2002 or at www.merck.de.

Chemicals – Regional Sales Development





┆ Masahiro Yamamoto ┆
 ┆ Marketing & Sales,
 Liquid Crystals ┆

LC displays with three-dimensional images are the latest development in Japan – Merck is inside.

» *Liquid Crystals* – We Make Bits and Bytes Visible «

Liquid crystals are one of the biggest success stories at Merck and an impressive example of how a pure research topic becomes a great economic success: Today, information displays contribute to improving the quality of life for all people. The dedication of our researchers and the long-term corporate strategy of investing in intensive basic LC research, extending over a period of ten years, eventually led to sales of EUR 377 million for the Group in 2002.

Decisive for this success was the close collaboration of scientists from diverse disciplines such as chemistry, physics, and electronics. The requirements of the electronics industry and their customers were and still are very important regarding both the number of innovative ideas and the speed with which they have to be realized. Although our main R&D and production facilities are located in Germany, the chance to have immediate contact to our main customers was the reason to establish research and development centers in Japan and later in Korea and Taiwan. Today, Merck is the global market leader in the liquid crystals business, and the economic perspectives remain excellent, as the LCD technology is an essential part of our information society.

Passive displays (TN- and STN-LCDs, see Merck's TopTopics brochure or TopTopics@merck.de for further information)

can be found in all kinds of small-sized electronic devices, particularly mobile phones. By providing tailor-made LC mixtures for these display types, Merck participated in their enormous success. We also invested in the production of ITO glass for color displays and have gained a good market share. For a long time, notebooks have been the main application for large-size LCDs. Although demand for them is still growing, with more than 50 million sold pieces expected for 2006, LCD monitors for PCs became the most important market segment in 2002. TFT-LCDs are gradually replacing the bulky and more energy-consuming cathode ray tube desktop monitors. With more than 30 million flat-screen monitors sold worldwide in 2002, representing about 1/3 of the total desk top monitor market, these large displays are the strongest driving force for the total LCD market. Experts foresee a still growing trend, with more than 100 million sold pieces estimated for 2006 (>70 % share of flat-screen monitors).

In 2002, large-size LCD-TVs – up to 40 inches in size – were introduced into the market. With more than 1,3 million units sold in 2002 these flat TVs are the focus of LCD development in the coming years. Major TV manufacturers selected new display modes (for example VA, Vertical Alignment, ASV, Advanced Super View, or IPS, In-Plane Switching), which Merck had formerly developed in collaborations with the leading LCD manufacturers. We are also the main or, in some cases, exclusive suppliers of liquid crystal mixtures for these new LCD technologies and see an excellent chance to keep our position in the future. The most recent market research predicted an annual growth rate of about 60 % and a market volume of up to 19 million sold units in 2006, corresponding to 12 % of the total TV market.

| LABORATORY DISTRIBUTION |

Satisfying Organic Growth Offset by Currency Effects

With its laboratory chemicals, equipment, instruments, and consumables along with a comprehensive service offering, Merck is the world's leading full-service provider in the laboratory distribution business. The Laboratory Distribution business sector is identical to the worldwide operations of our wholly owned subsidiary VWR International, Inc., headquartered in West Chester, near Philadelphia. Laboratory Distribution sales slightly decreased 1.6 % to EUR 2,711 million, while the operating result fell 8.2 % to EUR 84 million. The free cash flow increased a gratifying 19 % to EUR 81 million. The ROS amounted to 3.1%, compared to 3.3 % the year before. This business sector contributed 36 % of the Merck Group's total sales and 14 % of the total operating result.

We recorded 69 % of total sales or EUR 1,882 million in North America, 30 % or EUR 806 million were achieved by our affiliates in Europe. Strong currency fluctuations between the U.S. dollar and the euro offset a positive organic growth of 2.3 %. In Canada, however, we saw a growth in sales of 3.4 % in 2002, and despite the difficult market conditions, many regions in both the United States and Europe met their 2002 plans.

