NOVARTIS AG
Form 20-F
February 24, 2003

QuickLinks -- Click here to rapidly navigate through this document

As filed with the Securities and Exchange Commission on February 24, 2003

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington D.C. 20549

FORM 20-F

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

OR

ý ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 for the fiscal year ended December 31, 2002

OR

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

Commission file number 1-15024

NOVARTIS AG

(Exact name of Registrant as specified in its charter)

NOVARTIS Inc.

(Translation of Registrant's name into English)

Switzerland

(Jurisdiction of incorporation or organization)

Lichtstrasse 35
4056 Basel, Switzerland

(Address of principal executive offices)

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

Title of class	Name of each exchange on which registered
American Depositary Shares each representing 1 ordinary share, nominal value CHF 0.50 per ordinary share, and ordinary shares	**New York Stock Exchange, Inc.**

Securities 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

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

2,474,970,619 ordinary shares

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, as amended, during the preceding 12 months (or for such shorter period that the Registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days:

Yes ý No o Not Applicable

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

Item 17 o Item 18 ý

TABLE OF CONTENTS

INTRODUCTION AND USE OF CERTAIN TERMS

Novartis AG and our consolidated subsidiaries ("Novartis" or the "Group") publish consolidated financial statements expressed in Swiss francs ("CHF"). Our consolidated financial statements found in Item 18 of this annual report on Form 20-F ("Form 20-F") are those for the year ended December 31, 2002. In this Form 20-F, references to "CHF" are to Swiss francs; references to "US dollars", "US$" or "$" are to the lawful currency of the United States of America; and references to "m" are to million. Solely for the convenience of the reader, this Form 20-F contains translations of certain Swiss franc amounts into US dollar amounts at specified rates. These translations should not be construed as

representations that the Swiss franc amounts actually represent such US dollar amounts or could be converted into US dollars at the rate indicated or at any other rate. Unless otherwise indicated, the translations from Swiss francs into US dollars have been made at the market rate as quoted by the Reuters Market System in effect on December 31, 2002, which was $1.00 = CHF 1.40.

In this Form 20-F, references to the "United States" or to "US" are to the United States of America, references to "Europe" are to all European countries (including Turkey, Russia and the Ukraine), references to the European Union ("EU") are to each of the 15 member-states of the EU and references to "Americas" are to North, Central (including the Caribbean) and South America, unless the context otherwise requires; references to "Novartis" or the "Group" are to Novartis AG and its consolidated subsidiaries; references to "associates" are to employees of our affiliates; references to the "FDA" are to the United States Food and Drug Administration. All product names appearing in italics are trademarks of Group companies. Product names identified by a "®" are registered trademarks of other companies. You will find the words "we," "our," "us" and similar words or phrases in this Form 20-F. We use those words to comply with the requirement of the United States Securities and Exchange Commission to use "plain English" in public documents like this Form 20-F. For the sake of clarification, each operating company in the Group is legally separate from all other companies in the Group and manages its business independently through its respective board of directors or other top local management body. No Group company operates the business of another Group company nor is any Group company the agent of any other Group company. Each executive identified in this Form 20-F reports directly to other executives of the company by whom the executive is employed, or to that company's board of directors.

We furnish to holders of our ordinary shares ("shares") annual reports that include a description of operations and annual audited consolidated financial statements prepared in accordance with International Accounting Standards ("IAS"). IAS differs in certain significant respects from Generally Accepted Accounting Principles in the United States ("US GAAP"). See "Item 18. Financial Statements note 31" for a description of the significant differences between IAS and US GAAP. The financial statements included in the annual reports are examined and reported upon by our independent accountants. We make available to our shareholders, on our web page, quarterly interim press releases that include unaudited interim consolidated financial information prepared in conformity with IAS with a reconciliation to US GAAP.

FORWARD-LOOKING STATEMENTS

This Form 20-F contains certain "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended, relating to our business and the industries in which we operate. Certain such forward-looking statements can be identified by the use of forward-looking terminology such as "believe," "expect," "may," "are expected to," "will," "will continue," "should," "would be," "seek" or "anticipate" or similar expressions or the negative thereof or other variations thereof or comparable terminology, or by discussions of strategy, plans or intentions. Such statements include descriptions of our investment and research and development programs and anticipated expenditures in connection therewith, descriptions of new products we expect to introduce and anticipated customer demand for such products. Such statements reflect our current views with respect to future events and are subject to certain risks, uncertainties and assumptions. Many factors could cause our actual results, performance or achievements to be materially different from any future results, performances or achievements that may be expressed or implied by such forward-looking statements. Some of these factors are discussed in more detail herein, including under "Item 3. Key Information 3.D. Risk factors," "Item 4. Information on the Company," and "Item 5. Operating and Financial Review and Prospects." Should one or more of these risks or uncertainties materialize, or should underlying assumptions prove incorrect, actual results may vary materially from those described in this Form 20-F as anticipated, believed, estimated or expected. We do not intend, and do not assume any obligation, to update any information or forward-looking statements set out in this Form 20-F.

PART I

Item 1. Identity of Directors, Senior Management and Advisers

Not applicable.

Item 2. Offer Statistics and Expected Timetable

Not applicable.

Item 3. Key Information

3.A Selected Financial Data

The financial data at December 31, 2002, 2001, 2000, 1999 and 1998 shown in the chart below are taken from audited financial statements. Our consolidated financial statements ("consolidated financial statements") for the years ended December 31, 2002, 2001 and 2000 are included elsewhere in this Form 20-F. All financial data should be read in conjunction with "Item 5. Operating and Financial Review and Prospects" and our consolidated financial statements and accompanying notes which are included elsewhere in this Form 20-F. All financial data presented in this Form 20-F are qualified in their entirety by reference to the consolidated financial statements and such notes.

The audited financial statements used to create the selected consolidated financial data set forth below were prepared in accordance with IAS. IAS differs in certain respects from US GAAP. For a discussion of the significant differences between IAS and US GAAP, see "Item 18. Financial Statements note 31."

For further information regarding continuing and discontinued activities (the Agribusiness Division), see "Item 4. Information on the Company 4.A. History and Development of Novartis" and "Item 5. Operating and Financial Review and Prospects 5.A. Operating Results."

