

ALTANA AKTIENGESELLSCHAFT
Form 20-F
April 21, 2004

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 20-F

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

OR

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended December 31, 2003

OR

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from _____ to _____
Commission file number:

ALTANA Aktiengesellschaft

(Exact Name of Registrant as Specified in Its Charter)

Federal Republic of Germany

(Jurisdiction of Incorporation or Organization)

Am Pilgerrain 15

D-61352 Bad Homburg v. d. Höhe

Federal Republic of Germany

(Address of Principal Executive Offices)

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

<u>Title of each class</u>	<u>Name of each exchange on which registered</u>
American Depositary Shares, each representing 1 Common Share, no par value	New York Stock Exchange
Common Shares, no par value*	New York Stock Exchange

* Listed, not for trading or quotation purposes, but only in connection with the listing of American Depositary Shares, pursuant to the requirements of the New York Stock Exchange.

Securities registered or to be registered pursuant to Section 12(g) of the Act: None

Securities for which there is a reporting obligation pursuant to Section 15(d) of the Act: None

The number of issued and outstanding shares of each of the issuer's classes of capital or common stock as of December 31, 2003 was 136,266,805, no par value.

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.

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Yes No

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

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FORWARD-LOOKING STATEMENTS

This annual report contains certain forward-looking statements, *i.e.*, current expectations or estimates of future events or future results. When used in this document, the words anticipate, believe, estimate, expect, intend, plan and project, and similar expressions, as they relate to management, identify forward-looking statements. These statements are based on beliefs of our management as well as assumptions made by and information currently available to us. Such statements reflect our current views with respect to future events and are subject to various risks, uncertainties and assumptions. Many factors could cause our actual results, performance or achievements to be materially different from those which may be expressed or implied by such forward-looking statements. The accompanying information contained in this annual report, including the information under Item 3: Key Information Risk Factors, Item 4: Information on the Company and Item 5: Operating and Financial Review and Prospects identifies important factors that could cause such differences. These factors include our ability to develop and launch new and innovative pharmaceutical and chemical products, price regulations for pharmaceuticals and budgeting decisions of local governments and health care providers, the level of our investment in pharmaceuticals-related R&D in any given period, the sales and marketing methods that we use to distribute our pharmaceuticals, the composition of our pharmaceuticals portfolio, our ability to maintain close ties with our chemicals customers, the business cycles experienced by our chemicals customers and the prices of the raw materials that we use in our chemicals business. Forward-looking statements speak only as of the date they are made. We do not intend, and do not assume any obligation, to update forward-looking statements to reflect facts, circumstances or events that have occurred or changed after such statements have been made.

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PART I

ITEM 1: IDENTITY OF DIRECTORS, SENIOR MANAGEMENT AND ADVISERS

Not applicable.

ITEM 2: OFFER STATISTICS AND EXPECTED TIMETABLE

Not applicable.

[Back to Contents](#)**ITEM 3: KEY INFORMATION****Selected Consolidated Financial Data**

The selected consolidated financial data as of and for the years ended December 31, 1999, 2000, 2001, 2002 and 2003 set forth below are derived from our consolidated financial statements. Our consolidated financial statements as of and for the years ended December 31, 1999, 2000, 2001 and 2002 have been audited by KPMG Deutsche Treuhand-Gesellschaft AG Wirtschaftsprüfungsgesellschaft, Frankfurt am Main, Germany (KPMG); our consolidated financial statements as of and for the year ended December 31, 2003 have been audited by PwC Deutsche Revision Aktiengesellschaft Wirtschaftsprüfungsgesellschaft, Frankfurt am Main, Germany (PwC).

We prepare our consolidated financial statements in accordance with International Financial Reporting Standards (IFRS). IFRS differ in certain significant respects from U.S. Generally Accepted Accounting Principles (U.S. GAAP). For a description of the significant differences between IFRS and U.S. GAAP and a reconciliation of net income and shareholders' equity to U.S. GAAP, you should read notes 33 and 34 to our consolidated financial statements.

All share and per share data in this annual report relating to prior periods have been restated to reflect the changes to our share capital that occurred in 2001.

You should read the information below in conjunction with our consolidated financial statements and the other financial information that we have included elsewhere in this annual report. For our consolidated financial statements as of and for each of the three years ended December 31, 2003, see the discussion beginning on page F-1.

Selected Consolidated Financial Data as of and for the Five Years Ended December 31, 2003

The following table presents selected consolidated financial information as of and for the five years ended December 31, 2003:

	1999	As of and for the year ended December 31,(1)			2003
	2000	2001	2002		
(€ in millions, except per share/ADS amounts)					
Selected income statement data					
<i>Amounts in accordance with IFRS</i>					
Net sales	1,577	1,928	2,308	2,609	2,735
Gross profit	927	1,144	1,414	1,681	1,788
Research and development expenses	(171)	(219)	(285)	(369)	(412)
Operating income	205	309	520(2)	538	563
Financial income	18	21	24	(12)	17
Income before taxes and minority interests	223	329	544	527	580
Net income	118	181	328	324	345
Weighted average number of shares outstanding during period (in millions)					
	140.2	138.8	137.5	136.6	136.3
Basic earnings per share/ADS(3)	0.84	1.30	2.38	2.37	2.53
Diluted earnings per share/ADS(4)	0.84	1.30	2.37	2.36	2.53
Dividends per share/ADS(5)	0.35	0.44(6)	0.60(7)	0.75	0.83(8)
<i>Amounts in accordance with U.S.GAAP</i>					
Net income	130	166	314	338	337
Basic earnings per share/ADS(3)	0.93	1.20	2.28	2.47	2.47
Diluted earnings per share/ADS(4)	0.92	1.19	2.26	2.46	2.47

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As of and for the year ended December 31,(1)

	1999	2000	2001	2002	2003
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(€ in millions, except per share/ADS amounts)

Selected balance sheet data*Amounts in accordance with IFRS*

Property, plant & equipment	394	478	579	610	687
Cash & cash equivalents and marketable securities	547	487	552	584	580
Total assets	1,638	1,812	2,127	2,269	2,532
Debt	126	100	127	117	96
Total liabilities	336	384	426	448	527
Total provisions	402	436	522	563	553
Total shareholders' equity	881	984	1,170	1,250	1,445
Number of shares outstanding at period end (in millions)	139.5	138.1	137.2	136.5	136.3

Amounts in accordance with U.S. GAAP

Total shareholders' equity	886	973	1,159	1,261	1,470
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Selected cash flow statement data*Amounts in accordance with IFRS*

Net cash flow provided by operating activities	164	282	309	442	425
Net cash flow used in investing activities	(111)	(156)	(113)	(204)	(298)
Net cash flow used in financing activities	(65)	(118)	(116)	(154)	(152)

- (1) Columns may not add due to rounding.
- (2) Includes a one-time gain in the amount of € 110 million resulting from the sale of our interest in a joint venture and a special donation of € 15 million to a charitable endowment.
- (3) Basic earnings per share is computed by dividing net income by the weighted average number of shares outstanding during the relevant period. For the year ended December 31, 2003, the weighted average number of shares includes shares issuable in connection with the legal proceedings surrounding Deutsch-Atlantische Telegraphen AG (DAT). See Item 4: Information on the Company-Legal Proceedings for more information on these proceedings.
- (4) Diluted earnings per share is computed by dividing net income by the sum total of the weighted average number of shares outstanding during the relevant period, adjusted for shares issuable upon the exercise of options under stock option plans and, for years ended on or before December 31, 2002, shares issuable in connection with the DAT litigation.
- (5) Dividends are presented in the column of the year in respect of which they are declared. Dividends are paid in the year following the year in respect of which they are declared.
- (6) Does not include a one-time bonus dividend in the amount of € 0.17 per share.
- (7) Does not include a one-time bonus dividend in the amount of € 0.10 per share.
- (8) Management proposal to be submitted to our shareholders for approval at the annual general meeting to be held on May 5, 2004.

Dividends

The following table sets forth the dividends per share paid in respect of each of the five years in the period ended December 31, 2003 in euro and U.S. dollars. We declare dividends in euro. For purposes of the table below, we have converted the amounts paid as dividends into U.S. dollars using the noon buying rate on the date of the shareholders' meeting at which the relevant dividends were approved. The table does not reflect the related tax credits that were available to German taxpayers in respect of dividend payments prior to 2002. Owners of our shares who are U.S. residents should be aware that they will be subject to German withholding tax on any dividends that they receive. See Item 10: Additional Information Taxation .

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Year ended December 31,	Dividend per share	
	(€)	(\$)
1999	0.35	0.37
2000(1)	0.44	0.39
2001(2)	0.60	0.54
2002	0.75	0.85
2003	0.83(3)	—

(1) Does not include a one-time bonus dividend in the amount of € 0.17 per share.

(2) Does not include a one-time bonus dividend in the amount of € 0.10 per share.

(3) Management proposal to be submitted to our shareholders for approval at the annual general meeting to be held on May 5, 2004.

Both net income distributable as dividends and net income subject to German tax are determined on the basis of the stand-alone unconsolidated financial statements of our holding company, ALTANA Aktiengesellschaft, prepared in accordance with German GAAP. German GAAP differ in a number of important respects from both IFRS and U.S. GAAP. In 2003, our net income calculated on an unconsolidated basis in accordance with German GAAP was € 276.0 million. In 2002, our net income calculated on an unconsolidated basis in accordance with German GAAP was € 1,113 million. This figure reflects corporate income tax-free capital gains resulting from changes to the legal organization of our group in 2002. We transferred the gains realized in connection with these changes to our holding company pursuant to various profit transfer agreements between our holding company and our two divisions. Excluding the effect of these gains, our company's net income calculated on an unconsolidated basis in accordance with German GAAP would have been € 223 million in 2002, compared with € 193 million in 2001. Because the companies that were affected by the organizational changes in 2002 are all wholly-owned subsidiaries of our holding company, the tax-free capital gains that arose in connection with these changes are not reflected in our consolidated financial statements.

Exchange Rate Information

We publish our consolidated financial statements in euro. As used in this annual report, euro or € means the single unified currency of the European Monetary Union. U.S. dollar, USD, U.S.\$ or \$ means the lawful currency of the United States of America. As used in this annual report, the term noon buying rate refers to the exchange rate for euro, expressed in U.S. dollars per euro, as announced by the Federal Reserve Bank of New York for customs purposes as the rate in the city of New York for cable transfers in foreign currencies.

To enable you to ascertain how the trends in our financial results would have appeared had they been expressed in U.S. dollars, the table below shows the average noon buying rates for U.S. dollars per euro for the five years ended December 31, 2003. The averages set forth in the table below have been computed using the noon buying rate on the last business day of each month during the periods indicated.

Year ended December 31,	Average
1999	1.0588
2000	0.9209
2001	0.8909
2002	0.9495
2003	1.1411

The following table shows the noon buying rates for U.S. dollars per euro for the six months ended March 31, 2004:

Month	High	Low
October 2003	1.1833	1.1596
November 2003	1.1995	1.1417
December 2003	1.2597	1.1956
January 2004	1.2853	1.2389
February 2004	1.2848	1.2426
March 2004	1.2431	1.2088

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On April 19, 2004, the noon buying rate was \$ 1.2019 per € 1.00.

Since the beginning of 1999, our shares have traded on the Frankfurt Stock Exchange in euro. We expect that fluctuations in the exchange rate between the euro and the U.S. dollar will affect the U.S. dollar equivalent of the euro price of our shares on the Frankfurt Stock Exchange and as a result are likely to affect the market price of our American Depositary Shares (ADSs) on the New York Stock Exchange. In addition, you should note that any cash dividends that we may declare in the future will be denominated in euro. Therefore, exchange rate fluctuations between the euro and the U.S. dollar will affect the U.S. dollar amounts that the holders of our ADSs will receive upon the conversion of any cash dividends that we may pay out on the shares represented by these ADSs.

A substantial portion of our assets, liabilities, revenues and expenses are denominated in currencies other than the euro. Accordingly, fluctuations in the value of the euro relative to other currencies have had a significant effect on the translation into euro of our non-euro assets, liabilities, revenues and expenses, and may continue to do so in the future. For further information on the impact of fluctuations in exchange rates on our operations, see Risk Factors Risks Related To Each Of Our Businesses and Item 11: Quantitative and Qualitative Disclosures About Market Risk.

Risk Factors

Our business, financial condition and results of operations may suffer material adverse effects due to any of the following risks. Additional risks not known to us or that we now consider immaterial also may adversely affect our business.

Risks Related to Each of our Businesses

Because the industries in which we operate are characterized by constant innovation and technological change, our success depends upon our continued ability to develop and market innovative products on a cost-effective basis. If we fail to do so, we may be unable to capture additional market share or may lose market share.

We operate in the pharmaceuticals and the specialty chemicals industries, both of which are highly competitive and are characterized by intensive research efforts and rapid technological change. Our success is highly dependent on our ability to discover, develop and manufacture new and innovative products on a cost-effective basis and to market them successfully. In doing so, we face and will continue to face intense competition from a variety of competitors, ranging from small niche companies to large national and international conglomerates. Based on total assets and annual revenues, we are significantly smaller than many of our competitors, which often have substantially greater financial, R&D and sales and marketing resources than we do. As a result, our competitors may succeed in developing and manufacturing products that are superior to our own products or that the market perceives to be more attractive. If this happens, our products may become uncompetitive and we may be unable to capture additional market share or may lose market share. In light of the ongoing consolidation of the industries in which we operate, we expect that the competitive pressures to which we are subject will increase in the future.

We operate in many different countries around the world. As a result, fluctuations in the exchange rates between the euro and other currencies could adversely affect our results of operations and reduce our ability to price our products competitively.

Due to the international scope of our operations, our net sales and net income may be affected by fluctuations in exchange rates, particularly between the euro and the U.S. dollar. An increasing portion of our sales is made in markets outside the European Union by our local subsidiaries or through distribution arrangements. As a result, fluctuations between the euro and the currencies in these markets may cause our reported revenues to vary significantly from period to period. For example, the devaluation of the U.S. dollar against the euro that started in 2002 has had a negative impact on our net sales, especially our reported sales of Pantoprazole, which is currently our most important product, in the United States. Any further devaluation of the U.S. dollar against the euro would intensify this effect. At the same time, a substantial proportion of our operating costs continues to be linked to the euro. Accordingly, exchange rate fluctuations have also affected our profitability, and they may continue to do so in the future.

You should note that historically each of our subsidiaries has been responsible for managing its own foreign exchange rate exposure. In 2003 we introduced a uniform hedging strategy for our main currency exposures, especially our exposure to the U.S. dollar, by expanding the time frame for our hedging transactions and the instruments that we use in structuring them. We believe that this revised

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strategy will assist us in better forecasting our financial results as well as in limiting our exposure to volatile exchange rates. Nevertheless, future fluctuations in the exchange rates between the euro and other currencies, particularly the U.S. dollar, may significantly influence our revenues and profitability.

In addition to influencing our reported net sales and net income, exchange rate fluctuations may also impact our competitive position in countries whose currencies fluctuate against the euro. In past years, the weakness of the euro vis-à-vis the U.S. dollar and currencies linked to the U.S. dollar has afforded us greater pricing flexibility in the United States and other countries, which in turn improved our competitive position and our profitability vis-à-vis our U.S. competitors. Starting in 2002, however, the euro has strengthened significantly relative to the U.S. dollar. This development has benefited our U.S. competitors, reduced our own pricing flexibility and adversely affected our reported revenues and profitability.

Because we depend on key management, scientific and technical personnel, our ability to compete would suffer if we were unable to hire and retain qualified employees.

Our success depends upon the continued contributions of our key management, scientific and technical personnel, many of whom have substantial experience with our company and would be difficult to replace. Competition for qualified personnel is intense in the industries in which we operate, and particularly so in the pharmaceuticals industry, and we may be unable to attract the highly qualified employees that our business requires. If we lose the services of our key management or scientific and technical personnel or do not succeed in attracting highly qualified personnel in the future, our business may be hurt by a reduced ability to compete in the rapidly evolving markets in which we operate.

Our business will suffer if we are unable to obtain and defend intellectual property rights or if we do not gain access to, or are accused of infringing on, the intellectual property rights of others.

Our ability to remain competitive and to capture additional market share depends in part on our ability to obtain and defend patents, trademarks and other forms of intellectual property protection for our products, and on our development and manufacturing processes and our know-how. While we intend to prosecute patents aggressively, the process of obtaining patents is lengthy and expensive. There can be no assurance that patents will be granted in connection with any of our currently pending or future applications or that such patents will be valid and of sufficient scope and strength to provide us with meaningful legal protection or any commercial advantage. We recently received notices of applications by generic drug companies before the Food and Drug Administration Agency (FDA) in the United States challenging the patents for Pantoprazole with a view to manufacturing and distributing a generic version of Pantoprazole. While we believe that our U.S. patents relating to Pantoprazole are valid and enforceable and of sufficient scope and strength to prevent the entities that have made the filings and any other third party from manufacturing and distributing Pantoprazole-based generics at this time, there can be no assurance that we will be successful in defending our patents. For more information, see Item 4: Information on the Company Pharmaceuticals Intellectual Property .