The Laboratory Distribution business was also directly affected by the difficult economic situation our customers were facing over the year: We saw significant spending decreases across the biotech and pharmaceutical marketplace; equipment and instrument sales were flat industry-wide; chemicals and consumables grew only slightly; and budget constrictions hampered science education at the end of the year. However, while economic factors did create a tight market in 2002, we expect that R&D spending will increase again to ensure the long-term viability of

Laboratory Distribution – Key Figures

<i>EUR million</i>	2002	2001	Change in %
Sales	2,711	2,754	-1.6
Operating result	84	92	-8.2
Return on sales	3.1 %	3,3 %	
EBIT	79	91	-13.4

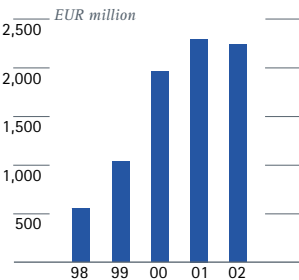


| Tradition | Lori Madar and Dominic Mesoraca ensure that customers' data at VWR International in West Chester are kept up to date. They are part of a tradition that began 150 years ago in San Francisco. VWR has since become a world leader in laboratory distribution.

drug development companies and pharmaceutical manufacturers. We will continue to evaluate opportunities for geographic as well as industry expansion. We will responsibly pursue our acquisition strategy or consider new areas that can make us more competitive.

Detailed information can be found in the full version of our Annual Report 2002 or at www.merck.de.

Laboratory Distribution – Sales Development



| RESULT OF THE MERCK GROUP |

High R&D Expenses and Expiry of Product Protection Impact Result

The operating result of the Merck Group totaled EUR 616 million, corresponding to a year-on-year decrease of 29.7 %. This result was adversely affected by currency translation effects amounting to EUR 28 million and acquisitions/divestitures of EUR 30 million. Return on sales (ROS) declined from 11.6 % to just 8.2 %. Return on capital employed (ROCE) also decreased, amounting to 9.6 % in fiscal year 2002, compared with 13.5 % the previous year.

The operating result of the Pharmaceuticals business sector amounted to EUR 272 million, almost halving the figure achieved in the record year 2001. The dramatic decline in operating result was due to generic competition in the United States for our best-selling product, the oral antidiabetic agent, Glucophage® at the beginning of the year, which could only be partly compensated for by our Generics and Consumer Health Care divisions. Nevertheless, we further increased our high level of investment in research and development in order to drive our promising projects further forward, in particular the clinical studies in the indications of cancer and diabetes. This resulted, however, in a decrease in return on sales (ROS) from 17.5 % to just 8.4 %. Return on capital employed (ROCE) decreased accordingly from 20.4 % to 9.4 %. Both of these key figures thus fall substantially short of our long-term targets of 20 % in each case; in the medium term, however, we are willing to accept deviations from these targets and regard this as an investment in the future.

The Chemicals business sector increased its operating result by 27 % to EUR 260 million. The main driver behind this development was once again our Liquid Crystals division. Return on sales (ROS) increased from 12.0 % the previous year to 14.6 % and is therefore just under our long-term target of 15 %. Return on capital employed (ROCE) also improved, amounting to 12.3 % in fiscal year 2002, compared with 9.7 % the previous year, and therefore came close to our long-term target of 15 %.

Our Laboratory Distribution (VWR International) business sector had to accept losses in earnings in the second half of the year due to the weak economy in the United States and Europe. In addition, the impact of the negative currency effects arising from the appreciation of the euro against the dollar has not been insubstantial. Consequently, the operating result decreased by

Key Figures of the Merck Group

	Operating result EUR million	Exceptional items EUR million	EBIT EUR million	EBITDA EUR million	ROS in %	ROCE in %
Pharmaceuticals	272	–	272	479	8.4	9.4
Chemicals	260	–52	208	357	14.6	12.3
Laboratory Distribution	84	–5	79	149	3.1	5.8
Merck Group	616	–57	559	985	8.2	9.6

ROS = Return on Sales

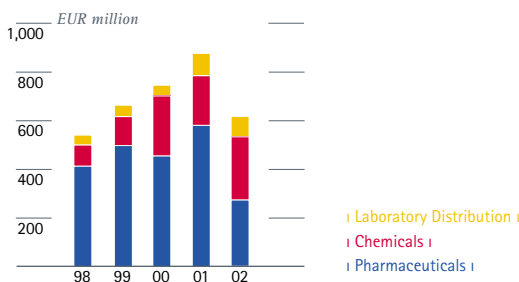
ROCE = Return on Capital Employed

8.2 % to EUR 84 million. However, both return on sales (ROS) and return on capital employed (ROCE) only showed a slight decrease compared with the previous year, and therefore came close to our long-term target of 15 %.

