BAYER AKTIENGESELLSCHAFT
Form 20-F
June 24, 2002

AS FILED WITH THE SECURITIES AND EXCHANGE COMMISSION ON JUNE 24, 2002

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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM 20-F

(Mark One)

[ ] REGISTRATION STATEMENT PURSUANT TO SECTION 12(b) OR 12(g)
OF
THE SECURITIES EXCHANGE ACT OF 1934
OR

[X] ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF
THE SECURITIES EXCHANGE ACT OF 1934
OR

[ ] TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF
THE SECURITIES EXCHANGE ACT OF 1934
Commission file number 001-16829

BAYER AKTIENGESELLSCHAFT
(Exact name of Registrant as specified in its charter)
BAYER CORPORATION*
(Translation of Registrant's name into English)
FEDERAL REPUBLIC OF GERMANY
(Jurisdiction of incorporation or organization)

BAYERWERK, GEBAUDE W1
KAISER-WILHELM-ALLEE
51368 LEVERKUSEN, GERMANY
(Address of principal executive offices)

Securities registered or to be registered pursuant to Section 12(b) of the Act.

| TITLE OF EACH CLASS: | NAME OF EACH EXCHANGE ON WHICH REGISTERED: |
|---|---|
| American Depositary Shares representing Bayer AG ordinary shares of no par value..... | New York Stock Exchange |
| Bayer AG ordinary shares of no par value..... | New York Stock Exchange** |

Securities registered or to be registered pursuant to Section 12(g) of the Act.

None

(Title of class)

Securities for which there is a reporting obligation pursuant to Section 15(d) of the Act.

None

(Title of class)

Indicate the number of outstanding shares of each of the issuer's classes of capital or common stock as of the close of the period covered by the annual report.

As of December 31, 2001, 730,341,920 ordinary shares, of no par value, of Bayer AG were outstanding.

Indicate by check mark whether the Registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

Yes [X] No [ ] Not applicable.

Indicate by check mark which financial statement item the registrant has elected to follow:

Item 17 [ ] Item 18 [X]

* Bayer Corporation is also the name of a wholly-owned subsidiary of the registrant in the United States.

** Not for trading, but only in connection with the registration of American Depositary Shares.

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FORWARD-LOOKING INFORMATION

This annual report contains forward-looking statements that reflect our plans and expectations. These forward-looking statements involve known and unknown risks, uncertainties and other factors that may cause our actual results, performance, achievements or financial position to be materially different from any future results, performance, achievements or financial position expressed or implied by these forward-looking statements. These factors include:

- Cyclicality in our industries;
- Reduced demand for older products in response to advances in biotechnology;
- Increasingly stringent regulatory controls;
- Increased raw materials prices;
- The expiration of patent protections;
- Environmental liabilities and compliance costs;
- Failure to compete successfully, integrate acquired companies or develop new products and technologies;
- Risks from hazardous materials;
- Litigation and product liability claims; and
- Fluctuations in currency exchange rates.

A discussion of these and other factors which may affect our actual results, performance, achievements or financial position is contained in Item 3, Key Information -- Risk Factors, Item 5, Operating and Financial Review and Prospects and elsewhere in this annual report.

ENFORCEABILITY OF CIVIL LIABILITIES UNDER U.S. FEDERAL SECURITIES LAWS

We are a German corporation. All of our directors and executive officers are residents of Germany. A substantial portion of our assets and those of such individuals is located outside the United States.

As a result, although a multilateral treaty to which both Germany and the United States are party guarantees service of writs and other legal documents in civil cases if the current address of the defendant is known, it may be difficult or impossible for you to effect service of process upon these persons from within the United States.

Also, because these persons and assets are outside the United States, it may be difficult for you to enforce judgments against them in the United States, even if these judgments are of U.S. courts and are based on the civil liability provisions of the U.S. securities laws.

If you wish to execute in Germany the judgment of a foreign court, you must

first obtain from a German court an order for execution (Vollstreckungsurteil). A German court may grant an order to execute a U.S. court judgment with respect to civil liability under the U.S. federal securities laws if that judgment is final as a matter of U.S. law. In granting the order, the German court will not enquire whether the U.S. judgment was, as a matter of U.S. law, correct. However, the German court must refuse to grant the order if:

- the U.S. court lacked jurisdiction, as determined under German law;

- the person against whom the judgment was obtained did not receive service of process adequate to permit a proper defense, did not otherwise acquiesce in the original action and raises the lack of service of process as a defense against the grant of the execution order;

- the judgment would conflict with the final judgment of a German court or with the final judgment of another foreign court that is recognizable under German law;

- recognition of the judgment would violate an important principle of German law, especially basic constitutional rights; or



- there is a lack of reciprocity between Germany and the jurisdiction whose court rendered the original judgment.

You should be aware that German courts hold certain elements of some U.S. court judgments, for example punitive damages, to violate important principles of German law. Judgments for ordinary compensatory damages are generally enforceable, unless in an individual case one of the reasons described above would forbid enforcement.

If you bring an original action before a German court based on the provisions of the U.S. securities laws and the court agrees to take jurisdiction over the case, the court will decide the matter in accordance with the applicable U.S. laws, to the extent that these do not violate important principles of German law. However, the court may refuse to accept jurisdiction if another action is pending before a U.S. or other foreign court in the same matter. Furthermore, the court might decide that, for a lawsuit brought by a U.S. resident under U.S. law against a defendant that, like Bayer, has a significant presence in the United States, a U.S. court would be the more proper forum.



## PART I

### ITEM 1. IDENTITY OF DIRECTORS, SENIOR MANAGEMENT AND ADVISORS

DIRECTORS AND SENIOR MANAGEMENT

Not applicable.

### ITEM 2. OFFER STATISTICS AND EXPECTED TIMETABLE

Not applicable.

### ITEM 3. KEY INFORMATION

SELECTED FINANCIAL DATA

We derived the following selected financial data for each of the years in the five-year period ended December 31, 2001, from our consolidated financial statements. We have prepared our consolidated financial statements in accordance with International Accounting Standards, or IAS and where indicated, in accordance with U.S. Generally Accepted Accounting Standards or U.S. GAAP. Note 44 to our consolidated financial statements included in Item 18 of this annual report describes the reconciliation of significant differences between IAS and U.S. GAAP.

Since January 1, 1999, we have prepared our financial statements in European Union euros (E). We originally prepared our consolidated financial statements for the years ending December 31, 1997 and 1998, in German marks (Deutsche Mark, or DM). We have restated these financial statements in euros, converting German mark values to euro values at the irrevocably fixed conversion rate of DM 1.95583 = E1.00. These restated financial statements depict the same trends and relationships among our financial accounts as do the corresponding original financial statements that we reported in German mark amounts prior to the introduction of the euro. Unless otherwise indicated, we have expressed all monetary amounts (except per share amounts) in the consolidated financial statements and in the notes in millions of euros.

In this annual report we have translated certain euro amounts into U.S. dollar amounts at the rate of $0.8901 = E1.00, the noon buying rate of the Federal Reserve Bank of New York on December 31, 2001. We have translated these amounts solely for your convenience, and you should not assume that, on that or any other date, one could have converted these amounts of euros into dollars at that or any other exchange rate.

The financial information presented below is only a summary. You should read it together with the consolidated financial statements included in Item 18.



CONSOLIDATED INCOME STATEMENT DATA

| | YEAR ENDED DECEMBER 31, | | | | | |
|---|---|---|---|---|---|---|
| | 2001 $ | 2001 E | 2000 E | 1999 E | 1998(1) E | 1997(1) E |
| | (IN MILLIONS, EXCEPT PER SHARE DATA) | | | | | |
| IAS: | | | | | | |
| NET SALES | 26,948 | 30,275 | 30,971 | 27,320 | 28,062 | 28,124 |
| Of which discontinuing operations | 1,190 | 1,337 | 2,356 | 3,748 | 6,418 | 6,522 |
| OPERATING RESULT | 1,434 | 1,611 | 3,287 | 3,357 | 3,155 | 3,077 |
| Of which discontinuing operations | 328 | 369 | 223 | 1,218 | 409 | 520 |
| Non-operating result | (442) | (496) | (297) | (521) | (427) | (465) |
| Income before income taxes | 992 | 1,115 | 2,990 | 2,836 | 2,728 | 2,612 |
| Income taxes | (137) | (154) | (1,148) | (818) | (1,113) | (1,102) |
| Income after taxes | 855 | 961 | 1,842 | 2,018 | 1,615 | 1,510 |
| Minority stockholders' interest | 4 | 4 | (26) | (16) | (1) | (6) |
| NET INCOME | 859 | 965 | 1,816 | 2,002 | 1,614 | 1,504 |
| Average number of shares in issue | 730 | 730 | 730 | 730 | 730 | 727 |
| Basic net income per share | 1.17 | 1.32 | 2.49 | 2.74 | 2.21 | 2.07 |
| Diluted net income per share | 1.17 | 1.32 | 2.49 | 2.74 | 2.21 | 2.07 |
| Dividends per share | 0.80 | 0.90 | 1.40 | 1.30 | 1.02 | 0.97 |
| U.S. GAAP: | | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| Net income | 711 | 800 | 1,783 | 1,967 | -- | -- |
| Basic and diluted net income per share | 0.97 | 1.10 | 2.44 | 2.69 | -- | -- |

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(1) The 1998 and 1997 figures have been restated from German marks into euro at the irrevocably fixed conversion rate of DM 1.95583 = E1.00.

CONSOLIDATED BALANCE SHEET DATA

| | DECEMBER 31, | | | | | |
|---|---|---|---|---|---|---|
| | 2001 $ | 2001 E | 2000 E | 1999 E | 1998(1) E | 1997(1) E |
| | (IN MILLIONS, EXCEPT PER SHARE DATA) | | | | | |
| IAS: | | | | | | |
| TOTAL ASSETS | 32,968 | 37,039 | 36,451 | 31,279 | 29,377 | 27,697 |
| Of which discontinuing operations | 934 | 1,049 | 2,000 | 1,749 | 5,513 | 5,757 |
| Stockholders' equity | 15,062 | 16,922 | 16,140 | 15,006 | 12,568 | 12,009 |
| Liabilities | 17,819 | 20,019 | 20,074 | 16,097 | 16,598 | 15,465 |
| Of which long-term financial obligations | 2,733 | 3,071 | 2,803 | 2,359 | 2,404 | 2,150 |
| Of which discontinuing operations | 273 | 307 | 821 | 688 | 2,462 | 2,302 |
| U.S. GAAP: | | | | | | |
| Stockholders' equity | 16,288 | 18,300 | 19,110 | 17,177 | -- | -- |
| Total assets | 33,673 | 37,831 | 38,740 | 32,769 | -- | -- |

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(1) The 1998 and 1997 figures have been restated from German marks into euro at the irrevocably fixed conversion rate of DM 1.95583 = E1.00.



DIVIDENDS

The following table indicates the dividends per share paid from 1997 to 2001. Shareholders who are U.S. residents should be aware that they will be subject to German withholding tax on dividends received. See Item 10, Additional Information -- Taxation.

| | 2001 | 2000 | 1999 | 1998 | 1997 |
|---|---|---|---|---|---|
| Total dividend (E in millions) | 657 | 1,022 | 949 | 747 | 710 |
| Dividend per share (E) | 0.90 | 1.40 | 1.30 | 1.02 | 0.97 |

See also "Dividend Policy and Liquidation Proceeds" in Item 8, Financial Information.