	Year Ended December 31,							
	2002[1]	2002	2001[2]	2000[2]	2000[2][3]	1999[2]	1999[2][3]	1998
	($)	(CHF)	(CHF)	(CHF)	(CHF)	(CHF)	(CHF)	(CHF)
	(in millions except per share data)							
INCOME STATEMENT DATA								
Amounts in accordance with IAS:								
Net sales	**23,151**	**32,412**	**31,643**	**35,395**	**28,702**	**32,282**	**25,226**	**31,702**
Operating income	**5,634**	**7,887**	**7,277**	**7,883**	**6,727**	**7,343**	**6,696**	**6,920**
Income from associated companies	(7)	(10)	139	98	97	383	376	239
Net financial income	678	949	1,067	1,091	1,216	793	990	759
Income before taxes and minority interests	**6,305**	**8,826**	**8,483**	**9,072**	**8,040**	**8,519**	**8,062**	**7,918**
Taxes	(1,064)	(1,490)	(1,440)	(1,820)	(1,504)	(1,833)	(1,683)	(1,882)
Minority interests	(16)	(23)	(19)	(42)	(25)	(27)	(20)	(26)
Net income	**5,225**	**7,313**	**7,024**	**7,210**	**6,511**	**6,659**	**6,359**	**6,010**
Basic earnings per share[4]	2.08	2.91	2.73	2.75	2.50	2.50	2.40	2.28
Diluted earnings per share[4]	2.03	2.84	2.72	2.75	2.50	2.50	2.40	2.28
Cash dividends[5]	1,639	2,294	2,194	2,064		1,935		1,663
Cash dividends per share[4],[5]	0.68	0.95	0.90	0.85		0.80		0.73
Operating income from continuing operations per share:								
basic earnings per share[4]	2.24	3.14	2.83	2.58	2.58	2.53	2.53	2.20
diluted earnings per share[4]	2.19	3.07	2.82	2.58	2.58	2.53	2.53	2.20

(1) The Swiss franc amounts have been translated into US dollars at the rate of CHF 1.40 to the dollar. Such translations should not be construed as representations that the Swiss franc amounts represent, or have been or could be converted into, US dollars at that or any other rate.

(2) Restated to reflect a change in classification of certain sales incentives and discounts to retailers. Sales and marketing & distribution expenses have both been reduced by CHF 395 million for 2001, CHF 410 million for 2000 and CHF 183 million for 1999.

(3) Financial data is presented on a continuing basis, excluding the results of the Agribusiness Division, which was spun-off in 2000. See "Item 4. Information on the Group 4.A. History and Development of the Group".

(4) Basic and Diluted earnings and cash dividends per share have been adjusted to reflect a forty-for-one share split effective May 7, 2001. The years 2000, 1999 and 1998 have been adjusted to take this split into account, in order to provide per share information on a consistent basis.

(5) Cash dividends represent cash payments in the applicable year that generally relate to earnings of the previous year. Cash dividends per share represent dividends proposed that relate to earnings of the current year.

	Year Ended December 31,					
	2002[1]	2002	2001	2000	1999	1998
	($)	(CHF)	(CHF)	(CHF)	(CHF)	(CHF)
	(in millions, except per share data)					
BALANCE SHEET DATA						
Amounts in accordance with IAS:						
Cash, cash equivalents and current marketable securities	12,575	17,605	22,152[2]	20,748[2]	16,328	14,170
Inventories	2,971	4,159	4,112	4,122	6,887	6,695
Other current assets	5,324	7,454	7,912[2]	8,069[2]	11,464	9,088
Long-term assets	24,274	33,984	32,585	25,257	30,848	26,272
Total assets	**45,144**	**63,202**	**66,761**	**58,196**	**65,527**	**56,225**
Trade accounts payable	1,270	1,778	1,809	1,591	1,971	1,537
Other current liabilities	7,024	9,834	12,388[2]	10,049	15,442	13,453
Long-term liabilities and minority interests	8,506	11,908	10,319[2]	9,694	10,898	9,839
Total equity	28,344	39,682	42,245	36,862	37,216	31,396
Total liabilities and equity	**45,144**	**63,202**	**66,761**	**58,196**	**65,527**	**56,225**
Net assets	28,410	39,774	42,349	36,940	37,437	31,590
Outstanding share capital	884	1,237	1,274	1,304	1,313	1,328
Amounts in accordance with US GAAP:						
Income statement data						
Net income	4,218	5,905	4,703	6,913	5,419	4,955
Basic earnings per share[3][4]	1.74	2.44	1.90	2.74	2.10	1.92
Diluted earnings per share[3][4]	1.71	2.39	1.90	2.74	2.10	1.92
Balance sheet data						
Total equity	33,319	46,646	50,747	48,802	50,575	47,823
Total assets	50,501	70,701	75,732	72,077	79,756	73,014

(1) The Swiss franc amounts have been translated into US dollars at the rate of CHF 1.40 to the dollar. Such translations should not be construed as representations that the Swiss franc amounts represent, or have been or could be converted into, US dollars at that or any other rate.

(2) Restated due to reclassification of the fair value of derivative financial instruments from other current assets to cash, cash equivalents and current marketable securities and from other current liabilities to long term liabilities and minority interests.

(3) Earnings per share has been adjusted to reflect a forty-for-one share split effective May 7, 2001. 2000, 1999 and 1998 figures have been adjusted to take this split into account, in order to provide earnings per share information on a consistent basis.

(4) Effective January 1, 2002, goodwill and other indefinite life intangibles are no longer amortized in accordance with US GAAP. For an analysis of reported earnings per share for 2002, 2001 and 2000, see "Item 18. Financial Statements note 31(xi)".

Cash Dividends per Share

Cash dividends are translated into US dollars at the Reuters Market System Rate on the payment date. Because we pay dividends in Swiss francs, exchange rate fluctuations will affect the US dollar amounts received by holders of ADSs.

Year Earned	Month and Year Paid	Total Dividend[2] per share	Total Dividend[4] per ADS
		(CHF)	($)
1998	April 1999	0.73	0.40
1999	April 2000	0.80	0.41
2000	April 2001	0.85	0.43
2001	March 2002	0.90	0.54
2002[1][3]	March 2003	0.95	0.68

(1) If the Swiss franc amount for 2002 is translated into US dollars at the rate of CHF 1.40 to the dollar, the Total Dividend per share and Total dividend per ADS in US dollars would be $0.68. Such translation should not be construed as representations that the Swiss franc amount represent, or have been or could be converted into, US dollars at that or any other rate.
(2) 1998, 1999 and 2000 figures have been adjusted for a forty-for-one share split and share-to-ADS ratio change on May 7, 2001.
(3) Dividend to be proposed at the Annual General Meeting on March 4, 2003.
(4) 1998 and 1999 figures have been adjusted for a two-for-one split for the ADSs on May 11, 2000.

Exchange Rates

The following table shows, for the years and dates indicated, certain information concerning the rate of exchange of Swiss francs per US dollar based on exchange rate information found on Reuters Market System. The exchange rate in effect on February 18, 2003, as found on Reuters Market System, was CHF 1.37 = $1.00.

	Year ended December 31,			
	Period End	Average[1]	High	Low
1998	1.37	1.45	1.54	1.29
1999	1.59	1.51	1.60	1.36
2000	1.64	1.69	1.83	1.55
2001	1.68	1.69	1.82	1.58
2002	1.40	1.55	1.72	1.39
September 2002			1.52	1.47
October 2002			1.51	1.47

	Year ended December 31,	
November 2002	1.49	1.44
December 2002	1.49	1.39
January 2003	1.40	1.35
February 2003[2]	1.37	1.34

(1) Represents the average of the exchange rates on the last day of each full month during the year.
(2) The high and low US dollar/Swiss Franc exchange rate is current as of February 18, 2003.