Expenses and Income from Exceptional Items

In the year under review, expenditure on exceptional items amounted to EUR 113 million, compared with income from exceptional items amounting to EUR 56 million. These earnings resulted primarily from a gain on exchange arising from the repatriation of capital of a now liquidated subsidiary in the United Kingdom. Expenses related to restructuring and to risks from the vitamin business. This resulted in net expenditure for exceptional items of EUR 57 million, compared with net income of EUR 410 million the previous year. Earnings before interest and tax (EBIT) therefore decreased from EUR 1,286 million to EUR 559 million.

Operating Result by Business Sector



Improved Financial Result

The financial result (net expenditure) increased by 29 %. This is attributable to both a decrease in the interest rate compared with the previous year, as well as to a substantial reduction in the volume of financial obligations. Exchange losses from financial obligations were, however, also considerably lower than in the previous year.

Favorable Tax Rate (adjusted)

Profit before tax was EUR 412 million; profit after tax was EUR 215 million. Excluding exceptional items, profit after tax was 24.4 % lower than the previous year.

Effect of Exceptional Items

EUR million	2002		2001	
		Before exceptional items		Before exceptional items
Profit before tax	412	468	1,078	669
Income tax	-196	-198	-423	-312
Profit after tax	215	270	655	357
Tax rate	47.7%	42.3%	39.3%	46.6%

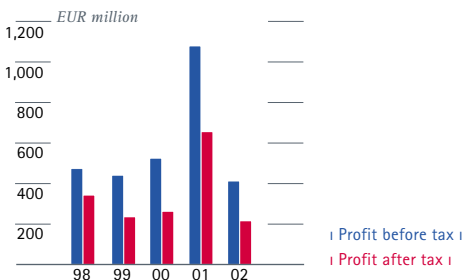
Dividend Proposal

The Executive Board proposes to the Annual General Meeting the payment of a dividend of EUR 1.00 per share from the earnings of the year under review, -5.3 % more than the previous year.

Free Cash Flow and Balance Sheet Structure

Free cash flow amounted to EUR 441 million in the year under review. It amounted to EUR 664 million the previous year due to the substantial proceeds from the sale of Pharmaceutical Resources and ImClone shares, which were contained in that figure.

Profit before and after Tax



At EUR 7,511 million in 2002, total assets were down EUR 744 million on the previous year. This was due primarily to the sale of a substantial residual claim from the disposal of our interest in Bracco in the course of the fiscal year to reduce financial debts. In addition, currency translation differences had a reducing effect on assets. This is reflected by a decrease in equity of EUR 261 million as a result of currency translation. Financial obligations decreased by EUR 422 million. At 27.3 % of total assets, the equity ratio was slightly lower than that of the previous year. The gearing ratio of net equity to net financial obligations (financial obligations less cash and cash equivalents) also remained on the previous year's level at 1:0.973.

Further details on the financial position and the balance sheet (see page 46) are contained in the consolidated financial statements and the related explanatory notes in our full version of the Annual Report 2002 or at www.merck.de.

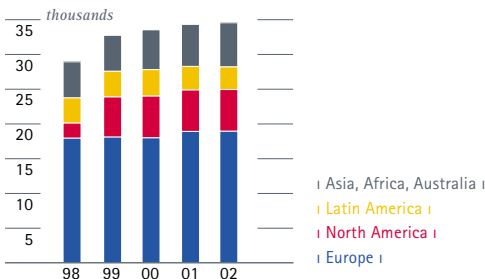
| WE ARE INVESTING IN THE FUTURE |

Growing Number of Employees – an Indicator of Success

The Merck Group consists of 204 companies in 53 countries and operates 62 production sites in 28 countries. A total of 34,504 employees worldwide contributed to a stable performance in 2002 and ensure long-term entrepreneurial success. The increase in the number of employees by 0.6 % compared with the previous year is attributable to a substantial increase in staff in Japan, Korea, China, and the Philippines.

In order to be able to build on highly qualified employees, we continued and will continue to invest in numerous employee training programs, such as the Merck Online Campus, which

Number of Employees as of Dec. 31



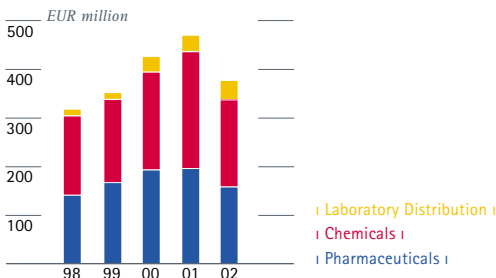
offers a range of e-learning opportunities, and our MBA programs at the University of Pforzheim and the Ashridge Management Institute in the United Kingdom. Merck University continues to be a key building block, offering our top managers courses at renowned business schools on three continents. Our Corporate Meeting in Chicago, attended by our senior international managers in May 2002, focused on the strategic issues employees and innovation. The following human resources issues were addressed as group-wide activities: Management development and succession planning (establishment of a “top talent pool”), as well as systems for setting targets and evaluating employee performance. We started a program in Asia and Latin America in 2002 to standardize human resources management with the aim of retaining highly qualified and motivated employees and attracting new talent to the company.