EXCHANGE RATE DATA

The following table shows, for the periods and dates indicated, the exchange rate of the U.S. dollar to the euro based on the noon buying rate of the Federal Reserve Bank of New York. For periods prior to the introduction of the euro on January 1, 1999, we have converted the then-prevailing German mark/U.S. dollar rates to a notional euro/dollar rate at the irrevocably fixed euro/mark rate of E1.00 = DM 1.95583. Fluctuations in the exchange rate between the euro and the dollar will affect the market price of the shares and the ADSs, the dollar amount received by holders of shares and the ADSs on conversion by the Depositary of any cash dividends paid in euro and the dollar translation of our results of operations and financial condition.

| YEAR | PERIOD END | AVERAGE | HIGH | LOW |
|---|---|---|---|---|
| 1997 | 1.0871 | 1.1287 | 1.2690 | 1.0398 |
| 1998 | 1.1733 | 1.1132 | 1.2178 | 1.0548 |
| 1999 | 1.0070 | 1.0655 | 1.1812 | 1.0016 |
| 2000 | 0.9388 | 0.9233 | 1.0335 | 0.8270 |
| 2001 | 0.8901 | 0.8909 | 0.9535 | 0.8370 |

| PREVIOUS SIX MONTHS | HIGH | LOW |
|---|---|---|
| December 2001 | 0.9044 | 0.8773 |
| January 2002 | 0.9031 | 0.8594 |
| February 2002 | 0.8778 | 0.8613 |
| March 2002 | 0.8836 | 0.8652 |
| April 2002 | 0.9028 | 0.8750 |
| May 2002 | 0.9373 | 0.9022 |



## RISK FACTORS

An investment in our shares or ADSs involves a significant degree of risk. You should carefully consider these risk factors and the other information in this annual report before deciding to invest in our shares or ADSs. The risks described below are not the only ones that may exist. The occurrence of any of these events could seriously harm our business, operating results and financial condition. In that case, the trading price of our shares or ADSs could decline and you could lose all or part of your investment.

### CYCLICALITY MAY REDUCE OUR OPERATING MARGINS OR CAUSE OPERATING LOSSES

Several of the industries in which Bayer operates are cyclical. In particular, these industries include chemicals and polymers. Typically, increased demand during peaks in the business cycle in these industries leads producers to increase their production capacity. Although peaks in the business cycle have been characterized by increased selling prices and higher operating margins, in the past these capacity increases have led to overcapacities because they have exceeded demand growth. Low periods in the business cycles are then characterized by decreasing prices and excess capacity. These factors can depress operating margins and may result in operating losses.

We believe that several areas within the chemical and polymer industries

currently show overcapacity, especially those areas, such as basic chemicals, that are subject to commoditization, and we expect that there may be further capacity additions in the next few years. We cannot assure you that future growth in demand will be sufficient to absorb current overcapacity or future capacity additions without significant downward pressure on prices and adverse effects on operating results.

The agriculture sector is moreover subject to seasonal and weather factors and fluctuations in crop prices, which can make its operations less predictable than those of our other business segments.

ADVANCES IN BIOTECHNOLOGY MAY REDUCE DEMAND FOR SOME OF OUR OLDER PRODUCTS

The growing importance of biotechnology, especially in the pharmaceutical and crop protection fields, could reduce market demand for some traditional products. In particular, new agrochemical compounds that achieve similar or improved results with less toxicity and smaller doses may reduce market demand for traditional chemical products.

REGULATORY CONTROLS AND CHANGES IN PUBLIC POLICY MAY REDUCE THE PROFITABILITY OF NEW OR CURRENT PRODUCTS

We must comply with a broad range of regulatory controls on the testing, manufacture and marketing of many of our products. In some countries, including the United States, regulatory controls have become increasingly demanding. We expect that this trend will continue and will expand to other countries, particularly those of the European Union. A proposed new EU chemicals policy could mandate a significant increase in the testing and assessment of basic chemicals and chemical intermediates, leading to increased costs and reduced operating margins for these products. Although we have adopted measures to address these stricter regulations, such as increasing the efficiency of our internal research and development process in order to reduce the impact of extended testing on time-to-market, we cannot assure you that stricter regulatory regimes will not delay product development or restrict marketing and sales.

Our Pharmaceuticals and Consumer Care & Diagnostics segments are subject to particularly strict regulatory regimes. Failure to achieve regulatory approval of new products can mean that we do not recoup our research and development investment through sales of that product. Withdrawal by regulators of an approval previously granted can mean that the affected product ceases to generate revenue. This can occur even if regulators take action falling short of actual withdrawal. For example, the U.S. Food and Drug Administration issued a recommendation to all manufacturers of products containing phenylpropanolamine (PPA). As a result, we voluntarily discontinued marketing our Consumer Care products that contained this substance. In addition, in some cases we may voluntarily cease marketing a product even in the absence of regulatory action, as in the case of our cerivastatin anti-cholesterol drugs.



Pharmaceutical product prices are subject to controls or pressures in many markets. Some governments intervene directly in setting prices. In addition, in some markets major purchasers of pharmaceutical products (whether governmental agencies or private health care providers) have the economic power to exert substantial pressure on prices. Price controls limit the financial benefits of growth in the life sciences markets and the introduction of new products. We cannot predict whether existing controls will increase or new controls will be introduced, further limiting our financial benefits from these products.

Similarly, international negotiations currently ongoing at the World Trade

Organization may affect the agriculture policy of the European Union. For example, a change in EU agricultural policy leading to an increase in "set aside" acreage could reduce the overall market for agricultural products in the European Union. Additionally, a radical review and reduction of pricing support in the European Union could affect customer and pricing structure and harm our operating results. It is impossible at present to determine precisely what changes, if any, may occur or when. We expect the operating results of our Crop Protection and Animal Health segments to reflect the uncertainties of this industry.

OUR OPERATING MARGINS MAY DECREASE IF WE CANNOT PASS INCREASED RAW MATERIAL PRICES ON TO CUSTOMERS OR IF PRICES FOR OUR PRODUCTS DECREASE FASTER THAN RAW MATERIAL PRICES

Significant variations in the cost and availability of raw materials and energy may reduce our operating results. Bayer uses significant amounts of petrochemical-based raw materials in manufacturing a wide variety of our products. We also purchase significant amounts of natural gas, coal, electricity and fuel oil to supply the energy required in our production processes. The prices and availability for these raw materials and energy vary with market conditions and may be highly volatile. There have been in the past, and may be in the future, periods during which we cannot pass raw material price increases on to customers. Even in periods during which raw material prices decrease, we may suffer decreasing operating profit margins if the prices of raw materials decrease more slowly than do the selling prices of our products. In the past, we have entered into hedging arrangements with respect to raw materials prices only to a limited extent. If the market for these hedging arrangements attains sufficient liquidity and we can obtain their protection at a reasonable cost, we would consider making more extensive use of these hedge instruments.

LITIGATION AND ADMINISTRATIVE CLAIMS COULD HARM OUR OPERATING RESULTS AND CASH FLOWS

We are or could become involved in a number of legal proceedings. See Item 8, Financial Information -- Legal Proceedings. Each of these proceedings or potential proceedings could involve substantial claims for damages or other payments. These proceedings include claims alleging product liability and claims alleging antitrust violations. If our opponents in these lawsuits obtain judgments against us, we could be required to pay substantial damages and related liabilities.

In addition, we are currently subject to an investigation of alleged underpayment of rebates to U.S. federal health programs. This investigation could lead to criminal or civil proceedings against us. If such proceedings are commenced and result in an adverse verdict, we would likely be required to pay substantial damages and fines. In the worst case, we could be disqualified from participating in U.S. federal health programs.

We are also plaintiff in lawsuits to enforce our patent rights in our products. If we are not successful in these actions, we would expect our revenue from these products to decline as generic competitors enter the market.

In cases where we believe it appropriate, we have established provisions to cover potential litigation-related costs. We believe that these provisions (together with insurance proceeds in cases where our liability would be covered by insurance) would substantially cover judgments for damages against us in these cases. We may also establish provisions for additional cases, if we believe that developments in those proceedings make it appropriate to do so. We cannot assure you, however, that our litigation provisions will be adequate or that we will fully recover claims under our insurance policies. As a result, adverse decisions in the legal proceedings in which we are involved could harm our results of operations or cash flows in any given year.

THE LOSS OF PATENT PROTECTION MAY RESULT IN LOSS OF SALES TO COMPETING PRODUCTS

During the life of its patent, a patented product is normally only subject to competition from alternative products. After a patent expires, the producer of the formerly patented product is likely to face increased competition from generic products entering the market. This competition is likely to reduce market share and sales revenue. See Item 4, Information on the Company -- Intellectual Property Protection, for a discussion of the scheduled expiration dates of our significant patents. In addition, generic drug manufacturers, particularly in the United States, may seek marketing approval for pharmaceutical products currently under patent protection by attacking the validity or enforceability of a patent. If a generic manufacturer succeeds in voiding a patent protecting one of our products, that product could be exposed to generic competition before the natural expiration of the patent. See Item 8, Financial Information -- Legal Proceedings, for a discussion of several important patent-related proceedings in which we are involved.

The extent of patent protection varies from country to country. In some of the countries in which we operate, patent protection may be significantly weaker than in the United States or the European Union. Piracy of patent-protected intellectual property has often occurred in recent years, particularly in some Asian countries. In addition, in an effort to control public health crises, some developing countries, such as South Africa and Brazil, have recently announced plans for substantial reductions in scope of patent protection for pharmaceutical products. In particular, these countries could facilitate competition within their markets from generic manufacturers who would otherwise be unable to introduce competing products for a number of years. Furthermore, in response to anthrax bioterror attacks in the United States in 2001, the U.S. and Canadian governments contemplated compulsory licensing of our ciprofloxacin antibiotic -- in effect, permission to generic manufacturers to market ciprofloxacin before the expiry of our patent rights. Although we reached agreements with the two governments intended to ensure adequate supplies of ciprofloxacin while preserving our existing patent rights, we cannot assure you that these or other governments would not impose compulsory licensing in future in response to renewed or increased bioterror attacks. We do not currently expect any proposed patent law modifications to affect us materially. Nevertheless, if a country in which we sell a substantial volume of an important product were to effectively void our patent rights in that product, our revenue could suffer.

FAILURE TO COMPETE SUCCESSFULLY OR INTEGRATE NEWLY ACQUIRED BUSINESSES MAY REDUCE OUR OPERATING PROFITS

Bayer operates in highly competitive industries. Actions of our competitors could reduce our profitability and market share. In some commodity areas (especially within our Plastics & Rubber, Polyurethanes, Coatings & Colorants and Chemicals segments), we compete primarily on the basis of price and reliability of product and supply. All of our segments, however, also compete in specialty markets on the basis of product differentiation, innovation, quality and price. Significant product innovations, technical advances or the intensification of price competition by competitors could harm our operating results.

From time to time we acquire all or a portion of an established business and combine it with our existing business units. Integration of existing and newly acquired businesses requires difficult decisions with respect to staffing levels, facility consolidation and resource allocation. We must also plan carefully to ensure that established product lines and brands retain or increase

their market position.

In October 2001, we announced the acquisition, subject to regulatory approval, of Aventis CropScience from Aventis SA and Schering AG for E7.25 billion. This price consists of both cash that we paid to Aventis and Schering and outstanding debt of Aventis CropScience that we have assumed. This acquisition marks the single largest acquisition in our history, and the integration of Aventis CropScience with our Crop Protection segment will pose formidable management challenges. Any failure to combine these businesses successfully could harm our operating results. Also, the antitrust authorities whose approval to consummate this acquisition we received have made their approval conditional on our divesting a portion of the assets we acquire from Aventis. To the extent that assets we are required to divest were an important part in our assumptions about the business of the combined enterprise, we might not be able to fully realize our objectives for the combined enterprise even if we successfully implement the other aspects of our plan.