3.B Capitalization and Indebtedness

Not applicable.

3.C Reasons for the offer and use of proceeds

Not applicable.

3.D Risk factors

You should carefully consider all of the information set forth in this Form 20-F and the following risk factors which we face and which are faced by our industry. The risks below are not the only ones we face. Additional risks not currently known to us or that we presently deem immaterial may also impair our business operations. Our business, financial condition or results of operations could be materially adversely affected by any of these risks. This Form 20-F also contains forward-looking statements that involve risks and uncertainties. Our results could materially differ from those anticipated in these forward-looking statements as a result of certain factors, including the risks we face as described below and elsewhere. See "Forward-Looking Statements."

We face intense competition from new products.

Our products face intense competition from competitors' products. This competition may increase as new products enter the market. In such an event, our competitors' products may be safer or more effective or more effectively marketed and sold than our products. If we fail to maintain our competitive position, this could have a material adverse effect on our business and results of operations.

Our research and development efforts may not succeed.

In order to remain competitive, we must continue to launch new and better products each year. To accomplish this, we commit substantial effort, funds and other resources to research and development, both through our own dedicated resources, and on various collaborations with third parties. Our ongoing investments in new product launches and research and development for future products could produce higher costs without a proportional increase in revenues.

In the pharmaceutical business, the research and development process can take up to 12 years, or even longer, from discovery to commercial product launch. This process is conducted in various stages. During each stage there is a substantial risk that we will not achieve our goals and accordingly we may abandon a product in which we have invested substantial amounts. If we fail to continue developing commercially successful products, this could have a material adverse effect on our business and results of operations.

Our dependence on research and development makes it highly important that we recruit and retain high quality researchers and development specialists. We commit substantial efforts and funds to this purpose. Should we fail in our efforts, this could have a material adverse effect on our business and results of operations.

We face intense competition from lower-cost generic products.

We also face increasing competition from lower-cost generic products after patents on our products expire. Loss of patent protection typically leads to a rapid loss of sales for that product and could affect future results. Patent protection is no longer available in major markets for the active ingredients used in a number of our Pharmaceuticals Division's leading products.

Neoral. Patent protection exists for the *Neoral* micro-emulsion formulation and other cyclosporin formulations through 2009 and beyond in major markets. Despite this protection, generic cyclosporin products competing with *Neoral* have entered the transplantation market segment in

the US, Germany and elsewhere. We have filed patent infringement actions against manufacturers of these generic products. However, despite a finding of infringement and an award of damages against one of these manufacturers in the US, we have so far not succeeded in obtaining an injunction, or a final judgment of damages against any of the manufacturers we have sued.

Aredia. Our patent protection for *Aredia* is limited. Generic versions of *Aredia* were launched in the United States in 2001 and 2002. Generic products in competition with *Aredia* are on sale in Canada and elsewhere. However, in 2002, we launched *Zometa,* our more potent successor product to *Aredia.*

Sandostatin. Basic patent protection for *Sandostatin* has expired in the US and Japan and will expire April 2003 in Germany and the UK, 2006 in France, and 2007 in Italy. However, protection extending to 2010 (2013 and beyond in the United States) continues in major markets for *Sandostatin LAR*, which represents a substantial and growing proportion of our octreotide sales.

Cibacen/Lotensin/Cibadrex. The basic benazepril substance patent for *Cibacen/Lotensin/Cibadrex* expired in Japan in 2002 and will expire in the US in August 2003 (or expected to expire in February 2004 with any six-month pediatric exclusivity) and in 2004-08 in major markets in the EU. However, *Lotrel,* which is a combination of benazepril with amlodipine, is patented in the US until 2017.

Lamisil. *Lamisil* is covered generically by a patent family which will expire in 2004 in the US, March 2003 in Japan and has expired in other major countries. Another patent family covers the product specifically and expires in 2006 in the US, 2004-05 in Japan and 2005-07 in major EU countries. The specific US patent is being challenged by Dr. Reddy Laboratories in the US.

Voltaren. *Voltaren* is off-patent. As a result, revenue from *Voltaren* may decline significantly over the next few years.

Government regulation may adversely affect our business.

We and our competitors are subject to strict government controls on the development, manufacture, marketing, labeling, distribution and pricing of products. We must obtain and maintain regulatory approval for our pharmaceutical and other products from regulatory agencies in order to sell our products in a particular jurisdiction.

Risks regarding the development of new products. Our research and development activities are heavily regulated. If we fail to comply fully with applicable regulations, then there could be a delay in the submission or approval of potential new products for marketing approval. In addition, the submission of an application to a regulatory authority does not guarantee that a license to market the product will be granted. Each authority may impose its own requirements and delay or refuse to grant approval, even when a product has already been approved in another country. In our principal markets, the approval process for a new product is complex, lengthy and expensive. The time taken to obtain approval varies by country but generally takes from six months to several years from the date of application. This registration process increases the cost to us of developing new products and increases the risk that we will not succeed in selling them successfully.

Risks regarding the manufacture of our products. The manufacture of our products is heavily regulated by governmental authorities around the world, including the US FDA. If we or our third party suppliers fail to comply fully with such regulations then there could be a government-enforced shutdown of production facilities, which in turn could lead to product shortages. A failure to comply fully with such regulations could also lead to a delay in the approval of new products.

Risks regarding the marketing of our products. The marketing of our products is also heavily regulated by governments throughout the world. In many countries, particularly those in Europe, we are prohibited from marketing our products directly to consumers. In the United States, some direct-to-consumer

marketing practices are permitted, but the scope of allowable marketing practices is still significantly limited. Most countries also place restrictions on the manner and scope of permissible marketing to physicians and other health professionals. The effect of such regulations may be to limit the amount of revenue which we may be able to derive from a particular product. In addition, if we fail to comply fully with such regulations then civil or criminal actions could be brought against us.

Risks regarding the pricing of our products. In addition to normal price competition in the marketplace, the prices of our pharmaceutical products are restricted by price controls imposed by governments and health care providers in most countries. Price controls operate differently in different countries and can cause wide variations in prices between markets. Currency fluctuations can aggravate these differences. The existence of price controls can limit the revenues we earn from our products and may have an adverse effect on our business and results of operations.

United States. In the United States, ongoing political debates over prescription drug pricing and Medicare reform could increase pricing pressures. In particular, if Medicare reform results in the provision of outpatient pharmaceutical coverage for beneficiaries, the United States government could use its enormous purchasing power to demand discounts from pharmaceutical companies. This could effectively create price controls on prescription drugs.

Europe. In Europe, our operations are also subject to price and market regulations. Many governments are introducing healthcare reforms in an attempt to curb increasing healthcare costs.

Japan. In Japan, where we also operate, the government generally introduces price cut rounds every other year, during which the government mandates price decreases for specific products.