Decrease in Capital Expenditure

After record investment of EUR 470 million in 2001, our investments in property, plant and equipment decreased by EUR 93 million to EUR 377 million. As a result, the investment ratio, which is based on sales, fell from 6.2 % to 5.0 %, thus approaching the medium-term goal of a ratio of under 5 %. The high level of investment in new fixed assets over the past few years thus allows us greater scope in the future, in particular to finance our research projects. The regional breakdown shows that investment was focused on Germany: Over the past 6 years, we have invested almost EUR 1 billion in our Darmstadt and Gernsheim sites.

At EUR 158 million, just under half of investment worldwide was dedicated to the Pharmaceuticals business sector. After modernizing our production facilities for solid pharmaceutical formulations over the past few years, we began overhauling ampoule production. In addition, we are setting up special synthesis facilities for the active agent contained in the antidepressant vilazodone. With the completion and start of operations at

Investments in Property, Plant and Equipment



our research center and the pilot plant for protein manufacture at EMD Lexigen in Boston, United States, Merck reached another milestone in the field of biotechnology. Our Generics subsidiary Alphapharm in Australia and Genpharm in Canada also expanded their production facilities in order to adapt to the growing market. Alphapharm also invested in new research facilities.

The Chemicals business sector invested EUR 179 million in property, plant and equipment, thus continuing its program begun in 2001. These investments include the expansion of synthesis capacities for Liquid Crystals (LC) in Darmstadt and Gernsheim, as well as the expansion of mixture production in Korea to be able to meet the increasing demand for liquid crystals. In order to extend our product portfolio of displays, we established a third coating plant in Taiwan that can also coat temperature-sensitive substrates such as color filters. In addition, it is planned to invest in production facilities for color filters, a further component of displays. The investments in production plants in Darmstadt for ultrapure calcium fluoride (CaF₂) and its precursor, ultrapure calcium chloride (CaCl₂) were concluded successfully. The global production facilities for our effect pigments were expanded as planned. Laboratory Distribution, which has merged with VWR International, invested EUR 40 million mainly in its service structure.

Research and Development Further Increased at a High Level

Our expenditure for research and development, which has been quite substantial for a number of years, increased 5.4 % to EUR 608 million in the year under review. The research-spending ratio, defined as a relation between research expenses and sales, based on Group sales less the Laboratory Distribution business, increased to 13 %. Approximately one half of research funding was spent in research & development facilities in Darmstadt, Germany, central home in particular to the infrastructure for full preclinical and clinical development, as well as many other departments including drug-regulatory and patent departments necessary for pharmaceutical research. Other major competence centers are located in Lyon and Chilly-Mazarin (France), Aberdeen (United Kingdom), Barcelona (Spain), and Billerica, MA (United States). The most important chemical research locations besides Darmstadt are Southampton (United Kingdom), San Diego (United States), and Onahama and Atsugi (both in Japan).

With a total of EUR 499 million, some 82 % of all research expenditure was allocated to Pharmaceuticals, as in the previous year. In relation to sales of Pharmaceuticals the research-spending ratio was 15 %. In the Ethicals division, which is par-