FAILURE TO DEVELOP NEW PRODUCTS AND PRODUCTION TECHNOLOGIES MAY HARM OUR COMPETITIVE POSITION

Bayer's operating results significantly depend on the development of commercially viable new products and production technologies. We devote substantial resources to research and development. Because of the lengthy development process, technological challenges and intense competition, we cannot assure you that any of the products we are currently developing, or may begin to develop in the future, will become market-ready and achieve substantial commercial success. If we are unsuccessful in developing new products and production processes in the future, our competitive position and operating results will be harmed.

RISKS FROM THE HANDLING OF HAZARDOUS MATERIALS COULD HARM OUR OPERATING RESULTS

Bayer's operations are subject to the operating risks associated with pharmaceutical and chemical manufacturing, including the related storage and transportation of raw materials, products and wastes. These hazards include, among other things:

- pipeline and storage tank leaks and ruptures;
- explosions; and
- discharges or releases of toxic or hazardous substances.

These operating risks can cause personal injury, property damage and environmental contamination, and may result in the shutdown of affected facilities and the imposition of civil or criminal penalties. The occurrence of any of these events may significantly reduce the productivity and profitability of a particular manufacturing facility and harm our operating results.

Although we maintain property, business interruption and casualty insurance that we believe is in accordance with customary industry practices, we cannot assure you that this insurance will be adequate to cover fully all potential hazards incident to our business.

For more detailed information on environmental issues, see Item 4, Business -- Governmental Regulation.

ENVIRONMENTAL LIABILITIES AND COMPLIANCE COSTS MAY HAVE A SIGNIFICANT NEGATIVE EFFECT ON OUR OPERATING RESULTS

The environmental laws of various jurisdictions impose actual and potential obligations on Bayer to remediate contaminated sites. These obligations may relate to sites:

- that we currently own or operate,
- that we formerly owned or operated, or
- where waste from our operations was disposed.

These environmental remediation obligations could significantly reduce our operating results. In particular, our accruals for these obligations may be insufficient if the assumptions underlying these accruals prove incorrect or if we are held responsible for additional, currently undiscovered contamination. See Item 4, Business -- Governmental Regulation.

Furthermore, Bayer is or may become involved in claims, lawsuits and administrative proceedings relating to environmental matters. An adverse outcome in any of these might have a significant negative impact on our operating results.

Stricter environmental, safety and health laws and enforcement policies could result in substantial costs and liabilities to Bayer and could subject our handling, manufacture, use, reuse or disposal of substances or pollutants to more rigorous scrutiny than is currently the case. Consequently, compliance with these laws could result in significant capital expenditures as well as other costs and liabilities, thereby harming our business and operating results.



FLUCTUATIONS IN EXCHANGE RATES MAY AFFECT OUR FINANCIAL RESULTS

Bayer conducts a significant portion of its operations outside the euro zone. Fluctuations in currencies of countries outside the euro zone, especially the U.S. dollar, can materially affect our revenue as well as our operating results. For example, changes in currency exchange rates may affect:

- the relative prices at which we and our competitors sell products in the same market; and
- the cost of items we require for our operations.

Although these fluctuations can benefit us, they can also harm our results. From time to time, we may use financial instruments to hedge our exposure to foreign currency fluctuations. As of December 31, 2001, we had entered into forward foreign exchange contracts and currency swaps with a total notional value of E2.75 billion. See Item 11, Quantitative and Qualitative Disclosures About Market Risk.



## ITEM 4. INFORMATION ON THE COMPANY

### HISTORY AND DEVELOPMENT OF THE COMPANY

Bayer Aktiengesellschaft, or Bayer AG, is a stock corporation (Aktiengesellschaft) organized under the laws of the Federal Republic of Germany. In this annual report, "Bayer AG" refers solely to the ultimate parent company of the consolidated Bayer Group.

Bayer AG was incorporated in 1951 under the name "Farbenfabriken Bayer AG" for an indefinite term and adopted its present name in 1972. Bayer AG's registered office (Sitz) and principal place of business are at the Bayerwerk, 51368 Leverkusen, Germany. Its telephone number is +49 (214) 30-1 and its home page on the World Wide Web is at www.bayer.com. Reference to our website does not incorporate the information contained on the website into this annual report.

Although Bayer AG was incorporated in 1951, it traces its roots to Friedr. Bayer & Co., an aniline dye works founded in Wuppertal, Germany in 1863 by Friedrich Bayer and Johann Friedrich Weskott. This company achieved a leading position in its industry, opening facilities and agencies in the United States and in other European countries. Friedr. Bayer & Co. made numerous discoveries, most notably of aspirin (acetylsalicylic acid), perhaps the best-known and most widely used medication in world history.

In 1925, the original Bayer company merged with five other leading German chemical and pharmaceutical companies, including the ancestors of today's Aventis and BASF, to form I.G. Farbenindustries AG. After the second World War, the Allied High Commission, formed by the United States, the United Kingdom, France and the former Soviet Union to administer occupied Germany, seized the assets of I.G. Farben. Pursuant to Law No. 35 of the Allied High Commission, some of these assets were later distributed among 12 newly formed companies, including the present Bayer AG.

After World War I, the U.S. government expropriated the U.S. rights to the Bayer name and trademarks as "enemy property". In 1986, Bayer reacquired the U.S. rights to the Bayer trademark with respect to products for the manufacturing industry and, in 1994, reacquired full U.S. rights to its name and trademarks, including the "Bayer cross".

Friedr. Bayer & Co. established operations in the United States as early as 1870. In 1992, Bayer AG's U.S. subsidiaries Mobay Corporation, Miles Inc. and Agfa Corporation merged with the management holding company Bayer USA Inc. to form a new operating company, Miles Inc. In April 1995, Miles Inc. changed its name to the current form, Bayer Corporation.

Since 1999, we have incurred capital expenditures as follows:

| | 2001 | 2000 | 1999 |
|---|---|---|---|
| | (EUROS IN MILLIONS) | | |
| Pharmaceuticals | 415 | 553 | 525 |
| Consumer Care & Diagnostics | 267 | 192 | 205 |
| Crop Protection | 215 | 233 | 184 |
| Animal Health | 49 | 50 | 33 |
| Plastics & Rubber | 592 | 652 | 575 |
| Polyurethanes, Coatings & Colorants | 492 | 359 | 446 |
| Chemicals | 483 | 424 | 461 |

In 1999, we spent E0.4 billion on acquisitions. Major projects in 1999 included the acquisition of the plastic sheet businesses of the chemical companies DSM-Axxis N.V. and Sheffield Plastics; the purchase of the business and assets of Elastochem Inc.; and an 11.3 percent equity investment in LION Bioscience AG. In 2000, we spent a total of E4.2 billion on acquisition activity, mainly in further aligning our polymers and chemicals activities toward specialties through the acquisitions of Lyondell Chemical Company's

polyols business, Sybron, CSM Holding, Inc. and Cytec's sizing and strength paper chemicals business. In the life science area we strengthened



our crop protection business by acquiring the Flint(R) strobilurin product line. In 2001, we spent E0.5 billion on acquisitions, including rights to manufacture and market products that detect hepatitis C and HIV antibodies as well as the corn herbicide Mikado(R). We also made a E93 million equity investment in CuraGen.

In October 2001, we entered into an agreement to acquire Aventis CropScience from Aventis and Schering. The consummation of this transaction is conditioned upon approvals of antitrust and competition authorities in the United States and the European Union. The European Commission approved the transaction in April 2002, and the United States Federal Trade Commission gave its preliminary approval of the transaction under the terms of a consent order on May 30, 2002. Both approvals are subject to the condition that we divest or out-license some of the combined enterprise's products. See below, -- Crop Protection -- Segment Strategy. The transaction was closed on June 3, 2002.

In 1999, our major divestments included our flotation of 70 percent of the former Agfa business segment; we sold the remaining 30 percent in June 2002. In 2000, the addition of a new partner in the DyStar joint venture reduced our capital share in that joint venture to 35 percent; since then we consider DyStar a non-core business and classify it under "Discontinuing Operations". We continued to streamline our portfolio through 2000, divesting our animal health biologicals, acrylic fibers and solar-grade silicon businesses, Troponwerke, and Basics, our generic pharmaceuticals business in Germany. We divested our investments in Myriad Genetics Inc. and in Schein Pharmaceuticals, a U.S. generics business. In the first half of 2001, we also sold our acrylic fiber product line and classified the remainder of our Fibers business group under "Discontinuing Operations". In May 2002, we reclassified Fibers as part of our continuing operations. See Item 5, Operating and Financial Review and Prospects -- Overview. In May 2001, we sold our interest in the EC Erdolchemie joint venture, which we had previously classified under "Discontinuing Operations". In December 2001, our Supervisory Board approved plans to divest a number of non-core businesses, including Haarmann & Reimer, Rhein Chemie and our 50 percent interest in PolymerLatex.



## BUSINESS

We are a global company offering a wide range of products, including ethical pharmaceuticals, diagnostics and other health-care products; agricultural products; polymers; and chemicals.

Bayer comprises the parent company, Bayer AG of Leverkusen, Germany, and over 250 consolidated subsidiaries. We are organized into seven business segments -- Pharmaceuticals; Consumer Care & Diagnostics; Crop Protection; Animal Health; Plastics & Rubber; Polyurethanes, Coatings & Colorants; and Chemicals.

At their annual meeting in April 2002, Bayer AG's shareholders approved a plan to transform Bayer AG into a management holding company structure. The new holding company structure, which evolves out of our historical "four pillar" strategy, calls for the division of our business operations among four new, wholly-owned operating subsidiaries. Each of these will comprise one or more current business segments. The new subsidiaries:

- Bayer HealthCare AG (which will comprise the current Pharmaceuticals, Consumer Care & Diagnostics and Animal Health segments);

- Bayer CropScience AG (consisting of our Crop Protection segment);

- Bayer Polymers AG (which will comprise the current Plastics & Rubber and Polyurethanes, Coatings & Colorants segments); and

- Bayer Chemicals AG (which will comprise our current Chemicals segment).

Under the plan, we have also created three additional subsidiaries. These will act as service companies that support the four operating subsidiaries, as well as Bayer AG.

Under our plan for this new structure, we expect to transfer most of Bayer AG's assets to the new subsidiaries. As a matter of German law, Bayer AG's shareholders must approve these transfers. At the April 2002 meeting, the shareholders approved the transfer of assets to Bayer CropScience AG, with economic effect from January 1, 2002. At the annual shareholders' meeting for 2003, we expect to ask shareholders to approve the transfer of assets to the other three operating companies, as well as to the three service companies. Subject to shareholder approval, our transformation to the new holding company structure will be complete when these asset transfers have been entered into the commercial register following the 2003 shareholders' meeting. However, for tax and accounting purposes, the transformation would have retroactive economic effect as from January 1, 2003.

Under the new structure, Bayer AG's Board of Management would continue to determine the overall strategy of the Bayer Group and control resource allocation. Bayer AG would nominate the management of the subsidiary Group companies and set each company's performance criteria. These new entities will be wholly owned by Bayer AG, although we may consider strategic partnerships, particularly for our Health Care and Chemicals businesses. If we do form any strategic partnerships, we would expect to maintain both majority ownership and operational control.