Regulations favoring generics. In response to rising healthcare costs, many governments and private medical care providers, such as Health Maintenance Organizations (HMOs), have instituted reimbursement schemes that favor the substitution of generic pharmaceuticals for more expensive brand-name pharmaceuticals. In the United States, generic substitution statutes have been enacted by virtually all states and permit or require the dispensing pharmacist to substitute a less expensive generic drug instead of an original branded drug.

As a result, we expect that pressures on pricing and operating results will continue and may increase.

Risks regarding the safety and efficacy of our products. Regulatory agencies may at any time reassess the safety and efficacy of our products based on new scientific knowledge or other factors. Such reassessments could result in the amendment or withdrawal of existing approvals to market our product, which in turn would result in a loss of revenue, and could serve as an inducement to bring lawsuits against us.

Other regulatory risks. Changes in worldwide intellectual property protections and remedies, trade regulations and procedures, as well as unstable governments and legal systems, intergovernmental disputes and possible nationalization could also materially adversely affect our business or results of operations.

We operate in highly competitive and rapidly consolidating industries.

We operate in highly competitive and rapidly consolidating industries. Our principal competitors are major international corporations with substantial resources for research and development, production and marketing. Our competitors are consolidating, and the strength of combined companies could affect our competitive position in all of our business areas.

Product liability claims could adversely affect our business and results of operations.

Potentially, product liability is a significant commercial risk for us. Substantial damage awards have been made in some jurisdictions against pharmaceutical companies based upon claims for injuries allegedly caused by the use of their products. We are involved in a number of product liability cases

claiming damages as a result of the use of our products. While we hold insurance for product liability in reasonable and prudent amounts, it is possible that not all risks may be covered by such insurance. Such insurance is becoming more difficult to obtain and more expensive when it is available. We believe, but do not know with certainty, that any reasonably foreseeable unaccrued costs and liabilities associated with the risks of product liability claims will not have a material adverse effect on our consolidated financial position, results of operations or liquidity.

Patent claims could adversely affect our Generics Business Unit and results of its operations.

We take all reasonable steps to ensure that our products, including the products manufactured and sold by our Generics Business Unit, do not infringe valid third-party intellectual property rights. Nevertheless, originating companies commonly assert patent and other intellectual property rights, in order to delay or prevent generic competition. As a result, we can become involved in extensive litigation regarding our generic products. If we are unsuccessful in defending against these suits, we could be subject to injunctions preventing us from selling our generic products, or to damages, which may be substantial. Either event could have a material adverse effect on our consolidated financial position, results of operations or liquidity. See "Item 4. Information on the Company 4.B. Business Overview Generics Intellectual Property."

Our business will continue to expose us to risks of environmental liabilities.

In our product development programs and manufacturing processes, it is sometimes necessary for us to use hazardous materials, chemicals, viruses and toxic compounds. These programs and processes expose us to risks of accidental contamination, events of noncompliance with environmental laws and regulatory enforcement, personal injury, property damage and claims resulting from these events. If an accident occurred, or if we discover contamination caused by prior operations, we could be liable for cleanup obligations, damages or fines, which could have an adverse effect on our business and results of operations.

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

that we currently own or operate;

that we formerly owned or operated; or

where waste from our operations was disposed.

These environmental remediation obligations could significantly reduce our operating results. In particular, our accruals for these obligations may be insufficient if the assumptions underlying the accruals including our assumptions regarding the portion of the waste at a site for which we are responsible prove incorrect, or if we are held responsible for additional contamination.

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

The manufacture of our products is technically highly complex, and a supply interruption or delay could adversely affect our business and results of operation.

The products we market, distribute and sell are either manufactured at our own dedicated manufacturing facilities, or through toll manufacturing arrangements or supply agreements with third parties. Since many of our products are the result of technically complex manufacturing processes, and are sometimes dependent on highly specialized raw materials, we can provide no assurances that supply sources will not be interrupted from time to time. In addition, for these same reasons, the volume of

production of any product cannot be rapidly altered. As a result, if we should fail to accurately predict market demand for any of our products then we may not be able to produce enough of the product to meet that demand, or may produce too much of the product, either of which could affect our business and operating results.

Foreign exchange fluctuations may adversely affect our earnings and the value of some of our assets.

Through December 31, 2002, we prepared our consolidated financial statements in Swiss francs. Beginning on January 1, 2003, we will prepare our consolidated financial statements in US dollars. In either case, a significant portion of our earnings and expenditures are in currencies other than our reporting currency. In 2002, 43% of our sales were made in US dollars, 25% in Euro, 8% in Japanese yen, 5% in Swiss francs and 19% in other currencies. In 2002, 32% of our costs were generated in US dollars, 25% in Euro, 21% in Swiss francs, 6% in Japanese yen and 16% in other currencies. Changes in exchange rates between the Swiss franc, the US dollar and these other currencies can result in increases or decreases in our costs and earnings. Fluctuations in exchange rates between the Swiss franc, the US dollar and other currencies may also affect the book value of our assets outside Switzerland and the amount of shareholders' equity. We seek to minimize our currency exposure by engaging in hedging transactions where we deem it appropriate. To mitigate some of these risks, we have hedged certain US dollar and Japanese yen positions for 2003. We cannot predict, however, all changes in currency and interest rates, inflation or other factors, which could affect our international businesses.

Decreases in financial income could affect our earnings.

In recent years, we have earned an attractive level of financial income, net, in a difficult investment environment, due to good currency management and investment strategies. Given the volatile nature of investment markets, there can be no guarantee that such gains will be repeated in the future, or that we can avoid suffering losses from this trading activity.

Changes in accounting rules could affect our reported results.

The International Accounting Standards Board is entering a period of critically examining current International Accounting Standards with a view to increasing international harmonization of accounting rules. This process of amendment and convergence of worldwide accounting rules could result in significant amendments to the existing rules within the next two years in such areas as the timing of recognition of sales and other revenues arising from collaborative agreements with marketing and distribution partners, accounting for share-based compensation, goodwill and intangibles, employee benefit plans, marketable securities and derivative financial instruments and classification of balance sheet positions as debt or equity. It is not possible to predict the impact on our reported results of any such rule changes which may be made in the future, or whether such rule changes would be retrospective, potentially requiring us to restate past reported results.

Changes in tax laws could adversely affect our earnings.

Changes in the tax laws of Switzerland, the United States, or other countries in which we do significant business, as well as changes in our effective tax rate for the fiscal year caused by other factors, could affect our net income. During 2002, no major tax legislation was enacted that would materially impact our net income. It is not possible to predict the impact on our results of any tax legislation which may be enacted in the future.

Changes in global economic conditions could affect our business and results of operations.

Our future results could be effected by changes in the global economy, including the changes in economic conditions which have resulted, and could continue to result from recent terrorist attacks, and any additional terrorist attacks which may occur in the future, as well as from any related military activity around the world.