Status of 22 Innovative Drugs

<i>Therapeutic Area</i>	<i>Compound</i>	<i>Indication</i>	<i>Status¹</i>
Oncology	Erbix™ (cetuximab, C225; EGFR specific monoclonal antibody) ²	EGFR-expressing tumors: colorectal, head & neck, NSCLC	Phase III
	Theratope® (cancer vaccine) ³	Breast cancer	Phase III
	Mitumomab (BEC-2; cancer vaccine) ⁴	Small-cell lung cancer	Phase III
	EMD 72000 (EGFR-specific monoclonal antibody)	EGFR-expressing tumors: cervical, gastric, ovarian	Phase II
	Cilengitide (EMD 121974; angiogenesis inhibitor)	Pancreatic cancer, NSCLC, glioblastoma	Phase II
	EMD 273066 (KS-IL2; immunocytokine)	EPCAM-expressing tumors (e.g., colorectal, NSCLC, ovarian)	Phase I/II
	BLP-25 (liposomal cancer vaccine) ³	MUC1-expressing tumors: NSCLC, prostate cancer	Phase II
	EMD 273063 (14.18-IL2; immunocytokine)	Melanoma, neuroblastoma	Phase I
Diabetes	EML 16336 (glucose uptake stimulatory agent)	Type 2 diabetes and insulin resistance	Phase II
	EML 16257 (glucose-specific insulin secretagogue)	Type 2 diabetes and insulin resistance	Phase II
	EML 4156 (dual PPAR- α , γ -activator)	Type 2 diabetes and dyslipidemia	Phase II ⁵
	IDD 676 (aldose reductase inhibitor)	Diabetic microvascular complications (1st indication: peripheral neuropathy)	Phase II
Other Indication Areas	Vilazodone ⁶	Depression	Phase II
	Sarizotan	Dyskinesia in Parkinson's disease	Phase II
	EMR 62203 (PDE V inhibitor)	Male erectile dysfunction	Phase II
	Asimadoline	Irritable bowel syndrome	Phase II
	EMR 62204 (oral NHE inhibitor)	Severe heart failure	Phase II
	EMR 62218 (5HT2A antagonist)	Schizophrenia	Phase I
Women's Health	EMM 210066 (E2/Nomac, oral)	Sequential HRT	Approved
	EMM 220066 (E2/Nomac, oral)	Continuous HRT	Phase III
	EMM 310066 (E2/Nomac, oral)	Contraception	Phase II
	EMM 210525 (E2/TX 525, oral)	Continuous HRT	Phase I ⁷

¹ Clinical status (for most advanced indication)

² Co-developed with Bristol-Myers Squibb and ImClone. Erbix is a trademark of ImClone Systems, Inc.

³ Co-developed with Biomira (Canada)

⁴ Co-developed with ImClone

⁵ A new phase I study is necessary to confirm the maximal tolerated dose for pivotal phase II

⁶ Co-developed with GlaxoSmithKline

⁷ New investigation of administration route

E2 = estradiol, EGFR = epidermal growth factor receptor, EPCAM = epithelial cell adhesion molecule, HRT = hormone replacement therapy, 5HT2A = serotonin receptor 2A, MUC = mucinous adenocarcinoma of the stomach, NHE = sodium-hydrogen exchanger,

Nomac = norgestrel acetate, NSCLC = non-small-cell lung cancer, PDE V = phosphodiesterase V, PPAR = peroxisome proliferator-

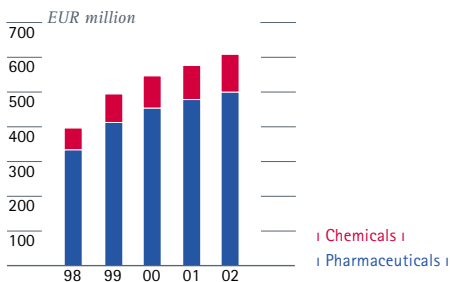
activator receptor, TX 525 = new progestin compound.

ticularly research-intensive, R&D expenses were EUR 423 million, the research-spending ratio was 24 %. Our commitment to R&D – which is comparatively strong for this sector of industry – was focused mainly on driving forward our oncology projects, since there is a strong medical demand for our innovative substances in the field of cancer therapy. In total, we have 20 compounds in our pipeline; all are innovative with unique selling points that will differentiate them in the market. In our core areas oncology and diabetes we have brought six projects into the late stages of development. Our biologically based oncology product Erbitux™ is on track for submission in Europe in 2003. Compared to the previous year, the Generics division increased its spending on development and regulatory activities by 4.5 % to EUR 69 million; the Consumer Health Care division increased its investment in the development of new products to EUR 6.9 million.

We increased our R&D expenditure in the Chemicals business sector by 11% to EUR 109 million. The greatest share of this was allocated to research in the Liquid Crystals division, which increased by 48 % to EUR 34 million. In this core business, we are constantly orienting ourselves to the changing demands made on our mixtures for use in displays for notebooks, PC monitors, projection systems, and television sets. Our R&D activities extend also to color filters and glasses, and are carried out at several locations around the globe. We opened a new liquid crystals center in Korea in 2002.