In addition, intellectual property protection may be unavailable or limited in some of the countries in which we do business. Furthermore, a substantial portion of our know-how is not eligible for patent or comparable forms of intellectual property protection. To protect this type of information against access by competitors, we rely on trade secret law and frequently enter into confidentiality agreements with our employees, customers and partners. These agreements may be unenforceable, however, and the remedies available to us for breaches may be inadequate. Likewise, our competitors may gain access to our know-how by lawful means, for example, by reverse engineering or by independently developing the same know-how, which would destroy any advantage that our know-how may afford us.

Our competitive position may also suffer if competitors come up with products, development or manufacturing processes or know-how that is protected by patents, trademarks, licenses or other forms of intellectual property protection. Technologies over which our competitors hold intellectual property rights may either be unavailable to us or be available to us only on unfavorable terms. To gain access to such technologies, we sometimes enter into licensing arrangements with third parties. If our licensing partners were to terminate the licenses that we have obtained from them or if we are unable to obtain licenses on commercially favorable terms in the future, our ability to develop, manufacture and market our present and future products may be impaired.

While we seek to protect our trademarks, which include the names of many of our key products, by filing for trademark protection in most of the countries where we sell these products, you should

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note that trademark protection consists primarily of a right to sue against infringing uses of a mark and, in order to be effective, requires extensive policing. If we fail to detect instances of infringement or if we do not succeed in defending our trademarks in court, our reputation with our customers and our ability to protect our trademarks in the future may be harmed.

It may become necessary for us to seek to enforce our patents, trademarks, licenses and other forms of intellectual property protection and to protect our trade secrets by taking legal action or to engage in litigation in order to defend ourselves against claims of alleged infringement of someone else's intellectual property brought against us by third parties. For example, in 1995, AstraZeneca PLC sued us, alleging that our gastrointestinal therapeutic Pantoprazole infringed that company's omeprazole patents (which have meanwhile expired). While we successfully settled this claim in a manner favorable to us, there can be no assurance that we will also be able to settle other claims that may be brought against us by third parties in the future. If we are unable to successfully settle future claims on terms acceptable to us, we may be required to engage in costly and time-consuming litigation and may be prevented from, or experience substantial delays in, marketing our existing pharmaceuticals and launching new ones. Any of these events could require us to divert substantial financial and management resources that we would otherwise be able to devote to our business.

Because our operations are subject to numerous environmental laws and regulations, we could become exposed to liability and be required to spend substantial amounts in connection with environmental compliance or remediation proceedings.

Our operations are subject to numerous environmental laws and regulations in the jurisdictions in which we operate. These laws and regulations govern, among other things, air emissions, wastewater discharges, the use and handling of hazardous substances, waste disposal and the investigation and remediation of soil and groundwater contamination. As with other companies engaged in activities similar to ours, we face a risk of environmental liability inherent in our current and historical manufacturing activities. While we do not believe that any currently anticipated environmental compliance and remediation requirements are likely to have a material adverse effect on our business, financial condition or results of operations, we may be forced to incur substantial expenses in connection with future environmental compliance or remediation proceedings, in which case our results of operations and financial condition may be materially adversely affected.

We may be faced with product liability claims, which could impair our reputation in the marketplace and hurt our profitability.

Although we maintain a comprehensive quality assurance program, there remains a risk that defects may occur in any of our products. The occurrence of such defects could give rise to liability for damages, including consequential and punitive damages, and could, by impairing our reputation, reduce the market's acceptance of our products.

To reduce our exposure to the aforementioned risks, we maintain an insurance policy covering product liability claims. There can be no assurance, however, that our insurance policy will be adequate and sufficient to cover all product liability claims that may be brought against us or that we will be able to obtain adequate insurance coverage on commercially reasonable terms in the future. A successful product liability claim in excess of our coverage could require us to pay substantial amounts in damages. In addition, our insurance policy does not protect us against reputational harm that we may suffer if the market perceives our products as unsafe or ineffective.

Our business may suffer as a result of volatility in different parts of the world.

We operate on a global basis. Our business is therefore subject to a variety of risks inherent in conducting international operations, each of which could adversely affect our business and results of operations. These risks include:

Wars, terrorist attacks and other hostilities;

Instability of foreign governments;

Changes in domestic or foreign laws or policies affecting international trade and foreign investment; and

Varying practices of the regulatory, tax, judicial and administrative bodies in the jurisdictions in which we operate.

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Fluctuations in stock prices and interest rate volatility could impair the value of our investments and adversely affect our financial position.

We invest a considerable amount of our cash balances in marketable securities, particularly fixed-income securities. At December 31, 2003, our portfolio of marketable securities represented more than 10% of our total assets. Fluctuations in the stock prices and interest rate volatility may affect the value of our portfolio of marketable securities and thus have an adverse impact on our financial position.

Risks Related to our Pharmaceuticals Business

Because we depend on the sale of a limited number of key products to generate a substantial proportion of our revenues, factors adversely affecting the sale of these products could materially harm our revenues and results of operations.

As with other companies in the pharmaceuticals industry, our pharmaceuticals division depends on sales of certain key products that account for a substantial portion of its revenues. For example, in 2003, our net sales of Pantoprazole, a proton pump inhibitor (PPI) that we offer for the treatment of ulcers and reflux disease, accounted for 56.2% of the net sales of our pharmaceuticals division, or 40.7% of our overall revenues. Pantoprazole has been a key revenue driver of our pharmaceuticals division for several years, and we expect that it will continue to account for a substantial proportion of our revenues in future periods. While we plan to launch additional therapeutics over the next several years (provided we manage to obtain regulatory approval for these drug candidates), including Ciclesonide, which we intend to market under the name Alvesco®, and Roflumilast, which we intend to market under the name Daxas®, we expect to continue to depend on a limited number of key products for the foreseeable future.

As a result of our dependence on key products, particularly Pantoprazole, factors adversely affecting the sale of any of these products could materially adversely affect our revenues and results of operations. These factors include:

Competition from other branded pharmaceuticals that may be equivalent or superior to our own products or that the market perceives to be more attractive;

Competition from generic versions of branded pharmaceuticals once the term of patent protection for the original branded pharmaceuticals has expired;

Technological advances;

The marketing strategies of our competitors;

Supply chain interruptions;

Work stoppages;

Changes in prescription practices;

Changes in the reimbursement policies of third-party payers; and

Product liability claims.

Pantoprazole, in particular, faces competition from various other branded PPIs. Most notably, these competitors include Takeda's lansoprazole-based PPI, which is the leading PPI in the world and which is marketed in the United States by TAP Pharmaceuticals under the name Prevacid, and AstraZeneca's Nexium, a PPI based on a substance called esomeprazole, which was launched in 2001 and is marketed as a next-generation PPI. If our competitors continue to invest heavily in marketing these products, the ability of Pantoprazole to capture market share or maintain its current market share could be adversely affected.

In addition, Pantoprazole faces increasing competition from generic PPIs, based on a substance called omeprazole. A variety of companies are marketing omeprazole-based generics in Europe and the United States at prices that tend to be significantly lower than the price of Pantoprazole and other branded PPIs. Further competition results from the fact that the Procter & Gamble Company (P&G) has recently launched an over-the-counter (OTC) version of omeprazole in the United States, which, unlike Pantoprazole, is available to patients without a prescription. While generic and OTC versions of omeprazole-based products have so far had a limited impact on the market for branded PPIs, including Pantoprazole, in Europe, their launch in the United States has resulted in increased competition and stronger price pressure in the U.S. market. This pressure results from the fact that generic PPIs are typically offered at higher discounts than branded PPIs, especially to managed care

organizations, which are among the most important customers of PPIs.

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While Pantoprazole's share both of new PPI prescriptions and of total prescriptions in the United States has, with temporary interruptions, grown since the drug was first introduced in the U.S. market, there can be no assurance that this trend will persist. As a result, we may experience reduced growth and potentially a decline in net sales of Pantoprazole in future periods.

We depend on Wyeth, Inc. (Wyeth) for the marketing and distribution of Pantoprazole in the United States. If Wyeth were to devote insufficient resources to the marketing of Pantoprazole or if we were to lose Wyeth as a partner, our sales of Pantoprazole would be adversely affected.

Up until June 2003, we marketed Pantoprazole in the United States exclusively through Wyeth Pharmaceuticals, the pharmaceuticals division of Wyeth, Inc. Since July 2003, our own dedicated sales force for the U.S. market has been co-promoting Pantoprazole alongside Wyeth. While this arrangement has afforded us greater influence with respect to the marketing of Pantoprazole in the United States, the revenues that we derive from this drug in the U.S. market continue to materially depend on the resources that Wyeth devotes to the marketing of this therapeutic. While our distribution arrangement with Wyeth requires Wyeth to use commercially reasonable efforts to sell Pantoprazole, there can be no assurance that Wyeth's marketing efforts will be successful. In addition, Wyeth is entitled to terminate its distribution agreement with us in certain circumstances, including when a third party commences legal action against Wyeth alleging patent infringement and, following the fifth anniversary of the date of approval by the U.S. Food and Drug Administration (FDA) of the first Pantoprazole-based product, without cause upon one year's prior written notice. If Wyeth terminates the contract for reasons other than because we become insolvent or commit a material breach of the agreement, it is required to transfer all of its rights pertaining to Pantoprazole and to products based on this substance, including any regulatory approvals that it has obtained, to us. See Item 10: Additional Information Material Contracts for a summary of the terms of our agreement with Wyeth. If we were to lose Wyeth as a distribution partner, we would be forced to find a suitable replacement. If we experience delays in finding such a replacement, our ability to sell Pantoprazole in the United States, which accounts for a substantial and increasing proportion of our Pantoprazole sales worldwide, would suffer, and, accordingly, our results of operations would be adversely affected.

Due to the inherent unpredictability of the process underlying the development of new pharmaceuticals, there can be no assurance that we will be able to successfully and timely launch new drugs and other pharmaceutical products.

A critical element of our future success is the successful and timely commercial launch of new products. To this end, we devote substantial resources to research and development and have a number of promising candidates for new therapeutics in our pipeline, including a potential next-generation drug for indications similar to those of Pantoprazole and several candidates for the treatment of asthma and other respiratory tract diseases. Because of the complexities and uncertainties associated with pharmaceutical research, however, we cannot be certain that any of these drug candidates will survive the development process and ultimately obtain the regulatory approvals needed in order to be launched commercially. While some of them are in advanced stages of clinical testing and appear to have desirable therapeutic profiles, adverse clinical and toxicological results remain possible at any time.

We may be unable to expand into the U.S. market, or our expansion may be delayed, each of which would limit our growth opportunities.

A key element of the growth strategy of our pharmaceuticals division is our plan to expand into the United States. The United States is the biggest pharmaceuticals market in the world and offers the greatest growth opportunities for our business. We plan to accomplish our expansion into the U.S. market with the assistance of experienced co-promotion partners and by exploiting the launch of certain of our pipeline drugs, including Alvesco® and Daxas®, two therapeutics that we are developing for the treatment of respiratory tract indications, to gradually build up our own sales and marketing organization for innovative therapeutics in the United States. This new sales and marketing organization will supplement our existing U.S. operations for facial topics and certain other types of pharmaceuticals. While we made significant further progress in this area in 2003, if either or both of Alvesco® or Daxas® fail to make it to market or to generate sufficient demand or if we were to lose our co-promotion partners for these drugs and be unable to find suitable replacements or experience delays in finding replacements, we may be unable to expand our operations in the U.S. market or may experience delays in doing so. If we do not succeed in securing a strategic position in this or

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other international markets, the growth of our business may be adversely affected. In addition, we may be unable to recover investments that we have already made in these markets.

Because our business is subject to extensive governmental regulation, including price controls, our ability to market our products is subject to administrative constraints over which we have only limited influence.

The development, manufacture and marketing of pharmaceuticals is subject to extensive governmental regulation. Regulatory approval is required in each jurisdiction in which we operate before any dosage form of any new pharmaceutical, including an off-patent equivalent of a previously approved pharmaceutical, may be marketed in that jurisdiction. The process for obtaining governmental approval to market pharmaceuticals is rigorous, time-consuming and costly, and it is impossible to predict the extent to which this process may be affected by legislative and regulatory developments. We currently have several drug candidates in various stages of the approval process in the United States, the European Union and Japan. If we fail to obtain, or experience delays in obtaining, regulatory clearance to market new pharmaceuticals or existing pharmaceuticals for new indications or if we experience any other regulatory impediments, our results of operations may be adversely affected. Even after a pharmaceutical has been approved, it may be subject to regulatory action based on newly discovered facts concerning its safety or efficacy. Any such regulatory action may adversely affect the marketing of our pharmaceutical products, require changes to their labeling and even force us to withdraw them from the market altogether.

In addition to the need for obtaining regulatory approval to market new products, we are subject to price controls imposed by local governments and health care providers and in some markets need to obtain special approval before patients are entitled to be reimbursed for purchasing our products. The existence of price controls can limit the revenues that we earn from our products and thus could also have an adverse effect on results of operations. The way in which price controls operate varies by country and can cause substantial disparities in the price levels prevailing in different markets. Many governments and private medical care providers, such as Health Maintenance Organizations (HMOs) and social security organizations, have recently introduced or are currently in the process of introducing reimbursement schemes that favor the replacement of branded pharmaceuticals by cheaper generic pharmaceuticals. Since January 1, 2003, the pharmaceutical industry in Germany had been required to grant the German social security funds (which are the main purchasers of drugs in the German health care system) discounts of 6% off the list price for most ethical therapeutics, which has had a negative impact on our pharmaceuticals sales in Germany. As part of its health care reform plans, the German government has recently increased these discounts to 16% and excluded certain OTC pharmaceuticals from the list of therapeutics that are eligible for reimbursement by the social security funds. In addition, recently adopted legislation provides a framework for the implementation of reference prices also for patent-protected pharmaceuticals, which may be introduced in 2005. As a result of these developments, we anticipate the negative impact of German regulation on our business in Germany to persist. We also expect further price regulations in various other European countries. In the United States, generic substitution statutes, which permit or require dispensing pharmacists to hand out less expensive generic drugs instead of the original ethical drug, have been enacted by virtually all states. The Medicare reform, which was adopted at the end of 2003, provides for, among other things, outpatient pharmaceutical coverage for covered beneficiaries. Demand for pharmaceuticals in the U.S. market could therefore increase significantly. However, the U.S. government could use its purchasing power to demand discounts from pharmaceutical companies, thereby creating *de facto* price controls on prescription drugs. As a result, we expect that pressures on pricing will continue, which could adversely affect our turnover and operating results.

As part of our plans to expand our pharmaceuticals business, we expect to make substantial investments in therapeutic areas in which we have limited experience, such as oncology. If we are unable to develop new drugs in these areas, we may be unable to recoup our investments.

Our medium- to long-term goal is to expand our pharmaceuticals business by entering markets in which we are currently not active. One such market that we may decide to enter is the oncology market, which we expect will grow substantially in the future. We have commenced basic oncological research and entered into R&D collaborations with third parties, and we intend to make further investments related to oncology over the next several years. In addition, we may decide to enter other therapeutics markets, which may require us to make similar investments. Investments of this sort frequently involve significant cash expenditures, for example in connection with hiring qualified scientists, conducting R&D projects and making desirable acquisitions. In addition, you should note that we have limited experience with respect to therapeutics that we do not currently offer. As a result, there can be no assurance that we will be successful in developing, manufacturing and

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marketing therapeutics for new markets or integrating them with our existing portfolio at all or within a time frame that will enable us to recoup our initial investments. Any of these risks may ultimately have an adverse impact on our business, financial condition and results of operations.

Our R&D strategy involves creating and maintaining alliances and other collaborative arrangements with third parties, and any inability to find suitable collaborators may adversely affect our ability to develop new pharmaceuticals.

Our continued success will in part depend on our ability to establish new and to maintain existing collaborations, alliances and licensing arrangements with third parties, especially with biotech companies. Collaborations with companies and other entities that have expertise in biotechnology and genetic research are of particular importance to our plans to supplement the existing franchises of our pharmaceuticals business with therapeutics for oncological indications. We may not be able, however, to establish such collaborations on terms that are acceptable to us or at all. Moreover, in view of the ongoing consolidation of the biotech industry, we may experience greater difficulty finding suitable partners in the future, as a number of smaller companies, which would be candidates for collaborations, become part of larger conglomerates that compete with us and that may be unwilling to grant us access to attractive technologies on commercially favorable terms or at all. In addition, we have no control over the amount and timing of resources that our partners devote to our programs. If we are unable to form or maintain alliances or our partners fail to assist us with our R&D efforts, our business may be harmed and our results of operations may be adversely affected.

Risks Related to our Chemicals Business

Demand for our products could suffer as result of periodic downturns.

Because the specialty chemicals that we offer are used in a wide variety of downstream industries served directly or indirectly by us, including the automotive, construction, electrical appliances and packaging industries, our results are affected by the business cycles experienced by these industries. While we seek to reduce our exposure to these cycles by focusing on complementary geographic and product markets, there is no assurance that we will be successful in insulating our chemicals business from downturns experienced by the industries that it serves. In addition, we are not immune to negative economic developments affecting more than one of these industries, such as the continuing difficult economic environment in 2003, which has negatively affected our business by dampening our net sales growth. Economic downturns can lead to overcapacity, oversupply, price pressure, reduced growth and lower margins, each of which could adversely affect our business and results of operations.