For the year ended December 31, 2001, Bayer reported total sales of E30.3 billion, an operating result of E1.6 billion, and net income of E965 million. Sales from continuing operations amounted to E28.9 billion. As of December 31, 2001, we employed 116,900 people worldwide, including employees in our discontinuing operations.

The following table shows a breakdown by region of our sales in 2001:

| REGION | SALES | |
|---|---|---|
| | (EUROS IN MILLIONS) | (PERCENTAGE OF TOTAL) |
| Europe | 12,999 | 44.9 |
| North America | 9,806 | 33.9 |
| Asia/Pacific | 3,817 | 13.2 |
| Latin America/Africa/Middle East | 2,316 | 8.0 |

By continuing to align our portfolio strategically in favor of the more profitable life sciences, we aim to increase Bayer's overall operating margin to above 15 percent. We plan to achieve this shift in our portfolio

through both organic growth and selective life science acquisitions like those of Chiron, Gustafson and Flint as well as the expected acquisition of Aventis CropScience and the planned joint venture with Aventis Behring in the biological products field. In our Health Care businesses we are aiming to win market share and grow profitability without stifling our growth potential at the same time.

We will strive to continue expanding the strong market position of our Polymers businesses. After integrating Lyondell's polyol business, our main focus will be on expansion in Asia, where we see opportunities for above-average growth, and on developing new applications for our products. In the Chemicals segment, we plan to focus on further improving our earnings potential. Our plan for achieving this goal calls for the further streamlining of our portfolio and the expansion of our specialties, including by means of selected acquisitions.

We aim to avoid accidents, to prevent our activities from harming human and animal health and to tailor our product range to the tenets of sustainability. Bayer's long-term strategy and activities are guided by the principles of sustainable development. Our objective is to meet the economic, ecological and social needs of today's society without compromising the ability of future generations to meet their own needs. We contribute to sustainable development by participating in the worldwide Responsible Care(R) initiative developed by companies in the global chemical industry.

PHARMACEUTICALS

OVERVIEW

Our Pharmaceuticals segment focuses on the development and marketing of ethical pharmaceuticals (medications requiring a physician's prescription and sold under a specific brand name) as well as biological products (for example, blood plasma products). The following table shows the segment's performance for the last three years.

| | 2001 | 2000 | 1999 |
|---|---|---|---|
| | (EUROS IN MILLIONS) | | |
| External net sales | 5,729 | 6,140 | 5,003 |
| Percentage of total sales (continuing operations) | 20.4 | 22.1 | 21.9 |
| Intersegment sales | 38 | 39 | 51 |
| Operating result before exceptional items | 383 | 1,165 | 922 |
| Percentage of total operating result (continuing operations) | 18.2 | 33.5 | 30.0 |

The following table shows our revenue during the past three years from the products that we regard as material to the revenue of the segment as a whole.

| | 2001 | | 2000 | | 19 |
|---|---|---|---|---|---|
| PRODUCT | REVENUE (EUROS IN MILLIONS) | PERCENTAGE OF SEGMENT REVENUE | REVENUE (EUROS IN MILLIONS) | PERCENTAGE OF SEGMENT REVENUE | REVENUE (EUROS IN MILLIONS) |
| Cipro | 1,964 | 34.3 | 1,785 | 29.1 | 1,519 |

| | | | | | |
|---|---|---|---|---|---|
| Adalat..... | 975 | 17.0 | 1,155 | 18.8 | 1,021 |

SEGMENT STRATEGY

We plan to hold all our Health Care businesses (including Pharmaceuticals, Consumer Care & Diagnostics and Animal Health) through a single new, wholly-owned subsidiary of Bayer AG. See -- Business. From January 1, 2002, we have organized the Pharmaceuticals segment into two business groups, Pharmaceutical Products and Biological Products.

Bayer AG and Aventis S.A. have signed a non-binding letter of intent to establish a joint venture for biological products. The proposed joint venture would combine the operations of our Biological Products business group with those of the Aventis subsidiary Aventis Behring L.L.C. Bayer would own a majority interest in, and have operational control over the joint venture. We would also have the option of acquiring the remaining



interest in the business at a later date. Currently, it is contemplated that Bayer would have a call option in the fourth year of the venture, while Aventis would have a put option in year five. No other options are currently contemplated. The joint venture would have marketing rights in Kogenate and related recombinant Factor VII blood-clotting products, which Bayer would continue to manufacture. At present Bayer and Aventis are contemplating the proposed transaction, but neither is obligated to proceed with these plans. If both companies elect to proceed, we would expect to enter into a binding final agreement during the summer of 2002, with closing expected in late 2002 or in the first quarter of 2003, subject to any required regulatory approvals.

Our strategic priorities for the Pharmaceuticals segment include:

- Completing the organizational adjustments made necessary by our voluntary withdrawal of Baycol/ Lipobay. Our strategy calls for us to evaluate potential strategic partnerships in order to maintain our costs, especially for research and development, at an acceptable level without stifling our potential for long-term growth.

- Preparing for the expected launch of our vardenafil erectile dysfunction product.

- Carrying out our planned biological products joint venture with Aventis Behring.

In addition to our immediate priorities, life cycle management remains a continuous element of our strategy. Successful life cycle management enables us to extend the commercial success of established products.

MAJOR PRODUCTS

Ciprofloxacin, marketed under the trademark Cipro(R) in the United States and Ciproxin(R), Ciproxine(R), Ciprobay(R) and Ciflox(R) in other countries, is a broad-spectrum antimicrobial agent of the fluoroquinolone class. We launched Cipro in 1986 and have since marketed it in more than 100 countries. Cipro's main uses are in the treatment of urinary tract infections and in severe hospital infections, where it competes with other fluoroquinolones as well as with antibiotics of other classes. It is also approved for the treatment of anthrax. Cipro is our leading pharmaceutical product.

Avelox(R) (moxifloxacin), marketed in Germany under the name Avalox(R), is

an antibiotic used to treat common bacterial respiratory tract infections. We currently market Avelox in 61 countries. Avelox is indicated for the treatment of community-acquired pneumonia, acute exacerbations of chronic bronchitis and acute sinusitis. In late 2001, we launched Avelox i.v.(R), a new intravenous form of this product, in the United States. In May 2002, the product was approved for Germany; we expect to being launch of the product in the near term.

Adalat(R) is the brand name for nifedipine, the first representative of the dihydropyridine class of calcium antagonists. Calcium plays an important role in the body's regulation of blood pressure and the supply of blood to the heart tissues. Calcium antagonists can reduce blood pressure and improve blood supply to heart tissue.

Kogenate(R) FS (Kogenate(R) Bayer in the EU) is a genetically engineered recombinant version of the protein Factor VIII (fVIII). Patients with hemophilia A cannot produce sufficient fVIII, and their blood therefore cannot clot properly. Physicians use both plasma-derived and recombinant fVIII to treat hemophilia. Because recombinant products like Kogenate(R) do not derive from human donors, the risk that their users will inadvertently contract infection with HIV, hepatitis or other viruses occasionally present in plasma-derived products is greatly reduced.

We supply recombinant fVIII to Aventis Behring, which markets it under the brand name Helixate FS(R). We produce recombinant fVIII under licenses from Genentech and another licensor, which together give us worldwide production rights.

Glucobay(R), Precose(R) (in the United States) and Prandase(R) (in Canada) are our trade names for acarbose, an oral antidiabetic product that delays carbohydrate digestion. Glucobay improves metabolic control in diabetics alone or in combination with other antidiabetic drugs.

Gamimune(R)/Polyglobin(R) is a plasma-derived concentrate of human antibodies (Intra-Venous Immunoglobulin G, or IVIG) registered in 33 countries worldwide, including the United States, Canada, Germany and Japan.



Physicians use it to treat immune system deficiencies as well as for the treatment of some autoimmune disorders, in which the immune system mistakenly attacks the body's own tissues.

Prolastin(R) (a1-proteinase inhibitor human) is a plasma-derived product approved for use in the United States, Canada and several European countries. It is used for chronic therapy in individuals with emphysema related to congenital a1-antitrypsin (AAT) deficiency. AAT deficiency is an inherited disorder that causes insufficient AAT in the body. This deficiency can cause serious lung disease and, ultimately, emphysema.

We launched Nimotop(R) (nimodipine) globally in the mid-1980s. A member of the dihydropyridmine class of calcium antagonists developed by Bayer researchers, Nimotop improves the stability and function of nerve cells following certain types of hemorrhage in the brain by inhibiting calcium influx into the cells. Physicians use Nimotop to treat aneurysmatic sub-arachnoid hemorrhage, a serious condition involving bleeding in the brain beneath its outer protective membrane following the rupture of a blood vessel.

We derive our Plasbumin(R) and Plasmanate(R) fluid management products from fraction V of human plasma. These products draw fluid from body tissues into the bloodstream, thereby helping to stabilize blood pressure and circulation in patients who have lost large amounts of blood through trauma, disease or

surgery. Health care professionals use our fraction V products primarily in treating shock victims.

Trasylol(R) is a natural proteinase inhibitor obtained from bovine lung tissue. Used prophylactically, it reduces blood loss during coronary bypass surgery, reducing the patient's need for blood transfusions.

Marketing withdrawal of cerivastatin products

Baycol(R)/Lipobay(R) (cerivastatin) is a statin, one of a class of medications used to lower elevated blood levels of cholesterol and other lipids, or fatty substances. We launched cerivastatin in its lower original dosages in 1997. We later obtained regulatory marketing approval for higher dosages, up to 0.8 mg.

Statins are powerful medications that can reduce the risk of coronary heart disease. However, they can also cause significant side effects, including rhabdomyolosis. This is a serious condition which, in its most severe form, can lead to life-threatening kidney failure. Rhabdomyolysis has been reported more frequently in patients taking cerivastatin than other statins. This was particularly true in patients taking cerivastatin in combination with gemfibrozil, another lipid-lowering medication, and in patients taking cerivastatin in the 0.8 mg dosage. We are currently aware of approximately one hundred patients diagnosed with rhabdomyolysis while taking cerivastatin who have died, as well as approximately 1,600 patients assessed with non-fatal cases of rhabdomyolysis.

We had provided prescription information that warned of the risk of rhabdomyolysis and contained strong warnings and a contraindication against the combination of cerivastatin and gemfibrozil. However, we continued to receive reports of this condition in patients who had been taking cerivastatin. Accordingly, we voluntarily ceased marketing cerivastatin in August 2001 and do not intend to reintroduce the drug.

Kogenate production issues

In late 2000 we received reports from the U.S. Food and Drug Administration following FDA inspections at our Berkeley, California and Clayton, North Carolina facilities. The FDA highlighted data validation, management and record-keeping practice as the principal areas of concern, as well as technical production issues. In responding to the reports, we conducted follow-up investigations that identified certain technical problems affecting the manufacture of recombinant fVIII products. In July 2001, after receiving our response, the FDA issued a Warning Letter, identifying items requiring further action. As a result of these issues, our total production of recombinant fVIII products for 2001 was significantly less than in 2000, leading to periods of shortage in these products on the market. We are continuing to take action to rectify these issues. Although we cannot currently state when we will be able to return to full production capacity, we expect an improvement in the supply of these products by mid-2002.



Microbial resistance to antibiotics

The development by microbes of resistance to antibiotics has been a cause of concern for the medical and pharmaceutical communities in recent years. Resistance development is a natural process. It is almost certainly impossible to eliminate it altogether. Emergent ciprofloxacin or moxifloxacin resistance could become a problem on an isolated, individual-patient basis. Nevertheless, we do not believe that microbial resistance will impair the general clinical

usefulness of these two products in large patient populations in the foreseeable future.