At EUR 29 million, our Pigments division's research efforts focused on novel color and luster effects for attractive pigments, and a number of promising projects for the Technical Industries business. The Life Science Products division accounted for EUR 21 million R&D expenses. With its focus on customized synthesis of pharmaceutical actives and intermediates, technical

Research and Development by Business Sector



development plays a major role. Our U.S. subsidiary EMD Biosciences in San Diego extended its portfolio of reagents for biochemical use in protein purification for life sciences research. With EUR 10 million the Analytics & Reagents division expanded the chromatography range for the successfully launched Chromolith® columns, as well as the number of analytical rapid test kits. Our R&D expenditure in Electronic Chemicals and New Business Chemicals amounted to EUR 15 million, while negligible in the Laboratory Distribution business sector.

Further information on research and development, as well as on purchasing and environment is provided in our full version of the Annual Report 2002 or at www.merck.de.

Increased Global IT Activities

As part of an intensified network of our international businesses, we spent around EUR 200 million on our centrally coordinated IT and communication activities in fiscal year 2002. We further expanded our customer service with respect to detailed product information and our e-business applications. Using innovative information technology, we increased both process efficiency – for example by providing our Chemicals customers with safety data sheets and certificates of analysis via the Internet – and the speed at which customers can selectively access comprehensive information themselves from www.chem-dat.info. At the same time, we improved the quality and efficiency of our planning and control processes, e.g. by way of globally accessible database systems. In addition to our own expertise, we also utilize the know-how of leading providers to implement standard and special software at the Merck Group cost-effectively – in 2002, for example, we introduced SAP™/R3 in two more subsidiaries in India and Japan. As regards telecommunication, we cooperate with reliable, global service providers in order to, for example, broadcast our Financials Press Conference live on the Internet or on the Intranet of the Merck Group. All of the Group's larger companies have had access to the company-wide Intranet, "MerckNet", since 2002.

Branding of Merck and EMD Continued

As part of our Corporate Identity Project begun in 2002 to strengthen the company brands, Merck and EMD, we adapted the names of various Chemicals subsidiaries in the United States at the beginning of 2003 (EM Industries, Inc., headquartered in Hawthorne, New York, became EMD Chemicals; CN Biosciences, Inc. in San Diego was renamed EMD Biosciences). As we are not permitted to use the name Merck in North America (the rights to the name are held by the pharmaceutical company Merck & Co. which was founded by Merck in 1891 as a U.S. subsidiary, but

which has been an independent enterprise since 1917 with no relation to us in terms of company law), we had already combined our American pharmaceutical activities in 2001 under the name EMD Pharmaceuticals, headquartered in Durham, North Carolina, and EMD Lexigen Research Center, which is situated in Billerica near Boston, Massachusetts. The logo and new corporate design reflect not only our common identity and the values that bind us together (see front cover pages), rather, above all, they signalize to our customers that – despite the different names – there is a common symbol, a brand promise for excellent, high-quality products.

| RISK REPORT OF THE MERCK GROUP |

Established Risk Management System

As a company that operates on a global level, Merck is inevitably exposed to a large number of risks. By way of a central Controlling department, among other things, Merck has monitored the business development of all its companies for a long time. For several years now, this reporting system has made the development reports available to the Management online. In addition, Merck uses a database-assisted procedure developed especially for risk management. This early-warning system is being further developed on an ongoing basis. It is used to integrate the risk reports of all companies and central functions into the regular reports made to Senior Management. Any new, significant risks that arise are reported immediately, irrespective of specified reporting dates. The risk reports are finely categorized by risk type, level of damage and probability of occurrence. The implementation of countermeasures is monitored.

Risks for the Merck Group

— *Business- and product-related risks:* In the Pharmaceuticals business sector there is the risk of research projects having to be cancelled before any profit is made due to unsatisfactory results of preclinical and clinical studies. There is also the risk of the limited resources not being invested mainly in the R&D projects that hold the most economic potential. These risks are monitored by a project management system that was set up especially for this purpose. Other risks and the economic consequences thereof to which Merck was also exposed in fiscal year 2002 had been known to the Management for some time and were expected.

— *Risks from general legal conditions:* The crisis that healthcare systems are facing all over the world also presents risks for Merck. Changes in legislation in this respect are not predictable

for the sector as a whole and are thus difficult to calculate.

— *Legal risks with no significant impact:* In view of the extensive business activities of an international group of companies, there is always the risk of becoming involved in litigation. Several companies of the Merck Group are currently engaged in legal proceedings whose outcomes cannot be predicted in each case due to the uncertainties naturally inherent in litigation. This especially applies to the risks related to the vitamin antitrust proceedings. Based on our current state of knowledge, however, we are assuming that none of these proceedings will have a significant effect on the financial position of the Merck Group due to the provisions set up for this purpose

In fall 2002, we appointed a Compliance Officer, who will ensure our compliance with national and international laws, in particular those relating to high-risk sectors of law, such as antitrust, anti-corruption, capital market and commercial law. This Compliance Officer will also pursue compliance with the Merck Code of Conduct and will be involved in all important litigation proceedings, advising the Management and employees concerned during the preliminary stages.