Item 4. Information on the Company

4.A History and Development of Novartis

Novartis AG, headquartered in Basel, Switzerland, is a public company incorporated under the laws of Switzerland with an indefinite duration. We were created as a result of the merger of Sandoz AG and CIBA-Geigy AG in December 1996. Prior to the merger, Sandoz AG and CIBA-Geigy AG were each global participants in the pharmaceutical and agrochemical industries. We are domiciled in and are governed by the laws of Switzerland.

Our Group companies employ approximately 73,000 associates worldwide and operate in over 140 countries. Our registered shares are listed in Switzerland on the SWX Swiss Exchange ("SWX") and traded on the European trading platform virt-x, and our American Depositary Shares are listed on the New York Stock Exchange ("NYSE"). Our shares are also traded on the SEAQ International exchange in London. Our registered office is located at Lichtstrasse 35, 4056 Basel and our telephone number is 011-41-61-324-1111. We maintain an Internet website at http://www.novartis.com. In the US, Corporation Service Company (2711 Centerville Road, Suite 400, Wilmington, Delaware 19808, telephone: 1-800-927-9800) acts as our agent solely for the purpose of accepting service of process in respect of registration statements on Forms F-3 under the US Securities Act of 1933, as amended.

Major transactions in 2002, 2001 and 2000

On November 29, 2002, our Generics Business Unit acquired 99% of Lek Pharmaceuticals d.d., the Slovenian generics company, for CHF 1.3 billion (approximately US$929 million) in cash. See "Item 4. Information on the Company 4.B. Business Overview Generics."

On November 29, 2002, our Consumer Health Division divested its Food & Beverage business to Associated British Foods plc, of the United Kingdom, for CHF 402 million (approximately US$287 million) in cash. See "Item 4. Information on the Company 4.B. Business Overview Medical Nutrition." After the sale of the Food & Beverages business to Associated British Foods plc., the remaining Health Food & Slimming and Sports Nutrition businesses were reorganized as a stand-alone unit, Nutrition & Santé, which for external reporting purposes will be consolidated into our Medical Nutrition Business Unit.

In January 2002, our Animal Health Business Unit acquired two US farm animal vaccine companies, Grand Laboratories Inc., of Iowa, and ImmTech Biologies Inc., of Kansas, for a combined minimum purchase price of CHF 168 million (approximately US$120 million), of which CHF 133 million (approximately US$95 million) was settled in Novartis American Depositary Shares. The final price may increase depending on whether certain future sales and other targets are met. See "Item 4. Information on the Company 4.B. Business Overview Animal Health."

On May 5, 2001 we announced the acquisition of 32 million bearer shares of Roche Holding AG, representing 20% of the voting shares of that company for approximately CHF 4.8 billion (approximately US$2.8 billion). These shares were purchased as a package from BZ Gruppe Holding AG and are intended as a financial investment of a potentially strategic nature. At December 31, 2001 we held 21.3% of the voting shares of Roche Holding AG, which represented an approximate 4% interest in the total Roche equity. During 2002, we increased our investment in Roche by CHF 2.9 billion (approximately US$2.1 billion) by acquiring a further 11.4% of the company's voting shares. At December 31, 2002, we owned 32.7% of Roche's voting shares, which represents approximately 6.2% of Roche Holding AG's total shares and equity securities.

On December 21, 2000, Novartis Pharmaceuticals completed the acquisition of the antiviral products *Famvir* (famciclovir) and *Vectavir/Denavir* (penciclovir) from SmithKline Beecham, for a total price of CHF 2.7 billion approximately (US$1.6 billion).

In November 2000, we spun-off and merged our Crop Protection and Seeds businesses with AstraZeneca's Zeneca Agrochemicals to create Syngenta AG ("Syngenta"), which is headquartered in Basel, Switzerland, and is listed on the Swiss, London, New York and Stockholm stock exchanges.

On October 2, 2000, CIBA Vision acquired the stock of Wesley Jessen VisionCare Inc., a US corporation, for CHF 1.3 billion (approximately US$800 million) in cash.

For a description of our principal capital expenditures and divestitures, see "Item 5. Operating and Financial Review and Prospects 5.B. Liquidity and Capital Resources."

General Corporate Initiatives

We have undertaken a number of initiatives designed to make our management of the Group more transparent to investors and advance our corporate citizenship ideals.

In 2002:

We became the first major pharmaceuticals company to create internal ethical guidelines regarding the use of human stem cells in research, and we established a six-member Ethics Committee, chaired by a Professor of Ethics from the Swiss Federal Institute of Technology, to monitor global compliance with these guidelines;

We introduced three changes to our Articles of Incorporation intended to enhance shareholders' rights: The deadline for submitting agenda items prior to a General Meeting of the shareholders was reduced from 60 to 45 days; shareholders were given the option of conducting electronic voting during the General Meeting; and Directors' terms of office were reduced from four to three years;

We issued Guidelines to our associates to assist them in integrating our Corporate Citizenship Policy into their daily activities.

In the US, together with other leading pharmaceutical companies, we issued the *Together Rx Card* which provides discounts on a broad range of pharmaceuticals from many manufacturers. The total volume of discounts provided by us under the *Together Rx Card* program amounted to about CHF 40 million in 2002.

In 2001:

We created a Board-level committee to develop and implement sound corporate governance principles;

We gave the Board's Audit and Compliance Committee additional responsibility to monitor our compliance with law and policy;

We instituted a new Policy of Corporate Citizenship which sets the framework for our commitment to making corporate citizenship an integral aspect of our business;

We created a patient assistance program to help persons with limited financial means to afford *Gleevec/Glivec*, our innovative oncology medication;

In collaboration with the World Health Organization ("WHO"), we announced a plan to stem the spread of malaria in Africa and other endemic regions in the developing world. As part of a world-wide initiative entitled "Roll Back Malaria," we will provide specially designed packs of *Coartem*, our novel malaria treatment, for distribution through WHO at cost;

We established the Novartis Institute for Tropical Diseases in Singapore to target tropical diseases, including Dengue fever, and infections like tuberculosis;

In the US, we instituted the Novartis *CareCard* program to assist low income elderly to obtain the Novartis medications they need at significant discounts;

We split our shares 40 for 1 so that there is now a 1:1 share-to-ADS ratio.

In 2000:

We rolled out the Novartis Code of Conduct to our employees throughout the world;

We were among the first companies to join the Global Compact, a multilateral initiative of United Nations Secretary General Kofi Annan that is consistent with our own approach to business ethics. The Global Compact formulates nine principles in the areas of environmental protection, respect for the workforce, and human rights.

As part of our commitment to focus not just on our business, but on the business of being a responsible member of the global community, we have continued initiatives like the Novartis Community Partnership Day where all our employees around the world are encouraged, for one day each year, to give time back to the communities in which we operate.

4.B Business Overview

General

We are a world leader both in sales and in innovation in our continuing core businesses: pharmaceuticals and consumer health, which includes generics, OTC self-medication, animal health, medical nutrition, infant and baby foods and products, and eyecare products. We aim to hold a leadership position in all of these businesses. We are committed to improving health and well-being through innovative products and services. The name "Novartis" is derived from the Latin *novae artes*, meaning "new skills," which reflects our focus on research and development.