We encourage health care professionals to adopt standards of appropriate antibiotic use to avoid facilitating the development of resistance. Inappropriate use of antibiotics is one factor that facilitates the development of microbial resistance. We have initiated the LIBRAINITIATIVE.COM project to provide physicians and patients with information on how they can use antibiotics appropriately.

Ciprofloxacin: increased demand and governmental agreements following bioterror attacks

Cipro (ciprofloxacin) has been approved for the treatment of anthrax since 2000 in the United States and, since November 2001, in Germany. In response to higher demand for Cipro following anthrax bioterror attacks in the United States, we increased our global production of this antibiotic to provide the quantities required. We have entered into agreements with the governments of several countries, including the United States and Canada, to provide high volumes of Cipro if these countries require them.

MARKETS AND DISTRIBUTION

The Pharmaceuticals segment's principal markets are North America, Western Europe and Asia (especially Japan). The segment's sales by region and total, for the past three years are as follows:

| | 2001 | 2000 | 1999 |
|---|---|---|---|
| | (EUROS IN MILLIONS) | | |
| Europe | 1,629 | 1,698 | 1,571 |
| North America | 2,637 | 2,812 | 2,135 |
| Asia/Pacific | 1,022 | 1,159 | 883 |
| Latin America/Africa/Middle East | 441 | 471 | 414 |
| Total | 5,729 | 6,140 | 5,003 |

The following table sets forth the segment's sales for the last three years, broken down by key products.

| | 2001 | 2000 | 1999 |
|---|---|---|---|
| | (EUROS IN MILLIONS) | | |
| Cipro/Ciprobay | 1,964 | 1,785 | 1,519 |
| Adalat | 975 | 1,155 | 1,021 |
| Baycol/Lipobay | 367 | 636 | 350 |
| Gamimune N | 343 | 350 | 287 |
| Glucobay | 312 | 311 | 277 |
| Kogenate | 250 | 491 | 377 |
| Avelox | 181 | 132 | 12 |
| Trasylol | 136 | 104 | 74 |
| Prolastin | 131 | 140 | 74 |
| Nimotop | 120 | 129 | 127 |
| Fraction V products | 101 | 118 | 109 |

| | | | |
|---|---|---|---|
| Sum of top eleven products | 4,880 | 5,351 | 4,227 |
| All other products | 849 | 789 | 776 |
| Total | 5,729 | 6,140 | 5,003 |



Among the factors that have affected, or may affect, our Pharmaceuticals business are:

- in Europe and North America, increasingly competitive price pressures as managed care groups, health care institutions, government agencies and other purchaser groups seek price discounts and rebates for pharmaceutical products;
- the impact of competing generic products entering the European and North American markets;
- in Europe, currency effects resulting from transactions in countries outside the euro zone;
- competition from large pharmaceutical companies in the North America market with substantial resources for research, product development and promotion;
- in Japan, regulation of pharmaceutical prices and mandatory price reductions stipulated by the Japanese Ministry of Health and Welfare;
- in Japan, extensive periods of time required historically for the development and the approval of new drug applications by the Japanese Ministry of Health and Welfare.

We currently produce the active ingredients for our ethical pharmaceutical products almost exclusively at the Bayer facilities in Wuppertal and Leverkusen, Germany. Bayer facilities throughout the world compound our raw materials and package the finished product for shipment. Our main pharmaceutical production facilities are in Leverkusen, Germany; Garbagnate, Italy; Berkeley, California and West Haven, Connecticut; and Shiga, Japan.

We obtain the raw materials for our ethical active ingredients partly from Bayer's Chemicals business segment and partly from third parties in Europe and Asia. Strategic reserves of our products as well as the planned long-term buildup of our production capacity help us ensure an unbroken supply chain. We obtain additional ingredients and packaging materials from diverse suppliers on a worldwide basis. As a rule, we approve several suppliers for each required material. At the same time, we are increasingly entering into global contracts in order to secure advantageous pricing. Where a required material is available from only one supplier, our policy is to amass a strategic reserve, typically equal to a 90-day supply, while mounting an intensive search for potential alternative suppliers.

We produce biological raw materials and, under a license from Genentech, recombinant fVIII at our facilities in Clayton, North Carolina and Berkeley, California in the United States. We obtain raw plasma as well as some intermediates and supplies for plasma-derived products from third-party U.S. suppliers. The availability of raw plasma depends on the available donor base, purchases from other fractionators, regulatory procedures and ongoing consolidation with larger collectors.

We generally distribute our products through wholesalers, pharmacies and hospitals as well as, to a certain extent, directly to patients. Where appropriate, we actively seek to supplement the efforts of our sales force through co-promotion and co-marketing arrangements. In November 2001, we entered into a co-promotion agreement with GlaxoSmithKline for our erectile-dysfunction medication vardenafil, currently in late-stage development. We plan to introduce vardenafil to the market in the near to medium term, subject to obtaining regulatory approvals following the U.S. Food and Drug Administration's assessment. We expect the results of this assessment in the second half of 2002.

We encounter competition in all of our geographical markets from large national and international competitors. In the antibacterial products market, our main competitors are GlaxoSmithKline, Pfizer and Abbott Laboratories. Pfizer, Merck & Co. and AstraZeneca dominate the area of hypertension and coronary heart disease therapy. The market leader for oral antidiabetics is Bristol-Myers Squibb. Baxter, Bayer and Aventis are the leaders in the blood coagulation market. Together with Novartis, these three companies also play the major role in the markets for proteinase inhibitors and immunoglobulins.

RESEARCH AND DEVELOPMENT

We allocate the largest portion of our research and development budget to the Pharmaceuticals segment. Within this segment, we focus our research and development activities on therapeutic areas in which we believe there is a high degree of inadequately met medical need and where we expect our research and development



investment to yield high productivity. Our established areas of core competency are bacterial infections as well as cardiovascular diseases and related disorders such as lipid abnormalities and diabetes. Our current research and development portfolio also includes the following therapeutic areas: cancer, respiratory diseases (chronic obstructive pulmonary disease -- COPD -- and asthma); neurological disorders (stroke, traumatic brain injury, chronic pain), neurodegenerative disorders (Parkinson's disease and Alzheimer's disease), benign prostate hyperplasia/urinary incontinence and viral infections (with a particular focus on HIV, cytomegalovirus and hepatitis), as well as such promising newly evolving markets as the treatment of erectile dysfunction.

In recent years we have supplemented our internal research activities, especially in the pharmaceuticals field, through research collaborations with third parties. As a result of these collaborations, we have significantly increased the number of new development candidates that we identify each year, while reducing our research costs per candidate. See Item 4, Information on the Company -- Research and Development -- Research Cooperations.

The segment's largest research and development facilities are located in Wuppertal, Germany; West Haven, Connecticut; Berkeley, California and Kyoto, Japan.

Life cycle management

We have adopted life cycle management measures to optimize our return on investment for current major drugs. Life cycle management influences our planning long before patents expire. These measures have contributed to the maintenance of our leading position in antibacterials (Ciprofloxacin) as well as in the cardiovascular area (Adalat). Adalat is a prime example of successful life cycle management: the drug generated E975 million in sales 16 years after the patent protection for nifedipine, its key component, expired.

New products

In September 2001, we submitted our vardenafil product for the treatment of erectile dysfunction to the U.S. FDA for approval. In December 2001, we filed applications for approval in Japan and the European Union. FDA approval is expected in the second half of 2002.

Additional drug candidates in late Phase II and Phase III of clinical development are Repinotan, Faropenem and a PDE IV inhibitor. The respective indications are:

| PRODUCT/BRAND NAME | PRINCIPAL APPLICATION | STATUS |
|---|---|---|
| Repinotan | Acute ischemic stroke and traumatic brain injury | In phase III |
| Faropenem | Bacterial infections | In phase III |
| PDE IV inhibitor | Chronic Obstructive Pulmonary Disease | Phase II complete |

Bayer AG licenses Faropenem from Suntory Limited on an exclusive basis outside Japan and on a semi-exclusive basis in Japan. For Repinotan a further efficacy study will be conducted before broadening the Phase III program to a larger patient population is considered. Phase III clinical development of Faropenem is progressing to further determine its efficacy and safety across various types of bacterial infections. The Phase II program for the PDE IV inhibitor in CODP has been completed. Various strategies for subsequent Phase III development are under consideration.



CONSUMER CARE & DIAGNOSTICS

OVERVIEW

Our Consumer Care & Diagnostics segment comprises the Consumer Care and Diagnostics business groups.

The following table shows the segment's performance for the last three years.

| | 2001 | 2000 | 1999 |
|---|---|---|---|
| | (EUROS IN MILLIONS) | | |
| External net sales | 4,104 | 3,888 | 3,364 |
| Percentage of total sales (continuing operations) | 14.6 | 14.0 | 14.7 |
| Intersegment sales | 2 | -- | 1 |
| Operating result before exceptional items | 388 | 311 | 173 |
| Percentage of total operating result (continuing operations) | 18.5 | 8.9 | 5.6 |

SEGMENT STRATEGY

We plan to hold all our Health Care businesses (including Consumer Care &

Diagnostics, Pharmaceuticals and Animal Health) through a single new wholly-owned subsidiary of Bayer AG. See -- Business.

Our strategic priorities for the Consumer Care & Diagnostics segment are improving profitability and gaining market share. In the Consumer Care business group in particular, our goal is to achieve cost savings in the medium term by consolidating production. We are also preparing for the divestment of Consumer Care's household insecticide product lines.

CONSUMER CARE

OVERVIEW

Our Consumer Care business group develops and markets over-the-counter (OTC) medications (analgesics, cough and cold, dermatological and gastrointestinal remedies), vitamin and nutritional supplements and insecticides.

MAJOR PRODUCTS

Analgesics

The analgesics market comprises pain relief products both in oral form (for example, pills and tablets) and for topical use (for example, creams and salves). We concentrate primarily on the oral products segment. Our OTC products also face competition from prescription drugs, for example cyclooxygenase (COX-II) inhibitor pain relievers.

Aspirin(R) (Bayer(R) brand aspirin in the United States) is a nonsteroidal anti-inflammatory drug (NSAID). It is used for pain relief and the prevention of second heart attacks. Bayer first synthesized aspirin in 1893 and began marketing it in powder form in Germany in 1900. We introduced the familiar aspirin tablets in 1910.

Aleve(R) is a nonprescription strength of the analgesic naproxen sodium. Bayer now markets Aleve in the United States through a joint venture with its producer, Roche Laboratories. Aleve is a long-lasting pain reliever and can be used for fever reduction.

Our Midol(R) product family, which competes in the menstrual pain relief category, comprises several unique product positions, e.g., Maximum Strength Menstrual Formula, Teen Formula and Night Time Formula. We sell Midol products only in the United States and Canada.

Cough/Cold

Within the total cough and cold market we concentrate on the cold/flu remedy segment. This OTC category faces threats from "non-medicinal" remedies (e.g., nutritional or herbal products such as zinc supplements and echinacea) as well as from preventive medicines available by prescription or under development.



Alka-Seltzer Plus(R) is an effervescent product to relieve symptoms accompanying the common cold. We market Alka-Seltzer Plus in the United States and Canada. Tabcin(R) is a line of products similar to Alka-Seltzer Plus; we market it primarily in Latin America. In late 2000, in response to a recommendation from the U.S. Food and Drug Administration to all manufacturers of products containing phenylpropanolamine, we discontinued marketing Alka-Seltzer Plus and similar products containing phenylpropanolamine in all of

Consumer Care's markets. We completed our launch of reformulated products with Alka-Seltzer Plus in the United States in 2001 and expect to complete the worldwide relaunch during 2002.