— *Secured financial risks:* Financial risks, such as fluctuations in interest and exchange rates, are being countered by the targeted use of derivative financial instruments. These are explained in the notes to the consolidated financial statements in our full version of the Annual Report 2002 or at www.merck.de.

— *Protection against damage risks:* Insofar as possible, property damage and liability risks are covered by insurance policies.

— *Limited overall risk:* There are currently no identifiable risks that threaten the existence of the company.

| OUTLOOK 2003 |

Confidence in the Future

In view of political uncertainties, an outlook for the Merck Group as a company operating globally can only be given with some reservations. The prospects for the global economy in 2003 are viewed with skepticism, especially in connection with the possibilities of escalation of hostilities in the Middle East and increasing oil prices. Yet relatively positive forecasts prevail: The World Bank, for instance, is predicting a global economic growth rate of 2.5 %. Assuming a sustained recovery of the global economy and a revival of the U.S. economy, as well as stable central bank interest rates and euro exchange rates, economic growth of between 1.6 % (European Central Bank) and 2.0 % (German Institute for Economic Research – DIW) is forecasted for the euro area. In terms of German economic development in 2003, the Kiel Institute for World Economics is predicting growth of 1.0 % and an inflation rate of 0.9 %. The German Institute for Economic Research assumes an economic growth rate of just 0.6 %.

Against this background, we expect the Merck Group to perform on the level of the previous year, unless the euro significantly appreciates further. The strategic orientation of our businesses, the commitment of our employees, and the high level of investment in research and production facilities over the past few years will secure us competitive advantages despite the difficult environment.

In general, the pharmaceutical industry is less sensitive to economic cycles than other industries. On the other hand, the effects of governmental intervention in some health care systems cannot be foreseen. We expect our Generics division to at least maintain the record sales level it established in 2002 while Consumer Health Care should increase its sales in 2003. In Ethicals, we anticipate a bottoming out followed by a slight sales increase. What makes us confident are the still high number of prescriptions for Glucophage® XR in the United States, the number of new prescriptions for Glucovance®, and the market position of established drugs such as Concor®. The contribution to the Group's operating result will, however, decrease. In 2003, we expect to increase R&D spending disproportionate to sales. We can realize our clear strategic goals through the successful business model we have developed with solid foundations in both Pharmaceuticals and Chemicals.



| Pioneering Spirit | Worthy Chen and Andy Chang at our new coating line for display glass in Taiwan. Ideas and talent provide the competitive edge as a new technology for the production of glass for color LCDs opens the way for the next generation of mobile phones.

In the Chemicals business sector, the focus on our core competencies, the growing number of innovative products and the expansion of our market leadership in businesses with a long Merck tradition promise sustained stable business development. Ongoing cost-containment measures lead us to expect reasonable profit contributions from the Chemicals and Laboratory Distribution business sectors. The timing of the IPO for VWR International is dependent on when a fair market value can be expected.

In order to reduce expenses, we launched a program at our Darmstadt and Gernsheim sites in Germany in September 2002 to increase efficiency that will enable us to save EUR 30 million each year as of 2004 through process optimization. This will be combined with a reduction of 300 employment positions by the end of 2003. We will utilize cash flow from our business sectors mainly for clinical studies and pre-marketing related to our promising new drugs.

We are not expecting any new business risks beyond the generally assumed risks – particularly those relating to Pharmaceuticals. We remain confident that we will grow by virtue of our own efforts and through innovations created by talented, entrepreneurial employees.

| BALANCE SHEET |

ASSETS

<i>EUR million</i>	Dec. 31, 2002	Dec. 31, 2001
<i>Noncurrent assets</i>		
Intangible assets	1,839.0	2,036.2
Property, plant and equipment	2,133.7	2,151.4
Long-term investments	196.7	638.7
	4,169.4	4,826.3
<i>Current assets</i>		
Inventories	1,194.1	1,269.5
Trade accounts receivable	1,193.5	1,157.8
Other receivables and other assets	421.3	366.3
Cash and cash equivalents	339.4	464.2
	3,148.3	3,257.8
Deferred tax assets	193.2	171.3
	7,510.9	8,255.4