Product Areas and Geographic Markets

We are organized into two Divisions: Pharmaceuticals and Consumer Health. In 2002, the Consumer Health Division was reorganized to include our Generics, OTC self-medication, Animal Health, Medical Nutrition (including our Nutrition & Santé unit), Infant & Baby and CIBA Vision Business Units. All references to Group figures, unless otherwise indicated, including associates and sales, include the Agribusiness Division up until the November 6, 2000 spin-off. The following tables set forth the Group's sales and operating income by Division or Business Unit for the financial years ended December 31, 2002, 2001 and 2000. Because the Pharmaceuticals Business Units have common long-term economic perspectives, common customers, common research, development, production and distribution practices, and a common regulatory environment, their financial data are not required to be separately disclosed.

	Year Ended December 31,		
	2002	**2001[1]**	**2000[1]**
	(in CHF millions)		
Sales to third parties			
Pharmaceuticals	**21,002**	**20,181**	**18,150**
Generics	2,809	2,433	1,973
OTC[3]	2,359	2,538	2,483
Animal Health	971	962	1,083
Medical Nutrition (including Nutrition & Santé)[3]	1,109	1,115	1,136
Infant & Baby[3]	2,075	2,227	2,108
CIBA Vision	1,762	1,787	1,392
Consumer Health ongoing	**11,085**	**11,062**	**10,175**
Divested Health & Functional Food activities	325	400	377
Consumer Health	**11,410**	**11,462**	**10,552**

	Year Ended December 31,		
Sales from continuing activities	**32,412**	**31,643**	**28,702**
Sales from discontinued Agribusiness activities[2]			6,693
Group sales	**32,412**	**31,643**	**35,395**
Operating income			
Pharmaceuticals	**6,022**	**5,677**	**5,401**
Generics	406	281	242
OTC[3]	374	452	424
Animal Health	144	138	179
Medical Nutrition (including Nutrition & Santé)[3]	6	87	66
Infant & Baby[3]	355	388	371
CIBA Vision	183	174	100
Consumer Health ongoing	**1,468**	**1,520**	**1,382**
Divested Health & Functional Food activities	216	(7)	8
Consumer Health	**1,684**	**1,513**	**1,390**
Corporate and other income/expense	181	87	(64)
Operating income from continuing activities	**7,887**	**7,277**	**6,727**
Operating income from discontinued Agribusiness activities[2]			1,156
Group operating income	**7,887**	**7,277**	**7,883**

(1) Restated to reflect a change in classification of certain sales incentives and discounts to retailers. Sales and marketing & distribution expenses have both been reduced by CHF 395 million in 2001 and CHF 410 million in 2000.

(2) Agribusiness: Crop Protection and Seeds businesses through November 6, 2000, the date of spin-off.

(3) 2001 and 2000 figures were previously reported as a single Business Unit under Consumer Health. They are now separated into OTC, Medical Nutrition (including Nutrition & Santé) and Infant & Baby Business Units.

The table below sets forth a regional breakdown of certain data for the years ended December 31, 2002, 2001 and 2000.

	Americas			Europe			Asia/Africa/Australia		
	2002	**2001**	**2000**	**2002**	**2001**	**2000**	**2002**	**2001**	**2000**
Sales (CHF m)[1]	16,407	16,303	17,400	10,602	10,107	11,686	5,403	5,233	6,309
Operating income (CHF m)	1,483	2,240	2,570	5,927	4,473	4,377	477	564	936
Number of employees (at December 31)	28,328	27,303	27,063	32,595	31,386	28,815	11,954	12,427	11,775

	Americas			Europe			Asia/Africa/Australia		
Investment in tangible fixed assets (CHF m)	836	723	475	774	560	790	51	68	88
Depreciation of tangible fixed assets (CHF m)	(308)	(311)	(388)	(553)	(561)	(715)	(60)	(67)	(86)
Net operating assets (CHF m)[2]	8,858	10,216	9,400	19,776	17,071	11,574	1,354	1,587	1,372

(1) 2001 and 2000 figures have been restated to reflect a change in classification of certain sales incentives and discounts to retailers. Sales and marketing & distribution expenses have both been reduced by CHF 395 million in 2001 and CHF 410 million in 2000.

(2) 2001 and 2000 figures have been restated due to reclassification of the fair value of derivative financial instruments from other current assets to cash, cash equivalents and current marketable securities and from other current liabilities to long term liabilities and minority interests.

PHARMACEUTICALS

The business of our Pharmaceuticals Division is conducted by a number of affiliated companies throughout the world. We are a world leader in the discovery, development, manufacture and marketing of prescription medicines. Our goal is to provide a broad portfolio of effective and safe products to patients through healthcare professionals around the world. This goal is supported by approximately 80 affiliates marketing our products in more than 140 countries. In 2002, the affiliated companies of our Pharmaceuticals Division employed 44,110 associates and had CHF 21.0 billion in sales, which represented 65% of the Group's sales.

Our product portfolio includes a wide range of products in seven major disease areas: (i) cardiovascular/metabolism/endocrinology; (ii) oncology/hematology; (iii) central nervous system; (iv) transplantation/immunology; (v) respiratory/dermatology; (vi) rheumatology/bone/hormone replacement therapy/gastrointestinal and (vii) ophthalmics. Effective January 1, 2001, Novartis Pharmaceuticals took over responsibility for operating the ophthalmic pharmaceutical business previously managed by CIBA Vision. Our Pharmaceuticals Division is organized into five Business Units: Primary Care, Oncology, Transplantation, Ophthalmics and Mature Products. The Business Units coordinate the worldwide research, distribution, marketing and sales of the products assigned to each. Because the Business Units of the Pharmaceuticals Division have common long-term economic perspectives, common customers, common research, development, production and distribution practices, and a common regulatory environment, their financial data are not required to be separately disclosed.

The current product portfolio includes more than 30 key marketed products, of which four were launched in 2002. In addition, the portfolio includes more than 60 potential products or potential additional indications for existing products in various stages of development. See " Research and Development."

Key Marketed Products

The following table describes the key marketed products of our Pharmaceuticals Division, in alphabetical order, by therapeutic area.