Aleve(R) Cold & Sinus was launched in the United States in 2000 as the first long-lasting combination of analgesic naproxen sodium and nasal decongestant.

Dermatologicals

The dermatological category includes a broad range of skin treatments. Within this market, we focus on the antifungal category, which in turn consists of three sub-segments: gynecological, dermatological and general topical/other antifungals. All topical dermatologicals face significant threats from the prescription drug area as well as from locally marketed generic products and low-price brands.

Canesten(R) is treatment for vaginal yeast infections, athlete's foot and other dermatological problems. Originally introduced in 1973 as a prescription drug, Canesten has been switching to OTC status on a country-by-country basis since 1990.

Mycelex(R) is a treatment for vaginal yeast infections. Mycelex was previously available only with a prescription; it became an OTC medication in 1992.

Rid(R) is a topical head lice treatment. We acquired this brand from Pfizer (Warner-Lambert) in 2000.

Gastrointestinals

The gastrointestinal (GI) category includes antacids, anti-gas products, digestives, laxatives and anti-diarrheals. Our primary focus within this category includes all non-prescription segments except laxatives and anti-diarrheals. Longer term, all OTC GI products will face threats from related business areas including products switching from prescription to OTC status, OTC brand expansion from related categories (e.g., anti-diarrheal brands extending or re-positioning to cover the antacid segment) and possible future preventative or curative therapies (e.g., products that eradicate or manage the ulcer-causing bacterium H. pylori).

Alka-Seltzer(R) was developed in the late 1920s by Miles Laboratories, Inc. and began U.S. national distribution in 1931. Alka-Seltzer is used for speedy relief of acid indigestion, sour stomach or heartburn with headache, or body aches and pains. Today, we market Alka-Seltzer in close to 100 countries.

Phillips' Milk of Magnesia(R) is a saline laxative used as an overnight remedy for constipation and acid indigestion, heartburn or sour stomach that may accompany it. The original Phillips' formulation entered the U.S. market in 1873.

Talcid(R) was originally a prescription medication developed and sold by our Pharmaceuticals segment. Since 1988, it has obtained OTC status in several countries in Europe, Asia and South America. Talcid is used for the relief of symptoms from heartburn and acid indigestion.

Nutritionals

The nutritionals category is very broad, encompassing vitamins, minerals, multi-vitamins/minerals, herbals, sports nutrition and specialty supplements in many different forms. Applicable regulations vary greatly, both from country to country and across nutritional segments (e.g., herbals vs. vitamins). As a

general rule, however, regulation of nutritionals tends to be less stringent than that of other OTC products. Bayer's primary interests in the nutritionals field are in the vitamin and mineral (especially multi-vitamins/minerals) and herbals segments.

One-A-Day(R) multivitamins entered the marketplace in 1940. Since 1994, we have offered a variety of special formulations, such as Men's, Women's, 55 Plus, Maximum and Essential formulas. In 1998, One-A-Day



introduced a line of multivitamin/herbals blends to target specific health concerns (e.g., Energy, Tension, Prostate and Menopause).

Flintstones(R) are multivitamin dietary supplements containing (depending on type) 10-19 essential nutrients for children ages 2-12. They were introduced nationally in the U.S. in 1969. Bugs Bunny(R) children's sugar-free multivitamins were introduced in 1971 in the United States. To strengthen our position in the children's vitamin market, we launched Scooby Doo(R) children's vitamins in the United States in 2001.

MARKETS AND DISTRIBUTION

Our Consumer Care business group now focuses on the OTC market for medicinal products that consumers may generally purchase without a prescription. In some European markets, this category also includes products sold to consumers on a prescription basis and later reimbursed under an insurance plan.

The business group's sales by region and total for the past three years are as follows:

| | 2001 | 2000 | 1999 |
|---|---|---|---|
| | (EUROS IN MILLIONS) | | |
| Europe | 467 | 465 | 434 |
| North America | 894 | 749 | 685 |
| Asia/Pacific | 222 | 207 | 156 |
| Latin America/Africa/Middle East | 512 | 502 | 408 |
| Total | 2,095 | 1,923 | 1,683 |

The following table sets forth the business group's sales for the last three years, broken down by category of activity.

| | 2001 | 2000 | 1999 |
|---|---|---|---|
| | (EUROS IN MILLIONS) | | |
| Analgesics | 775 | 731 | 640 |
| Cough/Cold | 177 | 110 | 150 |
| Dermatologicals | 246 | 225 | 172 |
| Gastrointestinals | 266 | 239 | 199 |
| Nutritionals | 197 | 179 | 163 |
| Other(1) | 434 | 439 | 359 |

| | | | |
|---|---|---|---|
| Total | 2,095 | 1,923 | 1,683 |

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(1) Includes Household products expected to be divested.

Although the business group is not generally subject to seasonality, the tendency of consumers to purchase more OTC medications in the cough/cold area can have an impact on this business in the United States, Canada, Mexico and Argentina, where these products form a significant part of our local OTC product portfolio.

Consumer Care procures many high-volume raw materials internally from other Bayer business groups and companies. Our major externally procured high-volume raw materials are sodium citrate, sodium bicarbonate, citric acid and ascorbic acid. These are readily available commodities and are usually not subject to significant price fluctuations. Changes in oil and energy prices can affect a few key items, such as acetylsalicylic acid, phenol, aerosol cans and aluminum foil. We diversify our raw materials sources internationally to help balance currency exchange rate risk.

The typical sales and marketing channels of the business group worldwide are supermarket chains and other mass marketers. In Europe, however, pharmacies are the usual distribution channel for OTC products.

We regard Johnson & Johnson, GlaxoSmithKline, Wyeth and Pfizer as our major competitors in the Consumer Care business.



RESEARCH AND DEVELOPMENT

The Consumer Care business group focuses its research and development activities on developing and implementing products and programs to contribute to business growth, including:

- efficient development of new products to support current brands; and
- aggressive clinical and regulatory strategies to creatively pursue ingredient prescription-to-OTC transitions and technology programs.

The business group's primary research and development facilities are located in Morristown, New Jersey and Leverkusen and Monheim, Germany.

We currently have four products in late stages of development. Depending on approval by regulatory authorities and completion of internal prelaunch activities, we expect to launch these products during 2002. These products are:

| PRODUCT/BRAND NAME | PRINCIPAL APPLICATION | STATUS |
|---|---|---|
| Aspirin Dry Granules | Pain relief | Registration approved, launch expected in 2002 |
| Aspirin + Pseudoephedrine | Congestion, pain relief | Registration file submitted |
| Bayer Women's Aspirin Plus Calcium | Osteoporosis and heart | Launched in 2002 |

| | | |
|---|---|---|
| | regimen | |
| Alka-Seltzer Plus Nose + Throat..... | Runny nose, sore throat | Launch expected in 2002 |

Bayer Corporation is involved in a 50 percent joint venture with Hoffmann-LaRoche to market and sell Aleve, Mycelex, Femstat, Vanquish and Midol in the United States. Both partners are actively involved in research and development planning for these products.

DIAGNOSTICS

OVERVIEW

With approximately 7,000 employees worldwide, Bayer Diagnostics, based in Tarrytown, New York, is one of the largest diagnostics businesses in the world. We support customers in over 100 countries with an extensive portfolio of products for the central laboratory, near patient testing, and self-testing environments. These products serve in the assessment and management of health in such areas as infectious diseases, cardiovascular disease, oncology, virology, women's health and diabetes.

MAJOR PRODUCTS

Central Laboratory Testing

The ADVIA(R) family of products is the centerpiece of our laboratory testing portfolio, which provides a wide range of solutions for the central laboratory. ADVIA products include medium- and high-throughput systems for immunoassay diagnostics (the measurement of such substances as proteins, steroids, drugs and antibodies in patients' blood), clinical chemistry and hematology analysis and other diagnostic disciplines.

In addition to our ADVIA products, we also offer the ACS:180(R) and Bayer Immuno 1(R) immunodiagnostic analyzers as well as the Clinitek Atlas(R) urine chemistry system for high volume urinalysis testing. For highly specific testing of infectious diseases, we offer a family of DNA probes under the Versant(R) brand for the testing of HIV and Hepatitis B and C. Our Versant products represent our main focus in the field of nucleic acid diagnostics, or NAD testing. NAD techniques detect nucleic acids such as DNA and RNA to diagnose infections and other diseases.



Near Patient Testing

We offer a variety of solutions for the near patient testing environment, both in the hospital and in physicians' office laboratories. For the critical care environment, we offer the Rapid(R) family of instruments and reagents for the measurement of blood gases, electrolytes and coagulation.

In the field of urinalysis, we offer the Multistix(R) family of reagent strips for visual reading of up to 10 parameters and the Clinitek(R) line of instruments for automated readings. We also offer the DCA 2000+(R) for use in physicians' offices to complement our diabetes self-testing products. The DCA 2000+ analyzer allows doctors to rapidly assess the effectiveness of diabetic patients' self- monitoring over a period of time.

Self-Testing

Our key self-testing products include the Glucometer Dex/Esprit(R) blood

glucose meter that incorporates a 10-test cartridge to provide more convenience to patients who test their blood sugar levels several times per day, and our best-selling diagnostics product, the Glucometer Elite(R), a versatile blood glucose meter that serves a wide spectrum of patient needs.

MARKETS AND DISTRIBUTION

Our Diagnostics business group markets its products in over 100 countries worldwide, both directly and through a network of distributors. Our principal markets include North America, Western Europe and Japan.

The business group's sales by region and total, for the past three years are as follows:

| | 2001 | 2000 | 1999 |
|---|---|---|---|
| | (EUROS IN MILLIONS) | | |
| Europe | 697 | 700 | 607 |
| North America | 880 | 868 | 716 |
| Asia/Pacific | 276 | 307 | 301 |
| Latin America/Africa/Middle East | 156 | 90 | 57 |
| Total | 2,009 | 1,965 | 1,681 |

The following table sets forth the business group's sales for the last three years, broken down by category of activity.

| | 2001 | 2000 | 1999 |
|---|---|---|---|
| | (EUROS IN MILLIONS) | | |
| Laboratory testing (excl. NAD) | 791 | 776 | 674 |
| NAD testing | 86 | 65 | 63 |
| Near patient testing | 407 | 419 | 352 |
| Self-testing | 722 | 705 | 592 |
| Other | 3 | -- | -- |
| Total | 2,009 | 1,965 | 1,681 |

We market our laboratory testing and NAD products, as well as most of our near patient testing products, directly to customers, which are primarily laboratories and hospitals. We channel our self-testing products to the consumer market through distributors and large pharmacy and retail chains. In the near patient testing segment, we market urine chemistry strips primarily through distributors.

We manufacture or assemble a significant portion of our own products, relying on a vendor management process to supply both raw materials and sub-assemblies. In addition, we source a number of products from original equipment manufacturer, or OEM, suppliers. Diagnostics sales typically slow down in the third calendar quarter due to traditional vacation time in Europe and North America, but show strong performance in the fourth quarter as customers push to spend budgeted funding before the end of the year.

Our primary competitors in the diagnostics market are:

- Laboratory testing: Abbott, Roche, Beckman Coulter, Dade Behring and Johnson & Johnson;
- NAD testing: Roche and Abbott;
- Near patient testing: Roche and Radiometer; and
- Self-testing: Roche, Johnson & Johnson (Lifescan) and Abbott.