Our results may suffer if we are unable to offset increases in raw material prices or pass them on to our customers.

Raw material costs account for a significant portion of the cost of sales of our chemicals business. The prices and availability of the raw materials that we use in our chemicals business vary with market conditions and can be highly volatile. If we are unable to compensate for increasing raw material prices by achieving cost savings in other areas or to pass such increases on to our customers, or if the prices for our products decrease faster than raw material prices, our profitability may be hurt. In 2003, we continued to experience high raw material prices, which we were able to offset by substituting cheaper raw materials for more expensive ones. Nevertheless, there have been periods in the past during which we have been unable to offset rising raw material prices, and we expect that similar situations may arise in the future. Therefore, you should be aware that any movements in the level of the raw material prices that we use in our chemicals business may have a material impact on our business, results of operations and financial condition.

Our growth depends in part on our ability to acquire and successfully integrate companies into our existing organization.

A key element of the growth strategy of our chemicals division is to supplement our internal growth with strategic acquisitions of businesses and technologies that we consider capable of complementing or enhancing our existing products or of providing us with access to new markets. As a result, if we are unable to identify suitable acquisition targets, our growth prospects may suffer. In addition, in pursuing acquisitions, we may face competition from other companies operating in the specialty chemicals and related industries. Our ability to make acquisitions may be limited also by applicable antitrust, anti-takeover and other regulations in the United States, the European Union and any of the other jurisdictions in which we do business. If any of these risks materialize, we may be

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unable to make desirable acquisitions or to complete them on terms attractive to us. If that occurs, our ability to grow in certain of our business areas may be adversely affected.

To the extent that we are successful in making acquisitions, we may have to expend substantial amounts of cash, incur debt, assume loss-making business units and incur other types of expenses. We may also face difficulties in successfully integrating targets into our existing organization. Each of these risks may have an adverse effect on our business, financial condition and results of operations.

Risks Related to Investments in our Company

Because we and our directors and officers are located in Germany, it may be difficult for you to sue these persons in the United States or to enforce judgments by U.S. courts against them.

We are a corporation organized under the laws of the Federal Republic of Germany, and certain of our directors and executive officers are residents of Germany. In addition, a substantial portion of the assets owned by us and the aforesaid individuals is located outside the United States. As a result, it may be difficult or impossible for you to effect service of process upon us or any of the aforesaid persons within the United States with respect to matters arising under the U.S. federal securities laws or to enforce against us or any of such persons judgments of U.S. courts predicated upon the civil liability provisions of the U.S. federal securities laws. We have been advised by counsel that it is doubtful as to whether original actions of liabilities predicated on the U.S. federal securities laws may be enforced in Germany and that in Germany both recognition and enforcement of court judgments with respect to the civil liability provisions of the U.S. federal securities laws are solely governed by the provisions of the German Civil Procedure Code (*Zivilprozessordnung* or *ZPO*). In some cases, especially when the relevant statutory provisions of German law do not recognize the international jurisdiction of a U.S. court or the judgment conflicts with certain basic principles of German law (*e.g.*, the prohibition of punitive damages and limited pre-trial discovery), a U.S. judgment might not be recognized by a German court. Service of process in U.S. proceedings on persons in Germany, however, is regulated by a multilateral treaty guaranteeing service of writs and other legal documents in civil cases if the current address of the defendant is known.

[Back to Contents](#)**ITEM 4: INFORMATION ON THE COMPANY****Introduction**

We are a globally operating company that develops, manufactures and markets innovative pharmaceutical and chemical products for a range of targeted, highly specialized applications. In 2003, we reported net sales of € 2,735 million, 82% of which were generated outside of our home market Germany, and operating income of € 563 million.

Over the last five years, our business has on average experienced double-digit annual revenue growth. During the same period, our operating income has grown substantially faster than our net sales, leading to a profit margin (operating income as a percentage of net sales) of 20.6% in 2003. We believe that this development is a result of our strategic focus on the pharmaceuticals and specialty chemicals markets and the international expansion of our business. In recent years, much of this development has been driven by Pantoprazole, our main therapeutic, which we offer for the treatment of reflux disease as well as gastric and duodenal ulcers. Given the market position that Pantoprazole has achieved to date, we expect the growth of Pantoprazole to slow in the future. The following table provides a breakdown of our net sales and shows our operating income for the three years ended December 31, 2003:

Results of Operations

	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>CAGR(1)</u>
	(€ in millions, except %)			(%)
Net sales				
Pharmaceuticals	1,591	1,861	1,980	16.2
Chemicals	717	748	755	4.3
Total	2,308	2,609	2,735	12.4
Operating income				
As % of net sales	22.5(2)	20.6	20.6	22.2

(1) The Compound Annual Growth Rate (CAGR) measures the average annual growth of a line item over the period for which data is shown in the table.

(2) Includes a one-time gain in the amount of € 110 million resulting from the sale of our interest in a joint venture and a special donation of € 15 million to a charitable endowment. Excluding these items, our operating income in 2001 would have been € 424 million.

(3) Excluding the items described in note (2) above, our operating income, expressed as a percentage of net sales, would have been 18.4% in 2001.

For a description of our principal capital expenditures over the last three years, see Item 5: Operating and Financial Review and Prospects Liquidity and Capital Resources .

Our pharmaceuticals division is committed to developing innovative therapeutics for the global pharmaceuticals markets with a strategic focus on unmet medical needs in the gastrointestinal and respiratory tract areas. Our pharmaceuticals business is currently mainly driven by Pantoprazole. We market Pantoprazole in virtually all regions of the world with the exception of Japan. The main markets for the drug are the United States and Europe. Pantoprazole has been chiefly responsible for the growth of our pharmaceuticals division in recent periods, and we expect that it will continue to be a key revenue driver in the coming year. In addition, our R&D pipeline contains two promising candidates for the treatment of asthma and other respiratory tract diseases, Alvesco® (Ciclesonide) and Daxas® (Roflumilast). Both drug candidates are in advanced stages of clinical development. We filed an application for regulatory approval of Alvesco® in the United Kingdom, Australia, Canada and Switzerland in May 2002, in the United States at the end of 2003 and in Japan in January 2004. At the end of February 2004, the Australian Health Agency granted marketing approval for Alvesco® in Australia. We expect that Alvesco® will next be approved in the United Kingdom in the first half of 2004, with approvals in other member states of the European Union based on the U.K. approval to follow. We filed an application for EU-wide regulatory approval of Daxas® with the European Agency for the Evaluation of Medicinal Products (EMEA) in February 2004. In addition to our portfolio of prescription therapeutics, we offer imaging reagents and an assortment of over-the-counter (OTC) drugs, which are drugs that are available to patients without prescription.

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Our chemicals division offers a portfolio of innovative high quality specialty chemicals, including additives and measuring instruments, can and coil coatings and sealing compounds, and electrical insulation coatings for use in a wide range of downstream applications. In light of the highly application-specific nature of the specialty chemicals that we offer, we maintain close contact with our customers and constantly aim to develop, manufacture and market products that respond to their specific requirements. We believe that our customer-oriented approach has enabled us to achieve leading positions in the niche markets that we serve as well as revenue growth and margins above the average of our peers.

At December 31, 2003, we had operating subsidiaries in over 25 countries, which marketed our products on a worldwide basis. At that date we employed 10,402 people, of whom 19.2% worked in research and development. We believe that our commitment to the international expansion of our business and to R&D will enable us to capture future growth opportunities in the pharmaceuticals and specialty chemicals industries in our various targeted markets.

We are incorporated as a stock corporation under the laws of the Federal Republic of Germany and began operations as a separate legal entity in 1977 following our spin-off by VARTA AG. The legal name of our company is ALTANA Aktiengesellschaft. Our principal executive offices are located at Am Pilgerrain 15, D-61352 Bad Homburg v. d. Höhe, Germany, and our telephone number is ++49 (0) 6172-1712-0.

Strategy

Our group mission, which serves as a guiding principle for both our divisions, is to increase shareholder value through sustained profitable growth by developing, manufacturing and marketing innovative products in selected high-margin areas and expanding our operations internationally. We are committed to fully exploiting the opportunities of emerging technologies by investing a substantial amount of our annual earnings in R&D and to enlarging our presence in all important international markets, particularly the United States.

We measure our success in creating shareholder value by reference to sustained levels of growth in earnings, annual dividends and market capitalization. To focus our efforts on these criteria, we have sought to align the interests of our management and employees with those of our shareholders by implementing stock-based compensation programs. Accordingly, we operate annual stock option plans that are open to our management board, senior executives and other key and high-potential employees. We also offer an annual share ownership plan for those of our employees who are not eligible to participate in our stock option plans. For more information on these plans, see Item 6: Directors, Senior Management and Employees Stock Option Plans and ALTANA Investment Program.

In addition to our overall group strategy, we have also formulated more detailed strategies for each of our two divisions.

In our pharmaceuticals division, our strategy is to:

Develop innovative therapeutics in high-growth areas. To capitalize on opportunities in the worldwide pharmaceuticals markets, we concentrate our efforts on the discovery and development of innovative therapeutics in those areas that we believe offer the highest growth potential. Our current focus is on expanding our successful gastrointestinal franchise by exploiting the expertise that we have gained through the development of Pantoprazole, while strengthening our respiratory tract franchise. To this end, we are actively developing next-generation therapeutics for the treatment of ulcers and acid reflux disease, including Soraprazan, which is an acid pump antagonist (APA) in Phase II clinical development, and are in the process of finalizing the development of two innovative drugs for the treatment of asthma and other diseases of the respiratory tract, Alvesco® and Daxas®. Our medium- to long-term goal is to supplement our existing franchises by entering the oncology market, which we expect will grow substantially in the future. Consistent with our strategy to concentrate on those segments of the pharmaceuticals markets that offer the greatest growth potential, we have disposed of most of our diagnostics business.

Expand our business internationally, particularly in the United States, to capture growth opportunities in the global pharmaceuticals markets. International markets already account for more than 80% of the net sales of our pharmaceuticals division. We consider the further internationalization of our business a key element of our growth strategy. The strong market position of our gastrointestinal drug Pantoprazole in the United States has enabled us to

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achieve substantial sales increases over the past years. In 2003, our U.S. pharmaceutical sales amounted to € 638 million, representing 32.2% of the total net sales of our pharmaceutical division in this period. To solidify and expand our position in this and other important international markets, we aim to increase our visibility by entering into co-promotion arrangements with partners that have established marketing and sales organizations and by exploiting the launch of our pipeline drugs to gradually build our own sales and marketing organizations for innovative pharmaceuticals in the U.S. and other overseas markets. In addition, we plan to create and expand our own research, clinical development and regulatory affairs facilities in overseas locations, especially in the United States and Japan.

Focus on R&D. We believe that the foundation of our long-term growth strategy is our continued emphasis on R&D with a special focus on therapeutics, the strategic core of our pharmaceuticals business. In addition, we intend to expand the depth and scope of our R&D activities by entering into strategic collaborations with third parties active in biotechnology and molecular science with a view to enhancing our R&D efforts in the areas of genomics and proteomics. To fully exploit the fruits of our research, we complement our own efforts by entering into co-development arrangements with third parties. We also develop drugs on the basis of technologies licensed from third parties. See [Pharmaceuticals Research and Development R&D strategy](#) for more information on our R&D strategy.

In our chemicals division, we seek to:

Market comprehensive customer-oriented solutions. In our chemicals business, we provide our customers with comprehensive solutions that combine specialized chemical products with technical advice and assistance regarding their adaptation and integration into our customers' manufacturing processes. To this end, we typically market our products on a decentralized basis and maintain customer service facilities in proximity to our customers' premises. We believe that this strategy enables us to add substantial value to our customers' products and their manufacturing efforts. Our customer-driven philosophy has enabled us to achieve leading positions in terms of innovation, quality and service in a number of selected markets. In addition, because our customers pay us primarily for the performance of our products, rather than the chemical substances of which they consist, our ability to offer comprehensive solutions has allowed us to attain higher profit margins than many of our peers.

Maintain an innovative portfolio of technologically superior products. We believe that our focus on developing innovative products has earned us an industry-wide reputation as a supplier of technologically advanced specialty chemicals. We intend to build upon this reputation by continuing to spend substantial resources on R&D. To ensure that our R&D efforts are at all times geared towards improving the performance of our products, all our R&D projects are carried out in close cooperation with our sales and service organization. This approach, which we believe distinguishes us from our competitors, enables us to collaborate with our customers and to constantly adapt the focus of our efforts in response to their needs.

Focus on selected niche markets. We seek to achieve a leading position in each of our targeted markets through innovation, quality and service. A key element of our strategy is to focus on markets that are too small to form a core business of our larger competitors and yet too complex to be serviced by smaller companies, which typically have insufficient resources to meet the market's expectations in terms of R&D and international scope. In selecting markets to enter, we aim to maintain a strategic portfolio of downstream markets that allows us to supply a wide array of complementary industries. We believe that this approach enables us to diversify our risk by reducing our exposure to the business cycles of individual markets.

Supplement organic growth with acquisitions of selected targets. In furtherance of our strategic goal to maintain and expand our leading position in selected markets of the specialty chemicals industry, we have historically relied on a combination of organic growth and selective acquisitions, and we intend to continue to pursue this strategy in the future. In selecting acquisition targets, we focus on the potential for synergies, the availability of experienced and competent management and the willingness and ability of the target to accept our corporate culture and our focus on serving our customers.

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Pharmaceuticals

Overview

We develop, manufacture and market a wide range of pharmaceutical products, with a focus on innovative therapeutics. In addition, we offer imaging reagents and OTC drugs. We benefit from an extensive product portfolio, with particular strengths in the area of gastrointestinal therapies, and market our pharmaceuticals internationally, mainly in the United States, Germany and other countries in Europe, as well as in Latin America. The strength of our portfolio has enabled our pharmaceuticals division to increase its net sales substantially in recent years.

In 2003, our pharmaceuticals division generated net sales of € 1,980 million, an increase of 6.4% compared with 2002. The chart below provides a breakdown of our pharmaceuticals net sales by geographic region for the three years ended December 31, 2003:

A substantial portion of the North American growth of our business derives from the successful marketing of, and the steady growth in demand for, Pantoprazole since it was launched in the United States in May 2000, despite an increasingly adverse exchange rate situation over the past two years. We expect the proportion of our net sales accounted for by sales to North America to continue to increase in future years due to Pantoprazole and new pharmaceuticals currently under development. This growth may, however, be less substantial than it has been in the past. The increase in our pharmaceuticals net sales in Europe mainly reflects the continued success of Pantoprazole in the European markets. The decrease in Latin America is due primarily to the continuing difficult economic conditions in Argentina and Brazil as well as to currency exchange rate effects, especially in Mexico. As a result of the international dimension of our business, our results of operations are materially affected by exchange rate fluctuations in any given period, especially by changes in the exchange rate between the euro on the one hand, and the U.S. dollar and currencies linked to the U.S. dollar on the other hand. See Item 3: Key Information Risk Factors Risks Related To Each Of Our Businesses and Item 11: Quantitative and Qualitative Disclosure About Market Risk for more information on our exchange rate exposure. In 2003, our pharmaceuticals division comprised three principal business areas:

Therapeutics, comprising prescription drugs for gastrointestinal, respiratory tract and cardiovascular indications as well as a variety of other therapeutics;

OTC, comprising drugs, tonics, vitamins and medical accessories that patients may purchase over-the-counter without the need to obtain a prescription; and

Imaging, comprising diagnostic reagents, such as contrast media, for in vivo applications.

In addition, we generate limited revenues from other sources, mainly from contract manufacturing on behalf of third parties.

At the end of 2002, we sold a substantial part of our former diagnostics business to DiaSorin s.r.l., while retaining certain diagnostic technologies that are directly relevant to our pharmaceuticals research. Accordingly, effective January 1, 2003, we changed the presentation of our pharmaceuticals

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business to reflect four business areas: therapeutics, OTC, imaging and other. Diagnostic revenues generated prior to the sale of our diagnostics business in 2002 are now presented within other.

The following chart provides a breakdown of our pharmaceutical net sales by business area for the three years ended December 31, 2003:

The growth of our pharmaceuticals division is driven primarily by our therapeutics business and especially by our acid suppressant Pantoprazole, which continued to be the primary growth driver for the division, accounting for 56.2% of its net sales in 2003.

The following table shows the targeted applications and revenues generated by the five most important revenue contributors of our pharmaceuticals division in 2003:

Principal Products and Applications

Product/product group	Application	Revenues generated in 2003
		(€ in millions)
Pantoprazole	Gastrointestinal therapeutic for the treatment of reflux disease and ulcers	1,113
Imaging reagents(1)	Imaging reagents used for in vivo diagnostic applications	106
Ebrantil®	Cardiovascular therapeutic for the treatment of hypertension	66
Riopan®	Drug for the treatment of heartburn	30
Crofab	Drug for the treatment of snake bites	29

(1) Our imaging reagents portfolio includes Imeron® and related reagents.