Therapeutic area	Project/ Compound	Generic name	Indication	Formulation
Cardiovascular, metabolism and endocrinology	*Cibacen/ Lotensin*	benazepril	Hypertension	Coated tablet
	Cibadrex/ Lotensin HCT	benazepril + HCT	Hypertension	Coated tablet
	Co-Diovan/ Diovan HCT	valsartan + HCT	Hypertension	Film-coated tablet

	Diovan	valsartan	Hypertension Congestive Heart Failure	Capsule, film-coated tablet
	Lescol/ Lescol XL	fluvastatin	Primary and mixed hypercholesterolemia Slowing the progression of artherosclerosis Increase of high-density lipoprotein cholesterol (HDL-C)	Capsule
	Lotrel	benazepril & amlodipine	Hypertension	Capsule
	Starlix	nateglinide	Type-II diabetes	Tablet
Oncology and hematology	*Aredia*	pamidronate	Hypercalcemia of malignancy Bone metastases (breast and myeloma) Paget's disease of bone	Vial
	Femara	letrozole	Advanced breast cancer	Coated tablet
	Gleevec/Glivec	imatinib mesylate/imatinib	Chronic Myeloid Leukemia Gastrointestinal Stromal Tumors	Capsule
	Sandostatin LAR/ Sandostatin SC	octreotide	Acromegaly Symptoms associated with functional gastroenteropancreatic endocrine tumors	Vial, ampoule
	Zometa	zoledronic acid	Hypercalcaemia of malignancy Bone metastases (broad range of tumors) Prevention of skeletal-related events in patients with bone malignancies	Vial

Central nervous system	*Comtan*	entacapone	Parkinson's disease	Coated tablet
	Exelon	rivastigmine	Alzheimer's disease	Capsule, oral solution
	Focalin	dexmethylphenidate	Attention-deficit hyperactivity disorder	Tablet
	Leponex/Clozaril	clozapine	Treatment-resistant schizophrenia Treatment of recurrent suicidal behavior in patients with schizophrenia and schizoaffective disorder	Tablet
	Ritalin/ Ritalin LA	methylphenidate	Attention-deficit hyperactivity disorder	Tablet, capsule
	Tegretol	carbamazepine	Epilepsy, acute and bipolar affective disorders	Tablet, chewable tablet, syrup,

				suppository
	Trileptal	oxcarbazepine	Epilepsy	Tablet, oral suspension
Transplantation	*Neoral/ Sandimmun*	cyclosporine	Prevention of graft rejection following organ and bone marrow transplantation Severe Psoriasis Rheumatoid arthritis	Capsule, oral solution, concentrate for intravenous infusion
	Simulect	basiliximab	Acute organ rejection in de novo renal transplantation	Vial
Respiratory and dermatology	*Elidel*	pimecrolimus cream	Atopic dermatitis (eczema)	Cream
	Famvir	famciclovir	Acute herpes zoster Genital herpes Herpes simplex infections in immunocompromised patients	Tablet
	Foradil[(1)]	formoterol	Asthma Chronic obstuctive pulmonary disease	Inhalation capsule (aerosol)
	Lamisil	terbinafine	Fungal infections of the skin and nails	Tablet, cream, *DermGel*, solution, spray

(1) During the fourth quarter of 2002, we licensed the exclusive US distribution and marketing rights of *Foradil* to Schering-Plough Corporation. We continue to market and distribute *Foradil* outside of the US, where the brand has achieved broad acceptance amongst specialists and general practitioners. Our commitment to developing a global respiratory business through research, development and marketing remains a strategic priority.

Therapeutic area	Project/ Compound	Generic name	Indication	Formulation
Rheumatology, bone, hormone replacement therapy and gastrointestinal	*Estalis*	estradiol norethisterone acetate	Symptoms of estrogen deficiency in post-menopausal women Post-menopausal osteoporosis	Patch
	Estraderm TTS/ Estraderm MX	estradiol	Symptoms of estrogen deficiency in post-menopausal women Post-menopausal osteoporosis	Patch
	Estradot	estradiol	Symptoms of estrogen deficiency in post-menopausal women Post-menopausal osteoporosis	Patch
	Estragest TTS	estradiol norethisterone acetate	Symptoms of estrogen deficiency in post-menopausal women Post-menopausal osteoporosis	Patch

	Miacalcic	salmon calcitonin	Osteoporosis Paget's disease Hypercalcemia	Nasal spray, ampoule, vial
	Voltaren	diclofenac	Inflammatory forms of rheumatism Pain management	Coated tablet, drop, ampoule, suppository, gel
	Zelnorm/Zelmac	tegaserod maleate/ tegaserod	Irritable Bowel Syndrome with constipation	Tablet
Ophthalmics	*Rescula*	unoprostone isopropyl 0.15%	Glaucoma	Eye drop
	Visudyne	verteporfin	Wet form of age-related macular degeneration	Vial, activated by laser light
	Zaditen/Zaditor	ketotifen	Allergic conjunctivitis	Eye drop

Not all products are registered in all markets for the treatment areas described above.

Compounds in Development

The following table describes our most important compounds presently under development. "Filed" means that product registration documents have been filed with the US Food and Drug Administration ("FDA"), with regulatory authorities in the European Union (by either the centralized or mutual recognition procedure), and/or with national health authorities in Europe, but not necessarily in all jurisdictions.

Therapeutic area	Project/ Compound	Generic name	Indication	Estimated Filing Date/Current Phase[1]
Cardiovascular, metabolism and endocrinology	*Co-Diovan* (high doses)	valsartan/ hydrochlorthiazide	Hypertension	US Approved, EU Filed
	Lescol	fluvastatin sodium	Secondary prevention of cardiovascular events	US/EU Filed
	Lotrel 5-40 and 10-40	amlodipine + benazepril	Hypertension	US Filed
	Starlix/ thiazolidinedione	nateglinide + thiazolidinedione	Type-II diabetes	US Filed
	Diovan	valsartan	Congestive heart failure Post-myocardial infarction (VALIANT) Pre-myocardial infarction (VALUE)	US Approved, EU 2003/III 2004/III 2005/III
	Sandostatin LAR	octreotide acetate	High-risk HTN Diabetic retinopathy, other indications	2004/III

Starlix/Diovan	nateglinide + valsartan	Prevention of onset of Type-II diabetes/cardiovascular morbidity & mortality	>2005/III
LAF237	To be determined ("TBD")	Type-II diabetes	2005/II
NKS104	pitavastatin	Dyslipidemia	2005/II
SPP100[2]	TBD	Hypertension	2005/II

(1) Phase I: Clinical trials in healthy volunteers to determine safety and tolerability. Phase II: Clinical trials in patients to determine dose ranging, safety and efficacy. Phase III: Large clinical trials to determine definitive safety and efficacy in patients.

(2) This compound was out-licensed to Speedel for development with a callback option, which we exercised in June 2002.