RESEARCH AND DEVELOPMENT

Our Diagnostics business group focuses its research and development activities primarily on strengthening its core product lines and in expanding into high growth/high margin segments of the market:

- In Laboratory Testing, through internal development and in-sourcing of the ADVIA family of systems and in the expansion of high value assays.
- In NAD testing, through menu expansion of assays for infectious disease and cancer testing.
- In Near Patient Testing; through enhancements of our Rapid systems, a new hospital point-of-care platform, and new chemistry strips for urinalysis.
- In Self-Testing, through internal development and in-sourcing of mass market, user-friendly whole blood glucose systems and by focusing research in minimally- and non-invasive technologies.

The business group's primary research and development facilities are located in the United States: in Medfield and Cambridge, Massachusetts; Tarrytown, New York; Elkhart, Indiana; and Emeryville, California.

We currently have a number of products in late stages of development. Depending on completion of clinical trials and subsequent grant of any necessary FDA approvals, we expect to launch these products during the periods indicated below. These products are:

| PRODUCT/BRAND NAME | PRINCIPAL APPLICATION | STATUS |
|---|---|---|
| ADVIA IMS(R) Integrated Modular System..... | Modular platform, combining immunodiagnostic and clinical chemistry on a single instrument with a broad assay menu | Launch planned for 2003 |
| ADVIA Centaur(R) and ACS:180(R) menu extension..... | Extension of immunoassay menu for disease diagnosis | Launch planned for 10 additional methods in 2002 |
| VERSANT HIV 3.0..... | Quantitative detection of HIV | Awaiting FDA approval trials |
| VERSANT HCV 3.0..... | Quantitative detection of hepatitis C | Undergoing FDA clinical trials; approved outside the |

| | | |
|---|---|---|
| VERSANT HCV TMA..... | Qualitative detection of hepatitis C | United States Undergoing FDA clinical trials; approved outside the United States |
| RapidLab 800 Enhancement..... | Blood gas/electrolyte analyzer for laboratory testing | Launch planned for 2003 |
| Multistix PRO..... | Addition of proprietary microalbumin and creatine reagent pads for improved screening for kidney dysfunction | Released in US in February 2002 |
| Next-generation Glucometer systems..... | "Less Pain" whole blood glucose system | Launch planned for 2003 |



CROP PROTECTION

OVERVIEW

Our Crop Protection segment develops and markets conventional chemical crop protection products (insecticides, fungicides and herbicides). Using functional genomics, a discipline that analyses the functional effects of differing genetic structures, we also develop new chemical structures for conventional active ingredients, creating new modes of action for enhanced effectiveness against pests, weeds and fungi. The following table shows the segment's performance for the last three years.

| | 2001 | 2000 | 1999 |
|---|---|---|---|
| | (EUROS IN MILLIONS) | | |
| External net sales..... | 2,708 | 2,456 | 2,177 |
| Percentage of total sales (continuing operations)..... | 9.6 | 8.8 | 9.5 |
| Intersegment sales..... | 102 | 97 | 83 |
| Operating result before exceptional items..... | 453 | 401 | 383 |
| Percentage of total operating result (continuing operations)..... | 21.6 | 11.5 | 12.4 |

The following table shows our revenue during the past three years from the product that we regard as material to the revenue of the Crop Protection segment as a whole.

| | 2001 | | 2000 | | 19 |
|---|---|---|---|---|---|
| PRODUCT | REVENUE (EUROS IN MILLIONS) | PERCENTAGE OF SEGMENT REVENUE | REVENUE (EUROS IN MILLIONS) | PERCENTAGE OF SEGMENT REVENUE | REVENUE (EUROS IN MILLIONS) |
| Imidacloprid (Confidor, Gaucho, Admire, Provado)*..... | 608 | 22.5 | 560 | 22.8 | 464 |

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* Also used in our Animal Health segment's Advantage product.

SEGMENT STRATEGY

We plan to incorporate our Crop Protection business as a separate wholly-owned subsidiary of Bayer AG, to be named Bayer CropScience AG. See -- Business. Bayer CropScience will combine our current business and the business that we expect to acquire upon completion of the Aventis CropScience acquisition (see below).

We intend to continue expanding our crop protection franchise through ongoing life cycle management. In the Home Garden Market we seek to be a market leader by fully utilizing our existing portfolio and product pipeline, as well as through strategic joint ventures and acquisitions.

Historically, we concentrated our product development activities on research in innovative chemistry. With the consummation of the Aventis CropScience acquisition, we will complement our historical expertise with an additional agrobiological emphasis.

In October 2001, we agreed to acquire Aventis CropScience from its current owners, Aventis and Schering. In April 2002, the European Commission gave its approval for the transaction and, on May 30, 2002, the United States Federal Trade Commission gave its preliminary approval of the transaction under the terms of a consent order. Both approvals are subject to the condition that we divest or out-license a number of products. These conditions require us, among other things, to: divest Aventis CropScience's Fipronil business worldwide, with a right to obtain a co-exclusive license for non-agricultural uses worldwide, except for Europe; divest five Aventis fungicides in Europe and grant a world-wide, non-exclusive license for the Aventis seed treatment products; divest the sugar beet herbicide Metamitron in Europe; divest the broad-spectrum pyrethroid insecticides Cyfluthrin (Baythroid(R)) and beta-cyfluthrin (Bulldock(R)); divest the sugar beet herbicide (Goltix(R)); divest the insecticide Acetamiprid in Europe and North America; divest the wheat herbicide Everest worldwide; and divest Aventis CropScience's cotton defoliant business Folex in the U.S. The total sales value of all divestments is about



E650 to 700 million of which about 25 percent comes from the former Bayer Crop Protection business and 75 percent from the former Aventis CropScience. The acquisition of Aventis CropScience was closed on June 3, 2002, and we do not expect to make additional major acquisitions in our Crop Protection segment in the near term.

MAJOR PRODUCTS

Insecticides

Imidacloprid is an active ingredient in a new class of chemicals (chloronicotinyls syn. neonicotinoids). It helps control many pests, including aphids, thrips, whiteflies, leafhoppers, locusts, leafminers, wireworms, and many species of beetles, and is suitable for a wide variety of application methods, including foliar spray, soil drench, seed treatment and drip irrigation. We use imidacloprid in our Gaucho(R), Confidor(R), Admire(R) and Provado(R) brand products. We launched imidacloprid in 1991 and now market it in more than 120 countries for use on over 140 crops.

Cyfluthrin (Baythroid(R)) and beta-cyfluthrin (Bulldock(R)) are broad-spectrum pyrethroid insecticides. Although used primarily against biting insects, they are also effective against various sucking pests. Cyfluthrin and beta-cyfluthrin are registered for use on cotton as well as a broad range of other crops, including potatoes, soybeans, cereals, sugarcane and sunflowers. Both products are being divested in Europe under the commitments given to the European Commission.

Fungicides

Folicur(R) and Raxil(R) contain tebuconazole, a fungicide compound that prevents the targeted fungus from synthesizing vital components of its cell membrane. Tebuconazole can be used as spray (Folicur and related product brands), as a seed treatment (Raxil) and in special applications, such as sealing wounds in woody plants and in material protection. In addition, tebuconazole has certain plant growth-regulatory properties that are useful in raising certain crops, particularly oilseed rape.

Flint(R) contains trifloxystrobin, a strobilurin-type fungicide used primarily to protect cereals, and a variety of other crops. Strobilurins are a class of broad-spectrum fungicide developed from a chemical originally isolated from the mushroom Strobilurus tenacellus. Trifloxystrobin represents an important new addition to Bayer's fungicide portfolio, supplementing our triazole-based products and extending our capabilities in the specialty cereal fungicide sector.

Herbicides

Sencor(R) is our major brand of metribuzin herbicide. Introduced in 1972, metribuzin is used against broadleaf weeds and grasses. The product can be used on potatoes, tomatoes and more than 36 different crops. Despite metribuzin's maturity, we have extended its lifecycle by using the product as a mix partner with other key herbicides.

Flufenacet(R), introduced in 1998, is effective in low dosages to protect numerous crops, including corn, soybeans, potatoes, cereals and rice, against grass weeds. Axiom(R), Domain(R) and Epic(R), our major flufenacet brands in the United States, are innovative solutions for a changing market environment. For example, Domain, a flufenacet/metribuzin mix, is a specific herbicide developed for the protection of "Roundup Ready" soybeans, which have been genetically modified to resist certain herbicides.

Goltix(R), launched in 1978, is a specialty herbicide used primarily on sugar beets to control a range of broadleaf and some grass weeds. Goltix is being divested in Europe under the commitments given to the European Commission.



Garden/Professional Care (GPC)

Premise(R) is an imidacloprid-based termiticide launched in 1996 in the United States. Premise provides excellent termite control with low toxicity, has favorable soil characteristics and is odorless. Our goal is to establish Premise as the leading liquid termiticide worldwide.

We launched Merit(R), an imidacloprid-based compound for the turf and ornamental market, in 1994 in the United States. Merit is a low-toxicity insecticide of the new chloronicotinyl class. It is broad-spectrum, systemic and effective in low doses in controlling soil-inhabiting and crown-inhabiting insects on turf grass, as well as sucking and biting insects on ornamental plants.

MARKETS AND DISTRIBUTION

Europe has traditionally been Bayer's strongest crop protection market, accounting for 38 percent of our sales in 2001. We are seeking to achieve sales balance by increasing our market significance in other, non-European markets. For example, in 2001 the NAFTA region accounted for 25 percent of our Crop Protection business, up from 19 percent as recently as 1998.

The segment's sales by region and total for the past three years are as follows:

| | 2001 | 2000 | 1999 |
|---|---|---|---|
| | (EUROS IN MILLIONS) | | |
| Europe | 1,022 | 886 | 881 |
| North America | 614 | 557 | 442 |
| Asia/Pacific | 527 | 517 | 399 |
| Latin America/Africa/Middle East | 545 | 496 | 455 |
| Total | 2,708 | 2,456 | 2,177 |

The following table sets forth the segment's sales for the last three years, broken down by category of activity.

| | 2001 | 2000 | 1999 |
|---|---|---|---|
| | (EUROS IN MILLIONS) | | |
| Insecticides | 1,059 | 1,026 | 929 |
| Fungicides | 821 | 722 | 638 |
| Herbicides | 538 | 451 | 416 |
| GPC | 290 | 257 | 194 |
| Total | 2,708 | 2,456 | 2,177 |

Because nearly 80 percent of Bayer's crop protection business is located in the northern hemisphere, our business is affected by the seasonality of the various crop cycles.

We obtain the bulk of our raw materials from within the Bayer Group. We also enter into minor long-term contracts with non-Bayer companies.

We typically market our Crop Protection products through a one- to two-step marketing distribution system. Under this system, we sell to wholesalers, who in turn sell to retailers, as well as to large-scale retailers. The retailers supply end users with our products as well as with advice on their use. We believe that our new e-commerce platform, launched in the United States in late 2000, will fit well into this marketing strategy, helping us to improve service while satisfying customer demand.

Our main competitors in the insecticide, fungicide and herbicide businesses are Syngenta, Monsanto, BASF, Dow AgroSciences and DuPont. Scotts is our primary

competitor in the home garden business while Syngenta and Dow AgroSciences are our main competitors in professional garden care products.



RESEARCH AND DEVELOPMENT

The Crop Protection segment focuses its research and development activities on developing new active ingredients for insecticides, fungicides and herbicides. We also seek to develop new formulations for existing active ingredients, expanding their applicability to additional crops and countries and thereby augmenting their sales potential.