Products

Therapeutics

In our therapeutics business, we develop, manufacture and market prescription drugs, commonly referred to as ethical therapeutics, primarily for gastrointestinal and respiratory tract indications. In addition, we market therapeutics for cardiovascular and a variety of other indications. In 2003, our therapeutics business generated net sales of € 1,724 million. In prior periods, we presented our therapeutics business on the basis of four franchises: our gastrointestinal franchise, our respiratory tract franchise, our cardiovascular franchise and our other therapeutics franchise. Effective January 1, 2003, we changed this presentation by reclassifying our cardiovascular net sales as part of our other therapeutics category. As a result, we now present our therapeutics business on the basis of three franchises instead of four.

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The following table shows a breakdown of our therapeutics net sales by franchise for the three years ended December 31, 2003:

Therapeutics Net Sales by Franchise			
	2001	2002	2003
(€ in millions)			
Gastrointestinal	795	1,083	1,241
Respiratory tract	53	57	59
Other(1)	427	425	424
Total	1,275	1,565	1,724

(1) This franchise includes net sales of our cardiovascular business, which was formerly presented as a separate franchise. In the medium- to long-term, we intend to expand our therapeutics business by entering the oncology market. We have already commenced basic research related to oncology and entered into a number of collaborations with biotech companies through which we seek to enhance our R&D expertise in this area. See [Research and Development](#) [R&D strategy](#) for more information on our R&D strategy.

Gastrointestinal franchise. In our gastrointestinal franchise, we market drugs for the treatment of diseases affecting the human esophagus, stomach and intestine. In 2003, our gastrointestinal business achieved net sales of € 1,241 million. We originally gained a foothold in the market for gastrointestinal indications through Riopan®, a drug for treating ulcers that is capable of neutralizing acidity. While we sell Riopan as an ethical drug in a small number of markets, we market it primarily as an OTC drug. See [OTC](#) for more information on Riopan.

The most important product in our gastrointestinal portfolio is our patent-protected therapeutic Pantoprazole. In 2003, Pantoprazole accounted for net sales of € 1,113 million, or 89.6%, of the revenues of our gastrointestinal franchise. Pantoprazole enjoys patent protection in Europe until June 2005 and in the United States until July 2010. In addition, the drug benefits from supplementary protection in the majority of European countries until the end of May 2009. Recently, applications for approval of generic versions of Pantoprazole were submitted to the FDA. We are convinced that our U.S. patents relating to Pantoprazole are valid and enforceable and of sufficient scope and strength to prevent the applicants or any other third party from manufacturing and distributing Pantoprazole-based generics during the remaining life of these patents. For more information, see [Intellectual Property](#) , [Regulation - United States](#) and [Item 3: Key Information](#) [Risk Factors](#) [Risks Related To Our Pharmaceuticals Business](#) .

Pantoprazole is an acid suppressant drug that belongs to the family of so-called proton pump inhibitors (PPIs). Over the past decade, the worldwide market for PPIs has experienced rapid growth, and the number of PPIs and their labeled indications have continuously expanded. Doctors typically use Pantoprazole for the short- and long-term treatment of patients with gastroesophageal reflux disease (GERD), including patients with erosive esophagitis, which is a more serious form of GERD, a chronic condition caused by the reflux of stomach acid into the esophagus. Medscape estimates that more than 40% of adults experience GERD symptoms at least twice a week. If left untreated, esophageal damage caused by GERD can lead to even more serious complications, including a precancerous condition known as Barrett 's esophagus and esophageal cancer. Pantoprazole blocks the enzyme responsible for producing acid in the gastric mucosa, thereby restricting the flow of acid into the stomach. Pantoprazole has also received approval in the United States and Europe for the long-term treatment of GERD, which has significantly expanded its therapeutic profile. In addition, Pantoprazole has also received regulatory approval in many countries outside the United States for the treatment of gastric and duodenal ulcers. Ulcers result from the digestive action of the gastric juice on the mucous membrane when the latter is rendered susceptible to its action, for example, by certain drugs or local factors, including the Helicobacter pylori infection. Helicobacter pylori, which is widespread in industrialized countries, is the bacterium chiefly responsible for peptic ulcers. In addition, Pantoprazole received approval in the United States and in Europe for application in an intravenous formulation. Pantoprazole intravenous has important therapeutic benefits for the treatment of patients who are unable to receive a PPI by other routes and who need an intravenous (IV) agent for the short term. In some countries, we also offer Pantoprazole in combination with two antibiotics for the eradication of Helicobacter pylori.

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We believe that Pantoprazole enjoys therapeutic advantages vis-à-vis its competitors. First, clinical studies we have conducted on Pantoprazole suggest that Pantoprazole has less clinically relevant potential for metabolic interaction with other drugs. This feature distinguishes Pantoprazole from competing PPIs. Our studies have also shown that Pantoprazole has a higher bioavailability than other PPIs. Bioavailability is a measure for the degree and rate at which a substance is absorbed into the body. Finally, Pantoprazole is the only PPI currently available in the United States as both an oral and an IV preparation and the only PPI that enables patients to switch easily from IV to oral application without complications. However, we are expecting competition from IV preparations of Prevacid and Nexium in the very near future.

We have offered Pantoprazole in our home market, Germany, under the name Pantozol® since 1994 and launched it in the United States in May 2000 under the name Protonix®. As a result, we currently offer the drug in virtually all regions of the world with the exception of Japan. According to our internal records and data provided to us by our co-marketing partners, co-promotion partners and licensees, global market sales of Pantoprazole amounted to € 2,350 million in 2003. Market sales include our own direct sales to the market as well as the sales of our licensees and co-marketing and co-promotion partners. See [Sales and Marketing](#) for a description of our sales and marketing organization.

Pantoprazole has experienced rapid growth in almost every market in which it has been launched. Based on data available to us, total market sales of Pantoprazole in 2003 totaled € 1,456 million in North America, € 193 million in Germany, € 558 million in Europe excluding Germany, € 46 million in Latin America, and € 97 million elsewhere. These figures yield total market sales of Pantoprazole of € 2,350 million in 2003, compared with € 2,007 million in 2002 and € 1,326 million in 2001. The growth in total market sales of Pantoprazole in each of the three years reflects the product's strong growth in the U.S. market.

Our launch of Pantoprazole in the United States benefited from our marketing collaboration with Wyeth Pharmaceuticals, the pharmaceuticals division of Wyeth, Inc. ([Wyeth](#)). According to IMS Health, as of the week ending April 2, 2004, Pantoprazole's share of new U.S. prescriptions for PPIs was 22.6%, while our total prescription share amounted to 21.3%.

We expect Pantoprazole to continue to be a key revenue driver for our business for at least the next several years although we expect the growth rate to slow given that the drug has already achieved a substantial position in all markets in which it has been launched and as a result of the impact of increasing competition. Pantoprazole faces competition from various other branded PPIs. Most notably, these include Takeda's lansoprazole-based PPI, which is the leading PPI in the world and which is marketed in the United States by TAP Pharmaceuticals under the name Prevacid, and AstraZeneca's Nexium, a PPI based on a substance called esomeprazole, which was launched in 2001 and is marketed as a next-generation PPI. If our competitors continue to invest heavily in marketing these products, the ability of Pantoprazole to capture market share or maintain its current market share could be adversely affected. In addition, Pantoprazole faces increasing competition from generic PPIs based on a substance called omeprazole, for which patent protection has expired. A variety of companies, including Schwarz Pharma AG, Mylan Laboratories Inc., Novartis AG and most recently Torpharm, are marketing omeprazole-based generics in Europe and the United States at prices that tend to be lower than the price of Pantoprazole and other branded PPIs. Further competition results from the fact that the Procter & Gamble Company ([P&G](#)) has recently launched an OTC version of omeprazole in the United States, which, unlike Pantoprazole, is available to patients without a prescription. While generic and OTC versions of omeprazole-based PPIs have so far had a limited impact on the market for branded PPIs, including Pantoprazole, in Europe, their launch in the United States has resulted in increased competition and stronger price pressure in the U.S. market. This pressure results from the fact that generic PPIs are typically offered at higher discounts than branded PPIs, especially to managed care organizations, which are among the most important customers of PPIs.

Factors that we believe should limit Pantoprazole's ongoing exposure to competition include the facts that Pantoprazole is priced at a substantial discount to Nexium and that Wyeth's branding experience should enable us to continue to convey the therapeutic benefits of Pantoprazole to the market. However, there can be no assurance that we will be able to raise or maintain Pantoprazole's market share in future periods. See [Item 3: Key Information Risk Factors Risks Related To Our Pharmaceuticals Business and Competition](#) for more information on the competitors of Pantoprazole.

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Our continued commitment to the development of innovative gastrointestinal therapeutics has yielded a potential next-generation drug for indications similar to those of Pantoprazole. We refer to this drug candidate as Soraprazan and have applied to the World Health Organization (WHO) for recognition of that name as a proposed International Nonproprietary Name (INN). INNs identify pharmaceutical substances or active pharmaceutical ingredients. After a review of our application, the WHO has given the name Soraprazan proposed INN status and published it for comment. Soraprazan is currently in Phase II clinical development. See [Research and Development Pipeline](#) for more information on Soraprazan and its therapeutic profile and on our R&D efforts in the area of gastrointestinal therapeutics generally.

Respiratory tract franchise. In our respiratory tract franchise, we offer drugs to treat chronic obstructive lung diseases, such as asthma and chronic obstructive pulmonary disease (COPD), and recurrent respiratory tract infections. Asthma is a chronic inflammation of the airways, often of allergic origin, that is marked by continuous labored breathing accompanied by wheezing, breathlessness, a sense of constriction in the chest, and often by attacks of coughing or gasping. COPD is a pulmonary disease that is characterized by chronic, typically irreversible airway obstruction resulting in a slowed rate of exhalation. The airflow limitation is typically associated with an abnormal inflammatory response of the lungs to noxious particles or gases. COPD is often, though not always, caused by smoking. Over time, greater airway damage occurs, and patients eventually die due to lung failure. Our respiratory tract business generated net sales of € 59 million in 2003 and has been relatively stable over the past few years.

Currently, the principal drug of our respiratory tract franchise is Euphyllin®, a drug based on a substance called theophyllin. Euphyllin® is used for the treatment of asthma and COPD. The drug was among the very first products developed, manufactured and marketed by our pharmaceuticals division. The most advanced drug of our Euphyllin product line is Euphyllong®, a therapeutic that we designed to be administered only once daily.

Recently, our strategic focus in the respiratory tract area has shifted to two innovative drug candidates that are in advanced stages of clinical trials contained in our R&D pipeline, Alvesco® and Daxas®. We filed an application for regulatory approval of Alvesco® in the United Kingdom, Australia, Canada and Switzerland in May 2002, in the United States at the end of 2003 and in Japan in January 2004. At the end of February 2004, the Australian Health Agency granted us approval to market Alvesco® in Australia. We expect that Alvesco® will be approved in the United Kingdom in the first half of 2004 with approvals in other EU countries following. We submitted the registration dossier for Daxas® to the EMEA in February 2004 to obtain approval to market this drug in the European Union. We have not yet determined when we will submit an application for regulatory approval in the United States. If we are able to obtain regulatory approval for the commercial launch of these drugs, we expect our respiratory tract business to grow substantially in the future. See [Research and Development Pipeline](#) for more information on our R&D pipeline in the respiratory tract area and [Item 3: Key Information Risk Factors Risks Related To Our Pharmaceuticals Business](#) for risks associated with the regulatory approval of pharmaceuticals under development.

For respiratory tract indications, we also offer Broncho-Vaxom®, an oral drug used principally for the treatment of recurrent respiratory tract infections. Broncho-Vaxom consists of fractions of eight different strains of bacteria whose application stimulates the natural defenses of the body. As a result, the drug can reduce the severity of symptoms and help patients develop a greater resistance to respiratory tract infections, thereby reducing the incidence and duration of such infections in adults and children. We license Broncho-Vaxom from OM PHARMA SA, a company located in Switzerland.

Other therapeutics. In our other therapeutics business, we market a variety of therapeutics for indications outside of our other two franchises, including therapeutics to treat cardiovascular diseases. In 2003, our other therapeutics business had net sales of € 424 million.

Our main product offerings in the cardiovascular area are Ebrantil®, a drug based on a substance called urapidil, which is available as both an oral and an IV formulation, and Querto®, a therapeutic based on a substance called carvedilol. Ebrantil and Querto are used for the treatment of hypertension. Hypertension is characterized by an increase in blood pressure above normal levels over a prolonged period of time. The condition can cause damage to the heart and blood vessels, creating an increased risk of heart attack, heart failure and stroke. While the IV formulation of Ebrantil is used primarily to treat hypertensive emergencies and postoperative hypertension, Querto is also used for the treatment of coronary heart disease and chronic heart failure. Ebrantil is a so-called selective alpha-1 receptor antagonist with central anti-hypertensive action, whereas Querto is a beta blocker.

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Alpha and beta receptors are cellular entities that exist on the surfaces of cells and are stimulated by the sympathetic nervous system. Both alpha receptor antagonists and beta blockers reduce stress symptoms by inhibiting the effects of the sympathetic nervous system, thereby preventing cardiovascular damage. While Ebrantil is a result of our own cardiovascular R&D efforts, we have licensed Querto from F. Hoffmann-La Roche Ltd. Querto's patent in Germany will expire in 2004; we thus expect a decline of our Querto sales. However, we do not expect this decline to have a significant negative impact on our overall pharmaceutical sales. In the second quarter of 2003, we completed the disposal of two product lines (Chromagen and StrongStart) in the cardiovascular area for \$ 27 million. In 2002, these product lines generated revenues of € 16 million.

Apart from cardiovascular products, our main products in this area are drugs for the treatment of rheumatism and for urological and gynecological indications, as well as iron supplements and facial topicals.

OTC

In our OTC business, we market a variety of non-prescription brands directly to the consumer. Our portfolio includes gastrointestinal drugs, circulatory remedies, tonics and vitamins. Unlike ethical therapeutics, patients may purchase OTC drugs without a prescription. The OTC market has grown considerably in importance in recent years, as health insurance companies have become more cost-sensitive and refuse to refund the costs of certain categories of therapeutics (especially drugs used to treat trivial complaints). Therefore, we have switched several products from prescription to self-medication in the recent past. We achieve approximately half of the revenues of our OTC business in Germany, which we served through our Hamburg-based subsidiary ALTANA Consumer Health GmbH until the end of 2003. In January 2004, we integrated our German OTC business into our main marketing and sales organization, ALTANA Pharma Deutschland GmbH. We also distribute OTC drugs through our subsidiaries in a number of other regions of the world, most notably in other parts of Western Europe and in Latin America. In December 2003, we paid \$ 33 million to acquire certain OTC-related trademarks in Brazil. In 2003, our OTC business generated net sales of € 104 million.

The most important products in our comprehensive OTC portfolio are Riopan®, Buerlecithin® and Sanostol®. Riopan is an antacid for the treatment of GERD, duodenal and gastric ulcers, and stress-related mucosal damage. Antacids are agents that neutralize acidity and are used as an adjunct to other drugs to relieve ulcer pain and as self-medication against acid indigestion, heartburn, dyspepsia and sour stomach. The therapeutic importance of antacids has been declining in recent years in view of the better clinical efficacy of PPIs, such as Pantoprazole. We currently market Riopan as an ethical therapeutic in some markets but mainly offer it as an OTC drug. Buerlecithin is a tonic based on lecithin, a substance found in soy plants, and is used to increase mental productivity. Sanostol is a widely recognized vitamin preparation for children in Germany and many other countries.

Imaging

In our imaging business, we offer a variety of in vivo diagnostic applications, which are applications for diagnosing medical conditions in the living body of a human. Imaging is a term that covers a range of diagnostic techniques for creating images of parts of the human body. Our portfolio comprises contrast media for both x-ray imaging and magnetic resonance imaging (MRI) and ultrasonic imaging. MRI is an increasingly important noninvasive diagnostic technique that produces computerized images of internal body tissues and is based on nuclear magnetic resonance of atoms within the body induced by applying radio waves. In 2003, our imaging business generated net sales of € 106 million. We offer our imaging portfolio in cooperation with Bracco S.p.A., an Italian company active in contrast media. Under the terms of our collaboration with Bracco, we manufacture a variety of contrast media developed by Bracco and market them in Germany and in parts of Central Europe. We believe that as a result of our collaboration with Bracco, we are among the leading providers of contrast media in Europe.

[Back to Contents](#)**Research and Development***R&D strategy*

We consider R&D to be the foundation of the long-term growth of our pharmaceutical division and are committed to maintaining a high level of investment in R&D in the future. The table below provides information regarding our pharmaceutical R&D expenditures for the three years ended December 31, 2003:

	R&D Expenditures		
	2001	2002	2003
	(€ in millions, except %)		
R&D expenditures	252	335	376
% of pharmaceuticals net sales	15.8	18.0	19.0
% of therapeutics net sales	19.8	21.4	21.8

We believe that our current level of R&D expenditures positions us well vis-à-vis our peers. Our goal is to continue to spend approximately 20% of our therapeutics net sales on R&D in the future. We intend to allocate approximately 20% of our R&D expenditures in any given year to basic research and drug discovery.

The main focus of our R&D expenditures in recent years has been therapeutics, which is the single most important contributor to our pharmaceuticals revenues and which we expect to increase in importance in the future. Within therapeutics, we concentrate on the development of innovative drugs for gastrointestinal and respiratory tract indications. We have identified oncology as a further focal point of our R&D efforts. To this end, we have commenced basic oncological research and entered into a variety of collaborations with biotech companies. In addition, we also conduct R&D related to molecular diagnostics.