EQUITY AND LIABILITIES

<i>EUR million</i>	Dec. 31, 2002	Dec. 31, 2001
<i>Net equity</i>		
Equity capital	447.2	447.2
Reserves	1,566.0	1,848.5
Minority interest	40.4	40.8
	2,053.6	2,336.5
<i>Provisions</i>		
Provisions for pensions and other post-employment benefits	963.8	934.2
Other provisions	659.7	657.4
	1,623.5	1,591.6
<i>Liabilities</i>		
Financial obligations	2,336.9	2,759.3
Trade accounts payable	504.8	525.2
Other liabilities	866.6	900.7
	3,708.3	4,185.2
Deferred tax liabilities	125.5	142.1
	7,510.9	8,255.4

| INCOME STATEMENT |

<i>EUR million</i>	2002	2001
Sales	7,473.1	7,528.4
Cost of sales	-3,794.5	-3,682.1
Gross margin	3,678.6	3,846.3
Marketing and selling expenses	-1,843.7	-1,778.9
Administration expenses	-468.0	-515.5
Other operating income and expenses	-143.3	-163.6
Research and development	-608.2	-577.3
Patent and license revenues	97.7	169.3
Investment result	23.5	10.9
Amortization of goodwill	-120.6	-114.6
Operating result	616.0	876.6
Exceptional items	-56.7	409.6
Earnings before interest and tax (EBIT)	559.3	1,286.2
Financial result	-147.7	-208.0
Profit before tax	411.6	1,078.2
Income tax	-196.4	-423.2
Profit after tax	215.2	655.0
Minority interest	-12.2	-25.8
Net profit after minority interest	203.0	629.2
Earnings per share (in EUR)	1.18	3.66

| STATEMENT OF CHANGES IN NET EQUITY |

<i>EUR million</i>	2002	2001
Balance as of Jan.1	2,336.5	1,946.8
Profit after tax	215.2	655.0
Dividend payments to shareholders of Merck KGaA	-42.8	-40.5
Dividend payments to other minority shareholders in the Merck Group	-6.8	-9.9
Profits transferred by Merck & Cie to E. Merck	-64.5	-71.5
Profits transferred by E. Merck to Merck KGaA	11.6	13.3
Profits transferred by Merck KGaA to E. Merck	-149.3	-329.6
Appropriation to retained earnings/ profit brought forward by E. Merck	13.4	233.3
Currency translation difference	-261.4	0.1
Adjustment from the fair market valuation of financial instruments taken directly to equity	-15.7	-9.0
Changes in companies consolidated/Other	17.4	-51.5
Balance as of Dec. 31	2,053.6	2,336.5

| CASH FLOW STATEMENT |

<i>EUR million</i>	2002	2001
Profit after tax	215.2	655.0
Depreciation and amortization (noncurrent assets)	425.2	408.1
Changes in inventories	-41.2	-73.7
Changes in trade receivables	-135.5	-70.1
Changes in trade payables	10.8	80.5
Changes in provisions	70.0	84.9
Changes in other receivables and payables from operating activities	-89.4	-27.6
Gains/Losses on disposal of assets	-9.5	-480.0
Other non-cash income and expenses	-23.9	-14.9
Net cash flows from operating activities	421.7	562.2
Purchase of intangible assets	-34.8	-53.0
Purchase of property, plant and equipment	-377.0	-470.3
Purchase of long-term investments/ Changes in companies consolidated	-29.9	-95.9
Disposal of assets	461.5	721.0
Net cash flows from investing activities	19.8	101.8
Free cash flow	441.5	664.0
Dividend payments	-49.5	-50.4
Profit transferred to E. Merck	-188.9	-154.5
Other changes in net equity	-	3.3
Changes in liabilities to E. Merck	0.2	56.5
Changes in financial obligations	-286.3	-563.0
Changes in other debt from financing activities	7.4	-4.1
Net cash flows from financing activities	-517.1	-712.1
Changes in cash and cash equivalents	-75.6	-48.1
Changes in cash and cash equivalents due to currency translation	-49.5	8.7
Changes in cash and cash equivalents due to changes in companies consolidated	0.3	1.0
Cash and cash equivalents as of January 1	464.2	502.5
Cash and cash equivalents as of December 31	339.4	464.2

The Merck Annual Report 2002 has been published in German and English. Both versions are available on the Internet at www.merck.de. Full and short versions of the Report can be requested, free of charge, from: Corporate Communications, Merck KGaA D-64271 Darmstadt, Germany

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