The segment's primary research and development facilities are located in Monheim, Germany, Kansas City, Missouri, and Yuki, Japan.

During 2001, we began the launch process of four new active ingredients. We expect to launch two additional active ingredients in 2002. These products are:

| PRODUCT/ BRAND NAME | APPLICATION | STATUS |
|---|---|---|
| Iprovalicarb | Fungicide | Launched in 2001 |
| Thiacloprid | Insecticide | Launched in 2001 |
| Fentrazamide | Herbicide | Launched in 2001 |
| Flucarbazone-Sodium | Herbicide | Launched in 2001 |
| Propoxycarbazone-Sodium (proposed) | Herbicide | Launch expected in 2002 |
| Methoxyfenozide | Insecticide | Launch expected in 2002 |

ANIMAL HEALTH

OVERVIEW

Our Animal Health segment develops and markets such animal health products as veterinary medicines, environmental health products and nutritionals for the health care of both companion animals and commercial livestock/poultry. In addition, the segment develops products for insect and rodent control. The following table shows the segment's performance for the last three years.

| | 2001 | 2000 | 1999 |
|---|---|---|---|
| | (EUROS IN MILLIONS) | | |
| External net sales | 988 | 999 | 917 |
| Percentage of total sales (continuing operations) | 3.5 | 3.6 | 4.0 |
| Intersegment sales | 5 | 6 | 6 |
| Operating result before exceptional items | 172 | 157 | 137 |
| Percentage of total operating result (continuing operations) | 8.2 | 4.5 | 4.5 |

SEGMENT STRATEGY

We plan to hold all our Health Care businesses (including Animal Health, Pharmaceuticals and Consumer Care & Diagnostics) through a single new wholly-owned subsidiary of Bayer AG. We expect that, during 2002, our new Bayer

CropScience subsidiary will take responsibility for distributing the environmental health products that are currently part of Animal Health's portfolio. See -- Business.

Animal Health plans to cooperate closely with the Pharmaceuticals segment in research and development efforts in order to bring to the market new active ingredients and products to combat disease in animals.

MAJOR PRODUCTS

Parasiticides

Advantage(R) is a flea control product in easy-to-use, spot-application form.

The Droncit(R) and Drontal(R) product family offers solutions for the control of tapeworm and roundworm.

Bayticol(R) is a topical product against major tick species that attack livestock animals.

Baycox(R) is a product for controlling coccidiosis, primarily in poultry and, more recently, in piglets.



Antimicrobials

The Baytril(R) family is our line of fluoroquinolone antimicrobials for the treatment of severe bacterial infections in animals.

Biologicals

The Bayovac(R) vaccine family comprises two main product types. Foot and mouth disease, or FMD, vaccines have been part of this product line for 50 years. Our Bayovac IBR Marker vaccines, used in controlling bovine respiratory disease, make it possible to distinguish vaccinated from infected animals. Because animals vaccinated using traditional products cannot be distinguished from animals exposed to the natural disease (and thus potential carriers), many countries bar them from import.

Environmental health products

Our family of Cyfluthrin products, which comprises several distinct brands such as Blattanex(R) and Tempo(R), targets various flying insects.

MARKETS AND DISTRIBUTION

The Animal Health business covers worldwide markets, including emerging markets such as China, Vietnam and others in South-East Asia. We organize the activities of the segment along the lines of its market activities, into livestock, companion animal and environmental health.

The segment's sales by region and total for the past three years are as follows:

| | 2001 | 2000 | 1999 |
|---|---|---|---|
| | (EUROS IN MILLIONS) | | |

| | | | |
|---|---|---|---|
| Europe | 278 | 267 | 268 |
| North America | 362 | 356 | 329 |
| Asia/Pacific | 163 | 184 | 157 |
| Latin America/Africa/Middle East | 185 | 192 | 163 |
| Total | 988 | 999 | 917 |

The following table sets forth the segment's sales for the last three years, broken down by category of activity.

| | 2001 | 2000 | 1999 |
|---|---|---|---|
| | (EUROS IN MILLIONS) | | |
| Parasiticides | 455 | 443 | 390 |
| Antimicrobials | 208 | 191 | 167 |
| Biologicals | 45 | 81 | 95 |
| Environmental health products | 130 | 125 | 99 |
| Nutritionals | 69 | 78 | 68 |
| Others | 81 | 81 | 98 |
| Total | 988 | 999 | 917 |

On a worldwide basis, the activities of the Animal Health segment are not subject to any significant seasonal effects. Other business entities belonging to the Bayer Group are the primary suppliers of materials for Animal Health.

Depending on local legislation, Animal Health products may be available to end users on a prescription or non-prescription basis. End users purchase prescription products from veterinarians or pharmacies. Non-prescription products are available through retailers, cooperatives or directly to integrators in the livestock segment; to pet shops and other specialized channels in the companion animal market; and on the mass markets. We often use third-party distributors in these markets.



Our main competitors in the animal health business are Merial, Pfizer Animal Health and Intervet.

RESEARCH AND DEVELOPMENT

The Animal Health segment focuses its research and development activities on antimicrobials, parasiticides and pain and cancer remedies. A particular goal of our research and development efforts is to provide the segment with patent-protected products (new active ingredients, formulations and application technologies).

The segment's primary research and development facilities are located in Monheim, Germany and Kansas City, Missouri.

We see our greatest current challenge in the highly competitive but attractive field of parasiticides, where we are developing various treatments and treatment combinations for a variety of indications.

We currently have four products or product families in late stages of development. Subject to regulatory approval, we expect to launch these products by 2002-2003. These products are:

| PRODUCT/BRAND NAME | INDICATION | STATUS |
|---|---|---|
| Baycox Piglet | Coccidiosis control in swine | In registration |
| Pyrethroid spray | Tick control in dogs | Phase III |
| Endoparasiticide and ectoparasiticide combinations | Control of fleas, heartworm and roundworm in cats and dogs | Phase III |
| Cancer remedy | Cancer therapy in dogs | Phase III |

PLASTICS & RUBBER

OVERVIEW

Our Plastics & Rubber segment comprises the business groups Plastics and Rubber. The following table shows the segment's performance for the last three years.

| | 2001 | 2000 | 1999 |
|---|---|---|---|
| | (EUROS IN MILLIONS) | | |
| External net sales | 5,581 | 5,816 | 4,627 |
| Percentage of total sales (continuing operations) | 19.9 | 20.9 | 20.3 |
| Intersegment sales | 116 | 122 | 114 |
| Operating result before exceptional items | 288 | 560 | 443 |
| Percentage of total operating result (continuing operations) | 13.7 | 16.1 | 14.4 |

No individual product is material to the revenue of the segment as a whole.

SEGMENT STRATEGY

We plan to hold our Plastics & Rubber and Polyurethanes, Coatings & Colorants segments through a single new wholly-owned subsidiary of Bayer AG that will be responsible for all Bayer's Polymers businesses. See -- Business.

Our goal is to continue expanding our global leadership in high-value added plastic and rubber products. We intend to continue developing new applications for our products. We aim to improve profit margins by continually sifting out any weaknesses in our existing product portfolio, implementing efficient cost structures, eliminating capacity constraints and further exploiting our regional growth potential.



PLASTICS

OVERVIEW

With its broad product portfolio, our Plastics business group is one of the leading global suppliers and manufacturers of engineering thermoplastics. Many Bayer materials have chemical and physical properties that enable them to resist very low or very high operating temperatures as well as corrosive chemicals and solvents.

MAJOR PRODUCTS

Amorphic thermoplastics

Polycarbonates

Polycarbonates are plastics that are highly stable across a wide temperature range. Polycarbonates almost completely dominate the field of optical data storage media, such as recordable CDs and DVDs, and are widely used throughout the electrical/electronics segments in general. The construction industry is also a major user of polycarbonates. Makrolon(R) is our leading polycarbonate product. Its key characteristics include high transparency, heat resistance and toughness. It can be both sterilized and recycled. Our other polycarbonates include the APEC(R) range.

Styrenics

Styrenics lend themselves well to blending with other forms of plastic. Blend technology can transform a palette of a few basic polymers into a wide range of new, advanced polymers with tailored properties, creating user-specific solutions and, in many cases, cost advantages as well. Novodur(R), an acrylonitrile/butadiene/styrene copolymers, is our leading stryrenic. Other styrenics include Lustran SAN(R), Bayblend(R), Triax(R) and Centrex(R).

Fabricated Products

We also produce plastic films and sheeting with a broad range of characteristics for a wide variety of applications. These materials consist of polycarbonate, polycarbonate blends and mixtures of polycarbonates with other engineering thermoplastics. We market these materials under trade names as Makrofol(R), Bayfol(R), and Solartuff(R).

Semi-crystalline polymers

Polyamides

Polyamides are tough, strong, high-performance plastics. They are resistant to chemicals and can often replace metal and other materials. The most important consumers of polyamides are the automotive, food packaging and electrical/electronic industries. In addition, we use these materials in producing halogen-free flame retardant products. In the automotive field alone, applications of polyamides range from such long-established uses as coolant casings, hubcaps, door handles, external mirrors, sun-roofs and central electrical systems to more recent developments, such as tail pipes, vehicle electronics and ABS systems. Durethan(R) is our range of engineering thermoplastics based on PA 6, PA 66 and their copolyamides. The products in our Pocan(R) range are semicrystalline thermoplastic polyesters that show high resistance to chemicals, heat distortion and stress cracking.

Thermoplastic polyurethanes

Thermoplastic polyurethanes, or TPUs, belong to the high-performance thermoplastic elastomers family. A key TPU property is the high abrasion- and wear-resistance of TPU articles. TPU's abrasion- and wear-resistance properties are substantially superior to those of abrasion-resistant rubber compounds. Its wet abrasion resistance surpasses even that of most metals. We market our

thermoplastic polyurethanes under the trademarks Desmopan(R) in Germany and other EU countries and Texin(R) in the United States.



MARKETS AND DISTRIBUTION

We sell the products of our Plastics business group to some 6,500 customers worldwide. These customers include injection-molding operators and a large number of plastic-component manufacturers, whose products are overwhelmingly used in the automotive, electrical, electrical engineering, construction, data technology, medical and leisure fields.

The business group's external sales, by region and total, for the past three years are as follows:

| | 2001 | 2000 | 1999 |
|---|---|---|---|
| | (EUROS IN MILLIONS) | | |
| Europe | 1,572 | 1,574 | 1,352 |
| North America | 846 | 994 | 768 |
| Asia/Pacific | 735 | 730 | 495 |
| Latin America/Africa/Middle East | 221 | 222 | 155 |
| Total | 3,374 | 3,520 | 2,770 |

The following table sets forth the business group's sales for the last three years, broken down by category of activity.

| | 2001 | 2000 | 1999 |
|---|---|---|---|
| | (EUROS IN MILLIONS) | | |
| Amorphic polymers (polycarbonates, styrenics and structural fabricates) | 2,767 | 2,918 | 2,247 |
| Semi-crystalline polymers (polyamides, polyesters and thermoplastic polyurethanes) | 607 | 602 | 523 |
| Total | 3,374 | 3,520 | 2,770 |

The market for engineering thermoplastics is characterized by constant pressure on margins and growing price competition due to globalization, consolidation and increasing customer purchasing power. Outside the polycarbonates market, the primary driver of competition is price. Our major customers also expect global presence, technical support and service and reliable delivery. In order to meet these demands and to achieve leadership in both cost and technology, w