Our current R&D facilities are located in Constance, Germany; Hamburg, Germany; Bromma, Sweden; Florham Park, New Jersey; and Boston, Massachusetts. To support the international expansion of our operations, we are in the process of expanding our R&D facilities in overseas locations. In light of the relative size and importance of the U.S. market, we focus our international R&D activities outside of Germany primarily on the United States. To this end, we formed the ALTANA Research Institute, a genomics-oriented research center based in Waltham near Boston, Massachusetts, in May 2002, which was officially opened in June 2003. The unit is equipped with a variety of technology, including technology licensed from GPC Biotech AG (GPC), and specializes in functional genomics and proteomics, target identification and target validation. Its aim is to assist us in decoding complex cell functions and detecting genetically steered cell malfunctions. To conduct clinical studies on, and to assist us with obtaining regulatory approval for, new therapeutics in the United States, we primarily rely on our late-stage U.S. development and marketing facility in Florham Park, New Jersey, which we created in September 2002. In addition, we intend to enhance our research capacity in the field of medicinal chemistry by building a research institute in Mumbai, India. We expect that this institute will significantly increase our ability to synthesize new chemical compounds in our core indication areas.

In addition to carrying out R&D projects internally, we continuously seek to enhance the scope and depth of our research portfolio by obtaining access to outside knowledge, mainly through collaborations with companies in the biotech field. Our immediate goal is to intensify our activities in the areas of genomics, proteomics and high-throughput screening (HTS) by acquiring equity holdings in biotech companies, sponsoring research projects and facilitating collaborations that we believe will yield results which may assist us with the development of innovative new therapeutics. For example, in 2001, we acquired a strategic 8.3% stake in GPC, a biotech company with facilities in the United States and Germany with which we have a longstanding relationship. In addition to collaborating with third parties in the area of basic research, we also enter into co-development arrangements with third parties. By supplementing our own development efforts with the resources of third parties, we believe that we can enhance the commercial potential of our research results.

We believe that our scientific staff is a key to our success. At December 31, 2003, 1,514 of our employees – about 20% of the workforce of our pharmaceuticals division – worked in our pharmaceutical R&D laboratories. Our goal is to attract and retain the best-qualified scientists for our R&D activities. To this end, we offer our employees a competitive compensation package, which includes the ability to participate in our various employee incentive plans. See Item 6: Directors,

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Senior Management and Employees Stock Option Plans for additional information on our stock option plans.

Pipeline

Overview. We currently have several therapeutics in various stages of our R&D pipeline. For each project, we are required to conduct a number of pre-clinical and clinical studies. In the pre-clinical project phase, we typically conduct a number of in vitro and in vivo studies on animals to test the molecular and physiological effects of a drug candidate on cellular systems and its mechanisms of action. If these tests yield positive results, we then conduct Phase I, Phase II and Phase III clinical studies on humans to test the safety and clinical efficacy of the drug candidate. For more information on the regulatory approval process, see Pharmaceuticals Regulation .

While regulators in the United States and the European Union require that we conduct comprehensive pre-clinical and clinical studies before applying for authorization to market a drug, we typically need not conduct all requisite studies in each of the two jurisdictions. Instead, we are usually able to apply to the regulator of one jurisdiction to give us credit for studies conducted in other jurisdictions. Sometimes, a regulator will require us to supplement our existing studies with additional trials in order to satisfy all applicable requirements. As a result, we often manage to use, for example, the results of Phase I trials conducted in the European Union in order to qualify for Phase II trials in the United States and vice versa. Historically, we used to first test our drug candidates in the European Union and subsequently transfer the results of these tests to the United States, subject to any additional testing required by the U.S. Food and Drug Administration (FDA). More recently, in connection with the international expansion of our business, we started to conduct trials in the European Union and United States in parallel. In doing so, we rely partly on our own resources and partly on collaborations with third parties.

Consistent with our R&D strategy, we focus our development efforts on innovative drug candidates for gastrointestinal and respiratory tract indications.

Gastrointestinal franchise. In the gastrointestinal area, we focus our R&D efforts on a new class of therapeutics known as Acid Pump Antagonists (APA). Our main drug candidate in this area is Soraprazan, which we are developing for the treatment of GERD. APAs are widely considered the next generation of acid suppressants. Like PPIs, APAs restrict the flow of acid into the stomach. They differ from PPIs, however, in the way they operate. Whereas PPIs bind to active proton pumps, thereby inhibiting them irreversibly, APAs reversibly inhibit the ability of such pumps to produce acid. As a result of this difference, we believe that Soraprazan should have significant therapeutic benefits compared with currently available treatments for GERD and ulcers, such as a faster onset of action, which may result in a better symptom relief. This characteristic should make Soraprazan more suitable for treating the symptoms of various gastrointestinal diseases. We have completed ten Phase I studies with respect to Soraprazan, and the project is currently in Phase II development. Initial data from early Phase II studies indicate that Soraprazan is efficacious and well-tolerated.

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Respiratory tract franchise. Our pipeline for respiratory tract indications contains a series of innovative drug candidates for the treatment of asthma, COPD and rhinitis. Rhinitis is a disease that causes inflammation of the mucous membrane of the nose. The table below provides an overview of our respiratory tract pipeline along with the respective development stages of each drug:

Respiratory Tract Pipeline

Drug candidate	Indication	Current project phase	(Expected) filing date of NDA/MAA(1)	
			US	EU
Ciclesonide metered dose inhaler (MDI ²)(2)	Asthma	Phase III(3)	2003	2002
Ciclesonide dry powder inhaler (DPI)	Asthma	Phase I	N/A(4)	N/A(4)
Ciclesonide nasal	Rhinitis	Phase II/III	N/A(4)	N/A(4)
Ciclesonide combined with formoterol(5)	Asthma	Phase I/II	N/A(4)	N/A(4)
Roflumilast oral	Asthma	Phase III(6)	2004/2005	2004
Roflumilast oral	COPD	Phase III(6)	2004/2005	2004

(1) As part of the regulatory approval process, a New Drug Application, or NDA, must be submitted to the Food and Drug Administration in the United States. In the European Union, a Marketing Authorization Application, or MAA, has to be submitted to the EMEA. For more information on the regulatory approval process, see *Pharmaceuticals Regulation*. In light of the inherent unpredictability of the regulatory process, you should be aware that there can be no assurance that an MAA or NDA with respect to any of the drug candidates listed in the table above will be filed by the time indicated or at all.

(2) At the end of February 2004, the Australian Health Agency granted marketing approval for Alvesco® in Australia.

(3) In conducting Phase III studies with respect to this project in the United States, we collaborate with Aventis S.A.

(4) To be determined.

(5) Formoterol is a long-acting beta agonist, which is a compound acting as an acute bronchodilator.

(6) In conducting clinical studies with respect to this project, we collaborate with Pfizer, Inc.

Ciclesonide, which we intend to market under the name Alvesco®, is an inhaled steroid for the treatment of asthma. Because asthma is a global and widespread disease, there is a substantial need for further effective therapeutics in addition to those which are already on the market. Steroids are powerful anti-inflammatory drugs that prevent asthma attacks by reducing airway hyper-responsiveness and inflammatory reactions, such as mucous edema and secretion. Inhaled steroids are considered the current drug of choice for the treatment of asthma, as they offer the best overall therapeutic profile. The inhaled steroids currently available on the market, however, have two main side effects. First, when administered via inhalers, portions of the drugs' active ingredients are deposited not only in the lung but also in the mouth and throat, which can cause local side effects such as hoarseness and fungal infections. Second, once spread throughout the body following absorption and distribution via the blood, the systemic availability of these ingredients can lead to serious systemic effects. Of these systemic effects, diabetes, osteoporosis and slowed growth in children are the most important. In contrast, Ciclesonide is activated predominantly at the site of its action, in this case the lung. The activation is caused by special enzymes known as esterases. This feature of Ciclesonide should reduce the systemic effects that characterize existing inhaled steroids and may provide the drug with a significant therapeutic advantage over present treatments.

We are developing Ciclesonide for use in connection with metered dose inhalers (MDIs), dry powder inhalers (DPIs), nasal applicators and in combination with formoterol, which is a compound acting as an acute bronchodilator. With respect to the MDI version of Ciclesonide, for which we use a CFC-free environmentally friendly device, we are currently conducting a number of Phase III studies in the United States and other countries. Several of the studies that we are conducting in the European Union have yielded satisfactory results and have already been published. We filed an application for regulatory approval of Ciclesonide in the United Kingdom, Australia, Canada and Switzerland in May 2002. At the end of February 2004, the Australian Health Agency granted marketing approval for Alvesco®. We expect that Alvesco® will next be approved in the United Kingdom in the first half of 2004, with approvals in other member states of the European Union based on the U.K. approval to follow. At the end of 2003, Aventis S.A submitted a new drug

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application (NDA) for the MDI version of Ciclesonide to the FDA. In January 2004, Teijin Ltd., our partner for the Japanese market, submitted an application for regulatory approval in Japan. With respect to the DPI version of Ciclesonide, we have completed one Phase I study. This study is in addition to a large number of Phase I studies that we have conducted with respect to Ciclesonide in various trials since 1995. Because these studies have established the pharmacological and toxicological characteristics of Ciclesonide, we expect to be able to use the results of these studies not just in connection with the MDI version of Ciclesonide but also as the basis of future Phase II studies of the DPI version. With respect to the nasal application version, we are currently in the process of performing an extensive Phase II/III program involving more than 2,000 adult and pediatric patients. These studies are being performed mainly in the United States.

Roflumilast, which we intend to market under the name Daxas®, is a selective phosphodiesterase (PDE) 4 inhibitor for the treatment of asthma and COPD. In the United States COPD is second only to cardiovascular disease as a cause of disability, according to U.S. Social Security statistics, which speaks to the substantial need for an effective treatment. PDE 4 inhibitors are substances that have anti-inflammatory and immuno-modulatory effects and are effective against various inflammatory diseases. We refer to Roflumilast as a selective PDE 4 inhibitor because it selectively inhibits one form of the PDE enzyme family, namely the PDE 4 enzyme. As a result of its special molecular interaction with this enzyme, we expect that Roflumilast will have an improved side-effect profile compared with other PDE 4 inhibitors. Unlike most existing therapies, Roflumilast can be administered orally.

For both the asthma and the COPD indications of Roflumilast, we have completed a number of Phase III studies in the European Union and are currently in the process of conducting several additional studies in the European Union, the United States and other geographic regions.

In February 2004, we submitted the registration dossier for Daxas® for European approval to the EMEA. Despite certain similarities in their indications, our various pipeline drugs in the respiratory tract area are targeted at complementary markets. While Ciclesonide and Roflumilast are both aimed at the treatment of asthma, they have different therapeutic profiles as a result of differences in their mode of action and the manner in which they are administered. In addition, unlike Ciclesonide, Roflumilast is being developed also for the treatment of COPD.

While clinical trials of the various pipeline drugs described above have so far shown promising results, given the nature of the drug development process, there can be no assurance that any of these drugs will reach the market. There is always a significant possibility that adverse results with respect to a drug will become apparent in the future, which may result in substantial delays in the launch of the drug and possibly force us to abandon the drug altogether.

[Back to Contents](#)*R&D collaborations*

The table below provides an overview of some of our more important current R&D collaborations, including a brief description of the scope and objectives of each:

R&D Collaborations	
Partner	Scope
<i>Research collaborations</i>	
GeneData AG	Bioinformatics and genomics information management and analysis systems Data storage and analysis of high-throughput screening assays
GPC Biotech AG	Validation of tumor-specific targets Creation of a functional genomics/proteomics research unit in Waltham, near Boston, Massachusetts Collaboration in the area of pathway mapping and kinases
Atugen AG	Antisense target validation, <i>i.e.</i> , validation of drug targets by using a complementary sequence to a given segment of genetic material
Pharmacopeia Inc.	Screening for new chemical compounds with special biological properties in the field of inflammation research
Evotec OAI AG	Technical collaboration in the field of confocal laser detection in high throughput screening
Proteros Biostructures GmbH	Crystallization and X-ray analysis of drug target complexes in order to obtain three-dimensional information on the binding geometry of drug molecules and their biological target
Xerion Pharmaceuticals AG	Functional proteomics and target validation
<i>Development collaborations</i>	
Aventis S.A.	Co-development and co-promotion of Alvesco® in the United States
Teijin Ltd.	Development and marketing of Alvesco® in Japan; co-development of the nasal application of Alvesco®

Pfizer Inc.

Co-development and co-promotion of Daxas® in the
United States, Europe and other markets

Tanabe Seiyaku Co. Ltd.

Co-development and co-promotion of Daxas® in Japan

Research collaborations. In 2000, we entered into an alliance with GeneData AG, a Swiss company that is a leading provider of bioinformatics and genomics information management and analysis systems used in various genomic R&D applications. Our collaboration with GeneData has put us in a position to manage the huge amounts of data involved in functional genome analysis, thereby significantly enhancing our capabilities in this important area of pharmaceutical R&D. In 2002, we expanded the scope of our collaboration with GeneData to develop a high-throughput screening (HTS) data storage and analysis system. High-throughput screening is an automated process that is used to select the best drug candidate from among hundreds of thousands of candidate molecules.

In December 2000, we entered into a five-year research alliance with GPC Biotech AG in the area of tumor research. The alliance replaced our earlier collaboration with GPC, under which we worked together to investigate new genomic targets for the control of infections caused by microorganisms causing or capable of causing disease. Under the terms of this agreement, we collaborate in the identification of tumor-specific targets, that is, targets whose inhibition selectively eradicates cancer

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cells (but not normal cells). Most current chemotherapeutics for tumors show poor efficacy and safety profiles because they are unable to specifically target tumor cells. As a result, we believe that our collaboration with GPC will benefit our oncological research efforts. In addition to research, we are also entitled to have target validation, assay development and screening carried out by GPC. In 2001, we entered into an agreement with GPC, pursuant to which the company provides us with technology for our research unit in Waltham near Boston, Massachusetts, which specializes in functional genomics and proteomics. In addition, under the terms of the agreement, we collaborate with GPC in the area of pathway mapping and kinases. Kinases are enzymes that catalyze the transfer of phosphate groups and play an important role in the cell cycle and for the regulation of biochemical pathways in living cells.

In July 2001, we entered into a three-year arrangement with Atugen AG pursuant to which Atugen will carry out target validation for us, including the validation of tumor-specific targets. Target validation constitutes an essential step in the process of turning new target proposals identified with genomic technologies (which is the subject-matter of our agreement with GPC) into new drugs. The agreement will help us determine whether a target is critically involved in a disease process and whether drugs that modulate the target are likely to have a beneficial therapeutic effect.

In December 2003, we entered into a research collaboration with Pharmacoepia Inc. The goal of this collaboration is to search and identify new lead compounds for a biological target that we have identified in our inflammation research area. A lead compound is a chemical molecule that has been shown to bind to, inhibit or activate a target. Lead compounds are usually put through a process of modification and re-testing called optimization before a drug candidate is found. Under our agreement with Pharmacoepia Inc., we will screen Pharmacoepia's large chemical library for compounds that influence the biological behavior of the target. Upon successful completion of defined preclinical and clinical milestones, Pharmacoepia will receive milestone payments. We believe that this agreement will enable us to improve the number and quality of relevant lead compounds.

Since 2001, we are collaborating with Evotec OAI in the field of HTS technologies. As part of this collaboration, Evotec develops specialized equipment for the detection of fluorescence signals in cellular HTS assays, which constitutes a core capability for the high content screening of bioactive compounds and which we believe will provide us with a competitive advantage. The collaboration entitles us to a non-exclusive license to this technology.

In October 2001, we entered into a collaboration with Proteros AG, a company specializing in X-Ray crystallography of proteins. Under this collaboration, Proteros develops crystallization protocols for target proteins, 3D-structure elucidation of these proteins as well as protein-ligand complexes that permit the further optimization of our lead structures. The collaboration gives us an exclusive right to use the data generated by Proteros in our own R&D efforts, for example, in connection with the development of biological targets and bioactive compounds.

In June 2003, we completed our collaboration with Xerion Pharmaceuticals AG, Munich, which focused on the evaluation of antibody-based target validation technologies. We are entitled to use the results of this collaboration in our own R&D programs.

Development collaborations. We are currently party to four development collaborations. In 2001, we entered into an agreement with Aventis Pharmaceuticals Inc., the U.S. pharmaceuticals subsidiary of Aventis S.A., pursuant to which we cooperate with Aventis in connection with the ongoing Phase III clinical trials for Alvesco® carried out in the United States and share the costs of these trials. In addition, we agreed with Aventis that if we obtain regulatory approval to launch Alvesco® in the United States, we will distribute the drug in the U.S. market in collaboration with Aventis. In 1998, we entered into a contract in relation to the same drug with Teijin Ltd., a Japanese conglomerate, pursuant to which we granted Teijin the right to develop and market Alvesco® in Japan. Our collaboration with Teijin will enable us to gain access to the Japanese market, which operates substantially differently from the U.S. and EU markets, through an experienced partner. In addition, we agreed with Teijin to collaborate in the development of the nasal application of Alvesco®.

In 2002, we entered into an agreement with Pharmacia Corporation, now Pfizer, to co-develop and, provided we receive regulatory approval, market Daxas® in the United States, Europe and other important markets. While we coordinate the development of the drug in the European Union, Pfizer does so in the United States. The agreement provides that, following the receipt of regulatory approval in the relevant jurisdictions, we and Pfizer will jointly launch and promote Daxas® in the United States, Europe and other markets. Under the agreement, we received an upfront payment in the amount of \$ 30 million in the second quarter of 2002 and a milestone payment in the amount of

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\$ 30 million in the first quarter of 2003. We may receive additional payments based on the achievement of certain milestones in the future. On April 16, 2003, Pharmacia merged with Pfizer, Inc. We believe that this merger, which has created the largest pharmaceutical company in the world in terms of net sales, has significantly enhanced our distribution capabilities for Daxas®. In 2002, we also entered into a separate agreement with Tanabe Seiyaku Co. Ltd., a Japanese company, for the co-development and co-promotion of Daxas® in Japan.

Supplies and Raw Materials

We purchase our supplies and raw materials on a worldwide basis from a number of third-party providers. In those instances where there is only a single supplier, we seek to reduce our dependence on that supplier by accumulating and maintaining strategic reserves of the supplies and raw materials that we need for the manufacture of our products, qualify new suppliers, and, to the extent feasible, develop production processes in our own facilities. We typically attempt to secure strategic materials through medium- and long-term supply contracts and to ensure that in case of an outage, alternative sources would be readily available to us without undue expense and delay. We have not experienced significant difficulties in obtaining sufficient amounts of supplies and raw materials in recent years, and we do not expect to encounter such difficulties in the foreseeable future.

We have several sources for the most important raw materials of Pantoprazole, i.e., the active ingredient of the drug and a dry frozen IV formulation. We source the active ingredient of Pantoprazole from our Singen facility and from two suppliers, one of which has received FDA approval. The IV formulation is sourced internally from our Singen facility and from two external contract manufacturers as back-up sources.

Production

In the area of production, our goal is to ensure consistent quality and to minimize costs by creating facilities that specialize in discrete manufacturing tasks. We concentrate the manufacture of most of our products for the supply of the worldwide pharmaceuticals markets in Europe. Our manufacturing facility in Singen, Germany, has sole responsibility for all sterile application forms of therapeutics, including Pantoprazole IV, and also produces non-sterile semi-solid and liquid application forms as well as active pharmaceutical ingredients, predominantly Pantoprazole. Our facility in Oranienburg, Germany, which we are in the course of expanding in order to facilitate the large-scale production of Roflumilast, is engaged in the production of solid dosage forms, primarily Pantoprazole tablets. Our facility in Lyskowice, Poland, specializes in solid and liquid formulations. We started construction of a new manufacturing facility for Pantoprazole and Roflumilast tablets in County Cork, Ireland, during the fourth quarter of 2003. In Latin America, we are in the process of concentrating our activities for the Mercosur area in our facility in Jaguariuna, Brazil. As part of this program, we recently ceased all manufacturing activities at our site in Buenos Aires, Argentina, which has been shut down. All of our sites comply with current good manufacturing practice (cGMP) standards, which are a set of officially recognized scientifically sound methods, practices and principles for the development and manufacture of pharmaceuticals. In addition, certain of our sites, including Singen, have been inspected and have received approvals by the FDA and the relevant EU authorities.

We currently operate ten production facilities around the world. We source the active ingredient for Pantoprazole principally from our manufacturing facility located in Singen, Germany, and Isochem S.A., a French company that performs contract manufacturing for us. Pantoprazole tablets are manufactured at our facilities in Oranienburg, Germany, and Jaguariuna, Brazil. While we procure key starting materials for Pantoprazole from our facility in Mumbai, India, we also use external sources. For the construction of our Mumbai facility we have entered into a 50% joint venture with a third party. We otherwise own all of our principal production facilities and substantially all of the land on which they are located.

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The following table shows selected key information with respect to our principal current manufacturing facilities as well as our facilities under construction:

Production Facilities		
Location	Function	Size (m2)
Singen, Germany	Pharma (sterile, solid and semi-solid dosage forms and active pharmaceutical ingredients)	167,000
Oranienburg, Germany	Pharma (solid dosage forms)	64,300
Lyskowice, Poland	Pharma (solid and liquid dosage forms)	25,000
Melville, New York	Pharma (semi-solid and liquid dosage forms)	52,000
Hicksville, New York	Pharma (semi-solid dosage forms)	23,200
Mexico City, Mexico	Pharma (solid, semi-solid and liquid dosage forms)	11,900
Jaguariuna, Brazil	Pharma (solid, semi-solid and liquid dosage forms)	214,000
Mumbai, India	Key starting materials for Pantoprazole	25,100
Carrigtwohill, Ireland (1)	Under construction; Pharma (solid dosage forms)	14,000
Bromma, Sweden	Diagnostics	2,785

(1) Leased.

Sales and Marketing

We use the ALTANA brand to market products of our pharmaceuticals division on a worldwide basis. In doing so, we use sales and marketing methods customary in the pharmaceuticals industry. In addition to advertising our drugs, we maintain a network of sales representatives, collaborate with third parties and use our company's website to provide information about our pharmaceuticals. We also grant discounts to our customers. Our discounting practices vary widely among the countries in which we are active, depending on the respective country's regulatory framework and our position in the relevant market. The amount of control that we have over the sales mix used by our partners in any given market depends on the distribution arrangements we use in that market.

We have sales and marketing organizations in most European pharmaceuticals markets. As with other pharmaceuticals companies, however, we do not distribute our products exclusively through our own sales and marketing organization but also use collaborations with third parties. For example, while we supply a number of hospitals directly, we frequently rely on wholesalers to distribute our products to retailers, such as pharmacies.

In July 2003, we established a second sales force in the United States with approximately 300 representatives, which markets Pantoprazole in the U.S. market under the name Protonix® alongside Wyeth. Our sales force in the United States now comprises approximately 600 members, which we believe constitutes an important step towards establishing a fully integrated U.S. organization. To support our efforts in building a sales and marketing organization in the United States, we entered into an agreement with Ventiv Health, Inc., a provider of outsourced marketing and sales solutions, in October 2002. Under this agreement, Ventiv provides us with a nationwide sales force and related services, including recruitment, training and operational support services. We expect that our U.S. sales organization will assume a significant role in the distribution of Alvesco® and Daxas® if and when these drugs are launched in the U.S. market. In the meantime, our staff co-promote Pantoprazole and several drugs of Pfizer in the United States.

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In Japan, where we currently have no sales and marketing organization of our own, we expect that our agreement with Tanabe Seiyaku Co. Ltd., pursuant to which we will collaborate in the marketing of Daxas® in the Japanese market, will allow us to establish our own presence in that market in the mid- to long- term. Furthermore, with respect to Pantoprazole, we have found it desirable to supplement our internal sales and marketing efforts with the branding experience and marketing capabilities of external partners, particularly in the United States.

Among our third-party partners, we make a distinction between licensees, co-marketing partners and co-promotion partners. Licensees are partners that we typically use in markets that we do not

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serve ourselves. By contrast, co-marketing and co-promotion partners are distributors that we use in markets where we have a sales and marketing organization of our own. We use co-marketing partners when we decide to sell a product under more than one brand in the same market. Although we typically coordinate our efforts with our co-marketing partners, particularly in terms of dealing with regulators and drug safety, we and our co-marketing partners each manage a separate brand and use distinct distribution channels. To generate revenue, we charge our co-marketing partners a fee in an amount tied to the price that they charge their customers. By contrast, when we use co-promotion partners to sell a product under a single brand, either we or our co-promotion partners take sole responsibility for distributing the product, although we cooperate with our co-promotion partners in promoting the brand under which the product is marketed.

The type of arrangement we use in any given situation depends on the particular product and the features of the targeted market. An example of a licensing arrangement is our agreement with Wyeth to distribute Pantoprazole in the United States, where we have only recently begun to build a sales and marketing organization of our own. Pursuant to our agreement with Wyeth, Wyeth is required to use commercially reasonable efforts to distribute Pantoprazole in the U.S. market and to bill its customers for the drug directly. Wyeth is free to set the retail price at its discretion, which affords it the flexibility necessary to adapt its distribution strategy to the prevailing market conditions. In return, Wyeth is required to pay us a fixed percentage of its net sales, subject to a minimum price. While we market Pantoprazole in the United States through a licensing arrangement, we currently use co-marketing partners for the distribution of Pantoprazole in Germany, most other European countries and Latin America. In Australia and Canada, we distribute Pantoprazole in collaboration with a co-promotion partner.

Going forward, we intend to use licensees primarily in markets that we do not consider a strategic focus or where we believe that the costs of building and maintaining the necessary infrastructure and expertise outweighs the benefits of having a sales and marketing organization of our own. In strategically important markets that offer a substantial growth potential for our pharmaceuticals business, especially the United States, our goal is to rely less on licensees and instead to use experienced local companies as co-marketing and co-promotion partners. We believe that this approach will enable us to gradually build our own sales forces in these markets and to reduce our dependence on partners. We have already entered into a co-promotion agreement with Aventis for the distribution of our pipeline drug Alvesco® in the United States and have entered into a similar agreement with Pfizer with respect to Daxas®.

At December 31, 2003, Wyeth, the U.S. company through which we distribute Pantoprazole in the United States, accounted for 6.4% of our accounts receivable, compared with 7.6% at December 31, 2002. In 2003 and 2002, Wyeth accounted for 15.3% and 14.1% of our net sales, respectively.

Competition

For the most part, our pharmaceuticals division operates in markets characterized by intense competition. Our competitors include a wide variety of companies, ranging from small pharmaceutical companies to large national and international pharmaceutical groups and from off-patent manufacturers of generic pharmaceuticals to owners of preeminent brands.

The global therapeutics markets are highly competitive and are targeted both by large companies and by small niche players. The main competitive factors include product efficacy and safety and distribution capabilities. In addition, price has become increasingly important, particularly in Europe and Latin America. Our main competitors for drugs in the gastrointestinal area are Takeda, whose lansoprazole-based PPI is marketed in the United States through TAP Pharmaceuticals under the brand name Prevacid, and AstraZeneca, which markets Nexium, a PPI based on a substance called esomeprazole. Another company offering a branded PPI is Eisai. In addition, a variety of companies, including Schwarz Pharma, Mylan Laboratories, Novartis and most recently Torpharm, offer generic omeprazole-based PPIs in the United States and Europe, at prices that tend to be significantly lower than the price of Pantoprazole. In September 2003, Procter & Gamble launched an OTC version of omeprazole in the United States, which, unlike Pantoprazole, is available to patients without a prescription. While generic and OTC versions of omeprazole have so far had a limited impact on the market for branded PPIs, including Pantoprazole, in Europe, the launch of these products in the United States has resulted in increased competition in the U.S. market and led to stronger price pressure due to the fact that these PPIs are offered at higher discounts than branded PPIs, especially to managed care organizations, which are among the most important customers of PPIs. See Item 3: Key Information Risk Factors Risks Related To Our Pharmaceuticals Business for a

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discussion of the risks resulting from competition by other PPI brands, generic and OTC versions of omeprazole-based PPIs and Therapeutics for more information on Pantoprazole. In the respiratory tract area, we compete primarily with AstraZeneca, GlaxosmithKline, Merck & Co. and Boehringer-Ingelheim.

In the OTC area, the key competitive factors are price and branding. The OTC market is highly fragmented, and we face competition not only from other pharmaceuticals companies but also from distributors of homeopathic remedies and medical accessories.

The imaging markets are highly competitive. The key competitive factors include price (especially with respect to x-ray contrast media), product efficacy, safety, and sales and marketing capabilities. As far as new diagnosing techniques are concerned, technological innovation is also an important factor. Our competitors include Schering AG, Tyco Inc. and Amersham plc.

Intellectual Property

Intellectual property and especially patent protection are of critical importance to our pharmaceuticals business. At December 31, 2003, we held 102 U.S., 57 European and 22 Japanese patents for various pharmaceutical inventions. In addition, we have 72 patent applications pending at the U.S. Patent and Trademark Office, 172 at the European Patent Office and 122 in Japan. Our most important patents are those covering Pantoprazole as well as the patents for which we have applied and which have been granted in connection with our various pipeline drugs.

Pantoprazole enjoys patent protection in Europe until June 2005 and, by virtue of an extension granted by the U.S. Patent and Trademark Office in July 2003, in the United States until July 2010. In addition, however, Pantoprazole benefits from supplementary protection certificates, which have an effect similar to that of an extension of original patents, in the majority of European countries until the end of May 2009.

In February 2004, generic drug companies submitted applications known as an Abbreviated New Drug Applications (ANDA) including paragraph IV certifications in respect of Pantoprazole to the FDA. For more information on ANDAs, see Regulation United States .

Drug companies are required to include a certification in their ANDA filings when they intend to manufacture and distribute a generic version of a patent-protected drug listed in the Orange Book, which is a list of proprietary drugs together with pertinent patent information maintained by the FDA. Inclusion of a paragraph IV certification in an ANDA implies that the applicant is asserting that the patents listed in the Orange Book are either invalid or unenforceable or will not be infringed by the manufacture and distribution of a generic version of that drug. The applicant is required to notify the innovator company that it has filed an ANDA with the FDA, and must describe the reasons it believes the listed patents will not be infringed or are invalid or unenforceable. Once the innovator drug company has received notice that a generic application has been filed and its patent is being challenged, it may file a lawsuit claiming patent infringement based on its review of the generic drug company's notice. If a lawsuit is brought within 45 days of receiving the applicant's notice, the FDA's approval is stayed for 30 months. The 30-month period starts five years after the approval of the drug. If the patent court determines that the patent is valid, enforceable and would be infringed by the product proposed in the ANDA, the FDA will not approve the application until the patent expires. If the court decides that the patent will not be infringed or is invalid or unenforceable, the FDA may approve the generic application when that decision occurs. The FDA may approve the application at the end of the 30-month period, even if the litigation is ongoing. A generic applicant who is the first to challenge a listed patent using a paragraph IV certification is granted a 180-day exclusivity period with respect to other generic applicants. This exclusivity period provides generic applicants with an incentive to challenge listed patent for innovative drug products.

We received notice of the above-mentioned filings and the challenging of our patents in April 2004. We believe our patents are valid and enforceable. We intend to vigorously defend our patent rights and undertake all appropriate measures in the best interest of our company.

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Other patents and pending patent applications that are material to our business include those set forth in the table below:

	Patent Expiration Year		
	Europe (1)	United States	Japan
Ciclesonide (substance)	2011(2)	2013(2)	2011(2)
Ciclesonide (key intermediate)	2014	2015	2014
Ciclesonide (purification process)	2017	2017	2017
Ciclesonide (aerosol)	2018	2018	2018
Ciclesonide (nasal formulation)	2020	2020	2020
Roflumilast (substance)	2014(2)	2015(2)	2014(2)
Roflumilast (formulation)	2021	2021	2021
Soraprazan (substance)	2019(2)	2019(2)	2019(2)

(1) Includes European patents or national patents in major European countries.

(2) Does not reflect a possible extension of the term of patent protection or the grant of supplementary protection certificates for up to five additional years.

We rely on intellectual property that we obtain through cross-licensing arrangements with third parties to develop, manufacture and market pharmaceuticals. For example, we have entered into licensing arrangements with Hoffmann-La Roche and Invitrogen to obtain access to technologies that we consider critical to the R&D projects carried out in our molecular diagnostics unit. If we are unable to obtain licenses on commercially reasonable terms in the future, we may be limited in our ability to develop, manufacture and market new products.

We depend on our ability to obtain and, if challenged, successfully defend our patents, trademarks, trade secrets, licenses and other forms of intellectual property protection. Although we intend to continue to prosecute patent applications aggressively, we may not be able to obtain patents for all our inventions. In addition, the process of seeking patent protection is lengthy and expensive, and the issuance of a patent is conclusive neither of its validity nor of its scope. Therefore, there is no assurance that our currently pending or future patent applications will result in patents being granted or that, if patents are issued, they will be valid or of sufficient scope or strength to provide us with meaningful legal protection or a commercial advantage in the marketplace. In addition, if our competitors develop technologies that are themselves protected by patents, licenses or other forms of intellectual property protection, the underlying technologies may be unavailable to us or available to us only on unfavorable terms.

A significant part of our intellectual property consists of registered trademarks. We are continuously engaged in developing brand names for new products, securing trademark protection for our new brand names, policing our existing trademarks and enforcing our legal entitlements in situations where third parties infringe upon any of these rights. Before we start to advertise and sell a product under a new brand name, we seek to minimize the risks of infringing upon the trademark rights of others by filing for trademark protection and by conducting trade and service mark searches and other inquiries.

As with other pharmaceuticals companies, a portion of our know-how is not patent-protected. To protect this information, we rely on trade secret law and frequently enter into confidentiality agreements with our employees, customers and partners. These agreements may be unenforceable, however, and the remedies that are available to us for breaches may be inadequate. Likewise, our competitors may gain access to our know-how by lawful means, for example, by reverse engineering, or may independently develop the same know-how, which may destroy any competitive edge that we may have.

As a result of the key role that intellectual property plays in the pharmaceuticals industry, we may from time to time become involved in litigation as either plaintiff or defendant. For example, in 1995, AstraZeneca sued us alleging that our gastrointestinal therapeutic Pantoprazole infringes AstraZeneca's omeprazole patents. While we successfully settled this claim on terms favorable to us, there can be no assurance that we will also be able to settle other claims brought against us by third parties in the future. If we are unable to successfully settle future claims on terms acceptable to us, we may be required to engage in costly and time-consuming litigation and may be prevented from, or experience substantial delays in, marketing our existing pharmaceuticals and launching new ones. Each of these events could materially adversely affect our business, financial condition or results of

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operations or halt the sales of our existing products. For more information concerning the types of litigation that we face in our business, see [Legal Proceedings](#) and [Item 3: Key Information Risk Factors Risks Related To Each Of Our Businesses](#) .

Regulation

All companies developing, manufacturing and marketing pharmaceuticals are subject to extensive, complex and evolving regulations in the United States, Europe and Japan. Several years ago, the regulators and industry bodies in the United States, the European Union and Japan launched the International Conference on Harmonization, a collaborative effort with the goal of streamlining the development and registration of medicinal products by harmonizing the applicable procedures in the three regions. For the foreseeable future, however, we will have to seek separate approval in each region.

United States

The principal U.S. regulators relevant to the business of our pharmaceuticals division are the U.S. Food and Drug Administration (FDA) and to a lesser extent the U.S. Drug Enforcement Agency (DEA) and state government agencies. The Federal Food, Drug and Cosmetic Act, the Controlled Substances Act and other federal statutes and regulations all govern or influence the development, testing, manufacture, packaging, labeling, storage, record keeping, safety, approval, advertising, promotion, marketing, sale and distribution of our pharmaceuticals.

FDA approval is required before any dosage form of any new pharmaceutical, including any off-patent equivalent of a previously approved pharmaceutical, may be marketed. The process for obtaining governmental approval to market pharmaceuticals in the United States is rigorous, time-consuming and costly, and it is difficult to predict the extent to which this process may be affected by legislative and regulatory developments. Like all pharmaceutical companies, we are dependent on receiving FDA and other types of governmental approvals prior to producing and marketing virtually all of our new pharmaceuticals in the United States. Consequently, there is always a chance that the FDA or any other applicable agency will not approve our new pharmaceuticals, or that the rate, timing and cost of such approvals will adversely affect our launch plans and ultimately our results of operations. See [Item 3: Key Information Risk Factors Risks Related To Our Pharmaceuticals Business](#) for a discussion of these risks.

All applications for FDA approval are required to contain information relating to formulation, raw materials, stability, manufacturing, packaging, labeling and quality control. There are two types of applications for FDA approval:

New Drug Application (NDA) An NDA is filed whenever approval is sought for drugs with active ingredients and/or with dosage strengths, dosage forms, delivery systems or pharmacokinetic profiles that have not previously been approved by the FDA. A drug 's pharmacokinetic profile relates to the characteristic interactions of the drug with the human body in terms of absorption, distribution, metabolism, and excretion. NDAs are typically filed for newly developed branded pharmaceuticals as well as for new dosage forms of existing drugs that have been approved previously.

Abbreviated New Drug Application (ANDA) An ANDA is filed whenever approval is sought for generic equivalents of previously approved drugs or unapproved dosage forms of such drugs. The FDA will accept the filing of an ANDA before the expiration of the exclusivity period of the relevant patent only if the applicant simultaneously challenges that patent. For a description of the recent ANDA filings challenging the patents' underlying Pantoprazole, see [Intellectual Property](#).

The process mandated by the FDA before a previously unapproved pharmaceutical may be marketed in the United States essentially involves the following steps:

Preclinical laboratory and animal tests;

Submission of an investigational new drug application (IND), which must become effective before clinical trials may begin;

Adequate and well-controlled human clinical trials to establish the safety and efficacy of the proposed drug for its intended use;

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Submission of an NDA containing the results of the preclinical and clinical trials establishing the quality, safety and efficacy of the proposed drug for its intended use; and

FDA approval of the NDA.

Preclinical tests encompass the laboratory evaluation of a new pharmaceutical, its chemistry, formulation and stability, as well as animal studies to assess its potential safety and efficacy. Following the conclusion of preclinical tests, the results of these studies, which have to demonstrate that the pharmaceutical delivers sufficient quantities of the drug to the bloodstream to create the desired therapeutic results, are submitted to the FDA as part of an IND, which must become effective before human clinical trials may begin. The IND automatically becomes effective 30 days after receipt by the FDA unless the FDA, during that 30-day period, raises concerns or questions about the conduct of the trials as outlined in the IND. In such cases, the IND sponsor and the FDA must resolve any outstanding concerns before clinical trials can begin. In addition, an independent Institutional Review Board at the medical center that proposes to conduct the clinical trials must review and approve any clinical study before it commences.

Human clinical trials are typically conducted in three sequential phases:

Phase I. During this phase, the drug is initially introduced into a relatively small number of healthy humans or patients and is tested for safety, dosage tolerance, absorption, metabolism, distribution and excretion.

Phase II. This phase involves studies in a limited patient population to identify possible adverse effects and safety risks, to determine the efficacy of the drug for specific targeted diseases or conditions, and to determine dosage tolerance and optimal dosage.

Phase III. When Phase II evaluations demonstrate that a dosage range of the drug is effective and has an acceptable safety profile, Phase III trials are undertaken to further evaluate dosage, clinical efficacy and test for safety in an expanded patient population at geographically dispersed clinical sites.

Following completion of these trials, the results of the internal development processes and the mandatory preclinical and clinical studies along with documentation evidencing compliance with applicable Chemistry, Manufacturing and Controls (CMC) requirements as part of an NDA are submitted to the FDA. The drug development and NDA approval process averages approximately eight to twelve years.

FDA approval of an ANDA is required before a generic equivalent of a drug that previously has been approved under an NDA or a previously unapproved dosage form of a drug that has been approved under an NDA may be marketed. The ANDA approval process differs from the NDA approval process in that it does not require new preclinical and clinical studies; instead, it relies on the clinical studies establishing safety and efficacy conducted for the previously approved drug. The ANDA process, however, requires the generation of data that show that the ANDA drug is bioequivalent (that is, therapeutically equivalent) to the previously approved drug. Bioequivalence compares the bioavailability of one drug with another and, if established, indicates that the rate and extent of absorption of an off-patent drug in the body are substantially equivalent to the previously approved drug. Bioavailability establishes the rate and extent of absorption, as determined by the time-dependent concentrations of a drug in the bloodstream needed to produce a therapeutic effect. Supplemental NDAs or ANDAs are required for, among other things, approval to transfer products from one development site to another. Such applications may be under review by the FDA for a year or more. In addition, certain drugs may be approved for transfer only once new bioequivalence studies have been conducted or other certain requirements have been satisfied.

To obtain FDA approval of both NDAs and ANDAs, a pharmaceutical company's procedures and operations must conform to FDA quality system and control requirements generally referred to as current Good Manufacturing Practices (GMP), as defined in Title 21 of the U.S. Code of Federal Regulations. These regulations cover all aspects of the development, manufacturing and marketing process from receipt and qualification of components to distribution procedures for finished products. Since they are evolving standards, we have to continue to expend time, money and effort in all production and quality control areas to maintain compliance. The evolving and complex nature of regulatory requirements, the broad authority and discretion of the FDA, and the high level of regulatory oversight results in the continuing possibility that we may be adversely affected by regulatory actions despite our efforts to maintain compliance with the applicable regulatory

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requirements. See [Item 3: Key Information](#) [Risk Factors](#) [Risks Related To Our Pharmaceuticals Business](#) for a discussion of these risks.

In addition, we are subject to periodic inspections of our facilities, procedures and operations and/or the testing of our pharmaceuticals by the FDA, the DEA and certain other authorities that conduct periodic inspections to assess our compliance with applicable regulations. The FDA also conducts pre-approval and post-approval reviews and plant inspections in connection with its review of our applications for new products to determine whether our systems and processes comply with GMP and other applicable FDA regulations. If the FDA determines that deficiencies have occurred at any of our facilities, it may, among other things, withhold approval of any NDAs, ANDAs or other applications that we have submitted. Our vendors that provide us with finished products or components used to manufacture, package and label pharmaceuticals are subject to similar regulations and periodic inspections. Following its inspections, the FDA may issue notices on Form 483 and Warning Letters that may cause us to modify certain activities identified during the inspection. A Form 483 notice is typically issued at the conclusion of an FDA inspection and lists conditions that the FDA investigators believe may violate GMP or other FDA regulations. FDA guidelines specify that a Warning Letter be issued only for violations of regulatory significance for which the failure to adequately and promptly achieve correction may be expected to result in an enforcement action.

Failure to comply with FDA and other governmental regulations may result in fines, unanticipated compliance expenditures, recall or seizure of pharmaceuticals, total or partial suspension of production and/or distribution, suspension of the FDA's review of NDAs, ANDAs or other applications, enforcement actions, injunctions and criminal prosecution. Under certain circumstances, the FDA also has the authority to revoke previously granted approvals. Although we have internal compliance programs, if these programs do not meet the applicable standards or if our compliance is deemed deficient in any significant way, our business may be materially adversely affected.

See [Item 3: Key Information](#) [Risk Factors](#) [Risks Related To Our Pharmaceuticals Business](#) for a further discussion of risks in connection with FDA regulations.

The Generic Drug Enforcement Act of 1992 established penalties for wrongdoing in connection with the development or submission of ANDAs. Under this act, the FDA has the authority to permanently or temporarily bar companies or individuals from submitting or assisting in the submission of ANDAs and to temporarily deny approval and suspend applications to market off-patent drugs. The FDA may also suspend the distribution of all drugs approved or developed in connection with certain wrongful conduct and/or withdraw approval of ANDAs and seek civil penalties. The FDA may also significantly delay the approval of any pending NDA, ANDA or other regulatory applications under the Fraud, Untrue Statements of Material Facts, Bribery and Illegal Gratuities Policy Act.

In recent years, there has been enhanced political attention and governmental scrutiny at the federal and state levels of the prices paid or reimbursed for pharmaceuticals under Medicaid, Medicare and similar programs. The U.S. Federal Trade Commission (FTC) has recently announced its intention to conduct a study of whether brand-name and generic drug providers have entered into agreements, or have used other strategies, to delay competition from generic versions of patent-protected drugs. The FTC's announcement could affect the manner in which generic drug providers resolve intellectual property litigation with branded pharmaceutical companies, and may result in an increase in private-party litigation against pharmaceutical companies. See [Item 3: Key Information](#) [Risk Factors](#) [Risks Related To Our Pharmaceuticals Business](#) for a discussion of government regulation in connection with third-party reimbursement programs.

European Union

Much of what has been said with respect to the approval process applicable to new drugs in the United States also applies to the European Union. In the European Union, however, two different basic procedures are available: a centralized approval procedure and one based on the Mutual Recognition Procedure. The London-based European Agency for the Evaluation of Medicinal Products (EMA) governs the centralized drug registration and approval process. The respective scientific committees, the committee for proprietary medicinal products (CPMP) and the committee for veterinary medicinal products (CVMP), make recommendations based on reviews by appointed rapporteurs and co-rapporteurs, who are part of the CPMP/CVMP. Following the committee's recommendation, the European Commission issues a formal decision, which is valid throughout the entire European Union. Upon completion of the approval process, the drug may be marketed within all member states. An alternative procedure is the Mutual Recognition Procedure. Pursuant to this

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procedure, one member state carries out the primary evaluation. The other member states then have 90 days to decide whether they accept or reject the decision made by that member state. If a member state does not follow the decision of the reference country, then the issue is referred to the CPMP for arbitration. Based on the CPMP's determination, a formal decision is made by the European Commission.

Japan

In Japan, two issues make the approval process difficult for drugs developed outside of that country. First, the Japanese approval agency recognizes only a limited number of the documents used in registration procedures in other countries. Second, the Japanese approval agency requires that tests to determine appropriate dosages for Japanese patients be conducted on Japanese subjects and patients. As a result of these issues, parts of Phase II and Phase III clinical trials carried out in the United States or Europe typically need to be repeated in Japan. These regulatory requirements may cause delays of two to three years in introducing drugs developed outside of Japan to the Japanese market.

Chemicals

Overview

We develop, manufacture and market a wide range of specialty chemicals targeted at selected niche markets. Specialty chemicals are high value-added products used in the manufacture of a wide array of applications. Compared with commodity chemicals, specialty chemicals are typically made in smaller volumes. We offer our specialty chemicals together with support and comprehensive customer service regarding the use of our products and their adaptation to the specific manufacturing requirements of individual customers. The highly application-specific nature of specialty chemicals impedes product substitution, which fosters close relationships between suppliers and customers.

In 2003, our chemicals division generated net sales of € 755 million, an increase of 0.9% compared with 2002. The chart below provides a breakdown of our chemicals net sales by geographic region for the three years ended December 31, 2003:

In 2003, some of our customers transferred their production facilities from North America to Asia, which led to a decline of our sales in the North American region and caused our sales in the Far East to rise. The results for both regions suffered due to strong negative currency effects in 2003. In Europe and Asia, our chemicals division achieved single digit growth rates despite the weak economic situation throughout the year. As a result of the international dimension of our business, our results of operations are materially affected by exchange rate fluctuations in any given period, especially by changes in the exchange rate between the euro on the one hand and the U.S. dollar and the Japanese yen on the other hand. See Item 3: Key Information Risk Factors Risks Related

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To Each Of Our Businesses and Item 11: Quantitative and Qualitative Disclosure About Market Risk for more information on our exchange rate exposure.

Our chemicals division comprises three business areas:

Additives & Instruments, which comprises paint additives, plastic additives and wax additives as well as paint testing instruments, including gloss and color meters;

Coatings & Sealants, which comprises can and coil coatings for packaging and general industry applications as well as sealing compounds for cans and closures; and

Electrical Insulation, which comprises electrical insulation coatings for copper and aluminum wires, electrical insulation systems for use in electrical and electronic components, and compounds for a variety of other applications.

Our chemicals division has grown steadily over the past several years both organically and as a result of strategic acquisitions. We expect to continue to rely on a combination of organic growth and acquisitions for the expansion of our operations in the future. In identifying suitable targets for acquisitions, we seek majority interests in companies that present a clear strategic fit, have potential for net income contribution and whose management is both experienced and competent.

The chart below provides a breakdown of our chemicals net sales by business area for the three years ended December 31, 2003:

Because chemicals are used in a variety of industries, manufacturers of specialty chemical products are typically affected by the business cycles experienced by the industries that they serve. By targeting selected niche markets in complementary industries all over the world, we seek to diversify our risk and reduce our exposure to these cycles.

Products

Additives & Instruments

We provide a wide range of innovative, high-quality additives and related measuring and testing instruments. In 2003 net sales generated by our Additives & Instruments business totaled € 308 million.

We offer a comprehensive portfolio of paint additives, plastic additives and wax additives, which we develop for the specific requirements of our customers in the coatings, plastics and printing ink industries and which we market under our global brand BYK-Chemie. Additives are substances that have essentially two applications: first, they facilitate manufacturing processes, for example, by reducing viscosities and shortening processing times, and second, they substantially improve the quality of products, especially their mechanical properties and

appearance. Because additives can achieve effects that otherwise would not be possible, additives have become an integral and indispensable part

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of modern paint and plastics formulations. Due to their high effectiveness, they are usually applied in small dosages.

Our additives portfolio comprises wetting and dispersing additives for pigments and fillers, additives to improve surface properties, defoamers and air release agents, rheological additives, wax emulsions, dispersions and micronized waxes. Our additives are used in a variety of downstream applications, such as architectural and industrial coatings, automotive finishes, wood, can and coil coatings, printing inks, vinyl floorings, polyester, epoxy or acrylic resin systems and polishes.

As a complement to our additives portfolio, we also offer measuring and testing instruments that may be used to measure the surface characteristics of plastics and paints, including their color and gloss attributes. We market our instruments under our global brand BYK-Gardner. By enabling our customers to adjust their selection and dosage of additives based on the surface characteristics of the raw materials that they use, our instruments portfolio naturally complements our additives offering. We believe that our ability to offer complete solutions consisting of additives and instruments affords us a competitive edge.

We manage our additives business from the headquarters of our chemicals division, which are located in Wesel, Germany, and which are responsible for our worldwide R&D, manufacturing and marketing efforts. In contrast, sales and customer service are the responsibility of our local operating companies, which operate in proximity to our customers. We believe that this dual approach enables us to achieve operational synergies, while staying in touch with our customers.

Our Additives & Instruments business has expanded continuously over the past several years, almost entirely as a result of organic growth.

Coatings & Sealants

In the area of Coatings & Sealants, we offer can and coil coatings as well as compounds and sealants. In 2003, our Coatings & Sealants business generated net sales of € 222 million. Our can and coil coatings are used, among other things, to coat steel and aluminum sheets and coils. An important downstream application of our coatings portfolio are packaging materials that are used in the food industry, including cans, drums and closures as well as aluminum, plastic and paper foils for flexible packages. In addition, our coil coatings are also used for other applications, such as facade claddings, roller shutters, blinds and furniture. Our compounds and sealants portfolio comprises sealing compounds for use in food and beverage cans, bottle closures and jar lids.

We believe that we offer a comprehensive portfolio of coatings and sealants. This is especially true of packaging applications, for which we are able to provide our customers with complete solutions. Our position in the coatings market is particularly strong in Europe. In the area of closure compounds and can sealants, we consider ourselves to be among the leading providers worldwide. Our declared goal is to be the best in class with respect to every type of product that we offer and every market that we are active in.

Electrical Insulation

In our Electrical Insulation business, we offer a comprehensive range of wire enamels, impregnating resins, coatings and other compounds used for electrical insulation in a variety of applications. All of the products in our Electrical Insulation portfolio are formulated to fulfill various performance requirements in addition to electrical insulation, such as mechanical and chemical resistance and thermal endurance even under severe operating conditions. Our Electrical Insulation portfolio comprises:

Enamels for the electrical insulation of copper and aluminum wires used in a variety of electrical applications, including electrical motors, transformers, household appliances and consumer electronics;

Resins for the impregnation of electrical windings in motors, generators and other coils;

Compounds for the potting, encapsulation and embedding of electrical and electronic components such as transformers, printed circuit boards and capacitors; and

Coatings and compounds for specialized applications, including tooling, rapid prototyping and magnetic materials.

In 2003, our Electrical Insulation business generated net sales of € 225 million.

As with Coatings & Sealants, part of our growth strategy in our Electrical Insulation business area is to expand our market position by making selective acquisitions of innovative companies with

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strong positions in the markets in which they operate. In August 2003, we completed the acquisition of the global electrical insulation business of Schenectady International, Inc. As part of the transaction, we acquired 100% of the shares of Schenectady Europe GmbH (now Beck Electrical Insulation GmbH), Hamburg, Germany, and 83% of the shares of Schenectady Beck India Ltd. (now Beck India Limited), Pune, India, a company listed on the Indian stock exchange. In addition, we acquired Schenectady's electrical insulation business operations in the United States, the United Kingdom, South Africa, Brazil, Mexico, Canada and Australia, and integrated them in our existing subsidiaries. In 2002, Schenectady's electrical insulation business had revenues of \$ 91 million. In January 2004, we acquired the electrical insulation business of Ranbar Electrical Materials Inc., comprising impregnating resins, varnishes and potting compounds for the secondary insulation of electrical equipment. In 2002, this business had revenues of approximately \$ 11 million.

Research and Development

We consider the development of innovative specialty chemicals that are capable of satisfying our customers' needs a key prerequisite for the success of our business. The overarching goal of our R&D efforts is to create customized solutions that add value to our customers' manufacturing processes and the products that they market. In doing so, we seek to distinguish ourselves from our competitors in terms of quality and innovation. In order to be in a position to employ state-of-the-art technology in all aspects of our dealings with customers, we supplement our development processes with basic research in selected areas.

In our Additives & Instruments business, we manage most aspects of our R&D efforts on a centralized basis. Virtually all research related to additives is carried out at the headquarters of our chemicals division, which are located in Wesel, Germany. While we also maintain laboratories for these products in close proximity to our customers in all major markets, none of them is engaged in research activities. Instead, the function of these laboratories is to provide our customers with technical assistance and to solve their problems on-site. In our Electrical Insulation business, we carry out basic research projects at our facilities in Wesel, particularly in the area of wire enamels. In addition, we maintain R&D laboratories at selected local manufacturing sites. These laboratories develop and produce region-specific formulations in close contact with our customers and provide them with technical service and support. In our Coatings & Sealants business, we manage our entire R&D process on a decentralized basis, with our R&D laboratories being located at our local plants. To avoid overlaps and redundancies, our management promotes close collaboration and the mutual exchange of information between R&D facilities within each of our business areas.

As far as new technologies are concerned, such as UV-curing and nano technologies, which we expect to play an increasingly important role in the specialty chemicals industry, each of our business areas conducts its own R&D efforts. In addition, we recently acquired a 7% stake in, and entered into a cooperation and development agreement with, Nanophase Technologies Corporation, a company active in nano materials, to jointly identify and develop products for use in the manufacture of paints, coatings and plastics. Because the value of new technologies to our business is highly application-specific, our management considers this approach preferable to concentrating all R&D in one location. To ensure that know-how built up in one business area becomes available to other business areas, we actively manage cooperation between our various R&D facilities involved in similar technology projects.

As of December 31, 2003, 486 people worldwide (18.5% of the workforce of our chemicals division) were employed in our laboratories. Our R&D expenditures in this division totaled € 36 million in 2003, representing 4.7% of total sales.

Supplies and Raw Materials

We purchase our supplies and raw materials from third parties and typically seek to diversify our sources so as to minimize the risk of supply chain outages. We do not believe that the loss of any one of our providers would have a material adverse effect on our business. In addition, we believe that alternative sources for all supplies and raw materials that we need in our business would be readily available to us without undue expense and delay. We have not experienced significant difficulties in obtaining supplies and raw materials of sufficient amounts and quality in recent years, and we do not expect to encounter such difficulties in the foreseeable future.

Like other companies in the chemicals industry, we are exposed to raw material price increases. While we have historically been able to pass such increases on to our customers, we have experienced difficulties in doing so in the past two business years, which has created pressure on our margins. To

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reduce this pressure, we attempt to secure important raw materials by entering into long-term contracts. In 2003, we were able to achieve savings by streamlining our procurement processes.

Production

Our production strategy is to minimize costs by streamlining our manufacturing processes and by creating facilities that specialize in discrete product groups, thereby achieving economies of scale. In implementing this strategy, we focus on capacity and process improvements with respect to our existing facilities. To the extent necessary, we also construct new facilities. As a rule, we seek to promote close collaboration between our production facilities and our sales and service organizations so as to be able to adapt our manufacturing processes according to our customers' needs. We consider this approach especially important in the areas of Coatings & Sealants and Electrical Insulation.

We own substantially all of our manufacturing facilities and substantially all of the land on which they are located. Our most important production facility in the chemical division is located in Wesel, Germany, where we manufacture the majority of the products of our additives business area. We operate our facility located in Pittsburgh, Pennsylvania, in a joint venture with the legal owner of the land and lease our facilities in Montataire, France, Collecchio, Italy, and Fort Wayne, Indiana.

The following table shows selected key information with respect to our current manufacturing facilities as well as our facilities under construction:

Production Facilities		
Location	Function	Size (m2)
Wesel, Germany	Additives	98,810
Kempen, Germany	Wire enamels, impregnating resins and compounds	36,713
Hamburg, Germany	Impregnating resins	34,711
Grevenbroich, Germany	Coatings	25,219
Bremen, Germany	Closure compounds	13,719
Lehrte, Germany	Coatings	24,719(1)
Geretsried, Germany	Measuring and testing instruments	10,323
Vienna, Austria	Coatings	28,508
Sedan, France	Coatings	20,000
Montataire, France	Coatings	4,342
Quattordio, Italy	Wire enamels, impregnating resins	40,096(2)
Ascoli Piceno, Italy	Wire enamels, impregnating resins	17,499
Burago, Italy	Coatings	12,323
Collecchio, Italy	Compounds	8,000
Deventer, Netherlands	Additives	18,850
Vigo, Spain	Can sealants	20,637
Manchester, United Kingdom	Impregnating resins	8,500
St. Louis, Missouri	Wire enamels, impregnating resins and compounds	70,000
Wallingford, Connecticut	Additives	75,366
Pittsburgh, Pennsylvania	Coatings and sealants	5,060
Fort Wayne, Indiana	Wire enamels	3,345
Pune, India	Impregnating resins	213,191
Tongling City, China	Additives and wire enamels	19,634
Shunde, China	Coatings	9,754

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- (1) 14,104 m2 owned and 10,615 m2 leased.
 - (2) 26,030 m2 owned and 14,066 m2 leased.

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Customers, Sales and Marketing

We sell our specialty chemical products in more than 100 countries worldwide. Our customer focus and our commitment to quality and service have enabled us to achieve leading market positions. We seek to maintain close links between our manufacturing facilities and our sales and marketing organization in order to be able to respond to our customers' changing needs quickly. In addition, this approach enables us to ship products directly from our manufacturing facilities to our customers, which reduces both our and their inventories.

Each of the specialty chemicals business areas has its own centralized management, which coordinates the business area's sales and marketing strategy and which is responsible for dealing with its key customers. The actual sales and marketing, however, is carried out at the local level by our operating companies. In addition, to the extent that we do not serve a particular market through our own local organization, it is carried out either by way of direct sales made by us or through external agents, whom we remunerate on a commission basis.

Our main customers in the area of Additives & Instruments are in the paint and plastics industry. We offer our Additives & Instruments portfolio worldwide under our global brands BYK-Chemie and BYK-Gardner. Our marketing efforts are coordinated by our headquarters in Wesel, Germany, and are supported by our global sales and marketing organization, which consists of marketing companies in the United States, France and Japan and sales offices in Korea, Singapore and China. In those areas of the world where it does not make sense for us to maintain sales and marketing organizations of our own, we rely on distributors with which we have long-term relationships and whom we typically remunerate on a commission basis. We do not depend on any one of our distributors, and none accounts for a material portion of our revenues. In addition, we employ technical consultants who provide technical advice and service to our customers in all major markets.

In the area of Coatings & Sealants, our customers comprise a small number of globally operating companies in the packaging and certain other industries, and we rely on our own sales and marketing organizations in Germany, most other major European markets, the United States and China.

The principal customers of our Electrical Insulation business are large manufacturers of magnet wires and various producers of electrical and electronic components. Because electrical and electronic devices are used in a wide variety of applications of everyday life, our customer base for impregnating resins and compounds is large and diverse. As far as Electrical Insulation is concerned, we use our own sales operations in all major markets worldwide.

Competition

Because specialty chemicals are frequently critical components of the manufacturing processes or end products in which they are used, they are typically offered together with support and customer service regarding their use and adaptation to the manufacturing requirements of individual customers. Therefore, the key competitive factors in all our business areas are the ability to respond to customers' needs and the commitment to constantly introducing new products and providing consistent quality and service.

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The specialty chemicals industry is a highly fragmented industry, and there is no company that competes with us across all our business areas. The following table provides an overview of our principal competitors by business area:

Competitors

Additives & Instruments	Borchers (a subsidiary of Bayer AG), Ciba Specialty Chemicals, Cognis, Degussa-Tego, Lubrizol and UCB
Electrical Insulation	
Wire enamels	Du Pont, Nexans, Fupao Chemical and Hitachi
Impregnating resins and compounds	Vantico, Du Pont, Hitachi and Von Roll Isola
Coatings & Sealants	
Can coatings	ICI, PPG and Valspar
Coil coatings	Akzo Nobel Nippon Paint, BASF, Becker Industrial Coatings, Sigma-Kalon and Tikkurila
Can sealants and closure compounds	W.R. Grace

Regulation

The development, manufacture and marketing of chemical substances is regulated by national and international laws. Almost every country has its own legal procedures for manufacturing, registration and import. Of all countries, the laws and regulations of the European Union, the United States and Japan, however, are those which are most significant to our business. These regulations include the European inventory of existing commercial chemical substances, the European list of notified chemical substances, the United States Toxic Substances Control Act and the chemicals list of the Japanese Ministry of Trade and Industry. Chemicals that are contained in one or more of these lists can usually be registered and imported without additional testing into any other country, although additional administrative requirements may exist.

Employees

See Item 6: Directors, Senior Management and Employees for information on our employees.

Environmental Matters

Our operations are subject to a number of environmental laws and regulations in each of the jurisdictions in which we operate governing, among other things, air emissions, wastewater discharges, the use, handling and disposal of hazardous substances and wastes, soil and groundwater contamination, as well as employee health and safety. Environmental compliance obligations and liability risks are inherent in many of our manufacturing activities. In the United States, certain environmental remediation laws, such as the federal Superfund law, can impose joint and several liability for site cleanup, regardless of fault, upon certain statutory categories of parties, including companies that sent waste to a site. We are subject to potential liability at a number of owned and third party sites in the United States.

We believe that our operations are currently in material compliance with all applicable environmental laws and regulations. In many jurisdictions, environmental requirements may be expected to become more stringent in the future, which could affect our ability to obtain or maintain necessary authorizations and approvals and result in increased environmental compliance costs.

While our management does not believe that environmental compliance or remedial requirements are likely to have a material effect on us, there is no assurance that future material environmental compliance or remedial obligations will not arise in connection with our operations or facilities or that such obligations will not have a material adverse effect on our business, financial condition or results of operations.

We have established and continue to establish accruals for environmental remediation liabilities where the amount of such liability can be reasonably estimated. As a rule, investigations into potential contamination and subsequent cleanup are required only when a site is closed and the existing production facilities dismantled. Accordingly, it is not possible to reasonably estimate the ultimate liability for investigation and

cleanup at sites that are still in operation. Likewise, given the

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uncertainty inherent in such estimates, any accruals that we have established may be subject to change.

Organizational Structure

We have subsidiaries that operate in a number of countries throughout the world. The following table provides information as of December 31, 2003, with respect to our current significant subsidiaries:

Significant Subsidiaries

Corporate name, location and country of incorporation	Field of activity	Equity(1)	Ownership interest(2)
		(€ in millions)	(%)
Pharmaceuticals			
ALTANA Pharma AG, Constance, Germany	Administration, R&D, Production, Distribution	59	100
ALTANA Pharma Deutschland GmbH, Constance, Germany	Distribution	2	100
ALTANA Pharma Consumer Health GmbH, Hamburg, Germany	Distribution	0	100
ALTANA Pharma B.V., Hoofddorp, The Netherlands	Distribution	28	100
ALTANA Pharma N.V. /S.A., Diegem, Belgium	Distribution	5	100
ALTANA Pharma S.A.S., Le Mée-sur-Seine, France	Distribution	20	100
ALTANA Pharma GmbH, Vienna, Austria	Distribution	20	100
ALTANA Pharma S.p.A., Milan, Italy	Distribution	28	100
ALTANA Pharma S.A., Madrid, Spain	Distribution	12	100
ALTANA Pharma Sp.z.o.o., Warsaw, Poland	Distribution	16	100
ALTANA Inc., Melville, New York	Production, Distribution	40	100
ALTANA Pharma Inc., Oakville, Canada	Distribution	31	100
ALTANA Pharma S.A. de C.V., Mexico City, Mexico	Production, Distribution	57	100
ALTANA Pharma Ltda., São Paulo, Brazil	Production, Distribution	43	100
ALTANA Pharma AG, Kreuzlingen, Switzerland	Distribution	12	100
ALTANA Madaus (Pty.), Midrand, South Africa	Distribution	7	50
ALTANA Pharma Ltd., Marlow, Great Britain	Distribution	1	100
Chemicals			
ALTANA Chemie AG, Wesel, Germany	Administration	865	100
BYK-Chemie GmbH, Wesel, Germany	Production, Distribution	106	100
Rhenania Coatings GmbH, Grevenbroich, Germany	Production, Distribution	9	100
DS-Chemie GmbH, Bremen, Germany	Production, Distribution	7	100
Terra Lacke GmbH, Lehrte, Germany	Production, Distribution	6	100
Wiedeking GmbH Elektroisoliersysteme, Kempen, Germany	Production, Distribution	5	100
BYK-Cera B.V., Deventer, The Netherlands	Production, Distribution	20	100
Rembrandtin Lack Ges. mbH, Vienna, Austria	Production, Distribution	18	100
Deatech s.r.l., Ascoli Piceno, Italy	Production, Distribution	24	100
Salchi-Rhenacoat s.r.l., Burago Molgora, Italy	Production, Distribution	7	51
The P.D. George Company Inc., St. Louis, Missouri	Production, Distribution	18	100
BYK-Chemie USA, Wallingford, Connecticut	Production, Distribution	53	100
BYK-Chemie Japan KK, Osaka, Japan	Distribution	5	100
Tongling SIVA Insulating Materials Co. Ltd., Tongling City, People's Republic of China	Production, Distribution	15	100

Other subsidiaries

ALTANA Technology Projects GmbH, Bad Homburg v.d.H., Germany	Investments in and collaborations with biotech companies	62	100
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(1) Figures calculated in accordance with International Financial Reporting Standards (IFRS).

(2) Portion of ownership interest equals portion of voting power held.

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Property, Plants and Equipment

We own approximately 2.0 million square meters of property at our production, distribution and administrative facilities around the world and nearly all of the land that they occupy. See [Pharmaceuticals Production](#) and [Chemicals Production](#) for more information on our production facilities. Virtually all of our facilities are either owned by us or available to us under long-term leases. We believe that our current facilities and those of our consolidated subsidiaries are in good condition and adequate to meet the requirements of our present and foreseeable future operations.

Legal Proceedings

As is the case with many companies in the pharmaceuticals and specialty chemicals industry, we are and may from time to time become a party to claims and lawsuits incidental to the ordinary course of our business. We are not currently involved in any legal or arbitration proceedings that we expect to have a material adverse effect on our financial position, and, to our knowledge, no such legal or arbitration proceedings are currently threatened.

In 1988, we held 91% of Deutsch-Atlantische Telegraphen AG (DAT). In connection with the execution of a profit transfer and control agreement with DAT, which