Therapeutic area	**Project/ Compound**	**Generic name**	**Indication**	**Estimated Filing Date/Current Phase[1]**
Oncology and hematology	*Gleevec/Glivec*	imatinib mesylate/ imatinib	Tablet dosage form GIST tumors Solid tumors	US/EU Filed Japan Filed Filing date TBD/II
	Zometa	zoledronate	Hypercalcemia of malignancy Bone metastases prevention	Japan Filed 2005/III
	ICL670	TBD	Chronic iron overload	2004/III
	Femara	letrozole	Breast cancer (adjuvant therapy)	2005/III
	PTK787	vatalanib	Solid tumors	2005/III
	EPO906	epothillone B	Solid tumors	2004/II
	OctreoTher	edotreotide	Somatostatin receptor positive tumors	2004/II
	PKC412	midostaurin	Acute Myeloid Leukemia	>2005/II
	RAD001	everolimus	Solid tumors	>2005/II
	SOM230	TBD	Acromegaly/GEP neuroendocrine tumors	>2005/II

	LAQ824	TBD	Solid tumors	>2005/I
	XAA296	TBD	Solid tumors	>2005/I
Central nervous system	*Clozaril*	clozapine	Prevention of suicidal behavior	US Approved, EU Filed
	Entacapone triple combination (ECL200)	levodopa/carbidopa/entacapone	Parkinson's disease	US/EU Filed
	Ritalin LA	methylphenidate	Attention deficit disorders	US Approved/ EU Filed
	Trileptal NP	oxcarbazepine	Neuropathic pain	2004/III
	Exelon	rivestigmine	Non-Alzheimer's dementia	>2005/III
	ILO522	iloperidone	Schizophrenia	TBD/III
	Exelon TDS	rivestigmine	Alzheimer's disease	>2005/II
	AMP397	TBD	Epilepsy	>2005/II
	TCH346	TBD	Parkinson's disease, amyotrophic lateral sclerosis	2005/II
	AAG561	TBD	Anxiety/depression	>2005/I

(1) Phase I: Clinical trials in healthy volunteers to determine safety and tolerability. Phase II: Clinical trials in patients to determine dose ranging, safety and efficacy. Phase III: Large clinical trials to determine definitive safety and efficacy in patients.

Therapeutic area	**Project/ Compound**	**Generic name**	**Indication**	**Estimated Filing Date/Current Phase(1)**
Transplantation, immunology	*Certican*	everolimus	Transplantation	US/EU Filed
	Myfortic	mycophenolate soldium	Transplantation	US 2003/III, EU Filed
	FTY720	TBD	Transplantation	2005/II
Respiratory and dermatology	*Foradil*	formoterol	Multi dose dry powder inhaler in asthma "On demand" use	US/EU Filed >2005/III

	Xolair	omalizumab	Asthma/prevention of seasonal allergic rhinitis	US Filed, EU 2003/III
	Lamisil	terbinafine	Tinea capitis	2004/III
	Elidel Ointment	pimecrolimus	Inflammatory skin diseases	2004/II
	Elidel oral	pimecrolimus oral	Inflammatory skin diseases	2005/II
	QAB149	TBD	Asthma, chronic obstructive pulmonary disease	>2005/II
	Elidel	pimecrolimus	Asthma	>2005/II
Rheumatology, bone, hormone replacement therapy, and gastrointestinal	*Prexige*	lumiracoxib	Osteoarthritis, pain	US/EU Filed
			New Formulations (oral suspension; parenteral)	2005/I
	Zelnorm/Zelmac	tegaserod maleate/tegaserod	Chronic constipation	2003/III
			Irritable bowel syndrome	US Approved, EU 2004/III
			Functional dyspepsia	2004/III
			Gastroesophagal reflux disease	2005/II
	Zoledronic acid (ZOL446)	zoledronate acid	Paget's disease	2005/III
			Post-menopausal osteoporosis	>2005/III
			Rheumatoid arthritis	>2005/II
	AAE581	TBD	Osteoporosis	>2005/II
	RAD001	everolimus	Rheumatoid arthritis	>2005/II
	SMC021	calcitonin	Osteoporosis	>2005/II
	SAB378	TBD	Chronic pain	>2005/I

(1) Phase I: Clinical trials in healthy volunteers to determine safety and tolerability. Phase II: Clinical trials in patients to determine dose ranging, safety and efficacy. Phase III: Large clinical trials to determine definitive safety and efficacy in patients.

Generic name	**Indication**

Therapeutic area	Project/ Compound			Estimated Filing Date/Phase[1]
Ophthalmics	*Rescula*	unoprostone isopropyl	Glaucoma	EU Filed
	Visudyne	verteporfin	Age-related macular degeneration (classic)	Japan Filed
			Age-related macular degeneration (occult)	2005/III
			Age-related macular degeneration (minimally classic)	>2005/II
	AFU057A	TBD	Glaucoma	>2005/II
	ABJ409A	TBD	Glaucoma	>2005/II
	Elidel	pimecrolimus	Dry Eye	>2005/II

(1) Phase I: Clinical trials in healthy volunteers to determine safety and tolerability. Phase II: Clinical trials in patients to determine dose ranging, safety and efficacy. Phase III: Large clinical trials to determine definitive safety and efficacy in patients.

The tables shown above and the summary that follows describe each of our Pharmaceuticals Division's seven key therapeutic areas. Unless otherwise indicated, and subject to required regulatory approvals and, in certain instances, contractual limitations, our intention is to sell the key marketed products throughout the world. These same compounds are in various stages of development throughout the world. For some compounds, the development process is ahead in the United States, for other compounds, development is behind in the United States. Due to the uncertainties associated with the development process, and due to regulatory restrictions in some countries, including the United States, it may not be possible to obtain registration of compounds in development for any or all of the indications referred to in this Form 20-F.

Cardiovascular/Metabolism/Endocrinology

Our Pharmaceuticals Division markets a wide range of products for the treatment of cardiovascular disease, including products for the treatment of hypertension, hyperlipidemia, angina pectoris and heart failure. Ongoing research is focused on the development of innovative new agents to treat metabolic disorders, such as Type-II diabetes, which are associated with serious cardiovascular events, including peripheral vascular disease, diabetic retinopathy, nephropathy, stroke and myocardial infarction.

Key Marketed Products

Cibacen/Lotensin (benazepril) and *Cibadrex/Lotensin HCT* (benazepril+HCTZ) are ACE-inhibitors indicated for the first-line treatment of hypertension and as adjunct therapy in heart failure.

Diovan (valsartan) and *Co-Diovan/Diovan HCT* (valsartan+HCTZ) are pioneering entrants in the angiotensin II receptor blockers (ARBs) class of antihypertensive agents. The ARBs have proven to be a key growth class of drugs within the antihypertensive market. The fixed combination product, *Co-Diovan*, provides additional antihypertensive efficacy for patients who require a greater reduction in blood pressure than can be achieved with monotherapy. In the US, *Diovan* is approved to treat congestive heart failure in patients who are intolerant of angiotensin-converting-enzyme (ACE) inhibitors. *Diovan* is the first ARB to obtain an indication beyond hypertension.

Lescol (fluvastatin) is a lipid-lowering agent for the treatment of primary and mixed hyperlipidemia and reduction of atherosclerosis. *Lescol XL* 80 mg is a novel extended-release line extension of the *Lescol* 20 and 40 mg immediate-release capsules. *Lescol XL* effectively treats the entire lipid profile, *i.e.,* LDL, HDL and triglycerides. *Lescol XL* has been successfully introduced in major markets during the years 2000-02.

Lotrel (benazepril-amlodipine) is a fixed combination of the ACE-inhibitor benazepril and a leading calcium antagonist (amlodipine). It is marketed only in the United States.

Starlix (nateglinide) is a pioneering member of a class of drugs for the treatment of patients with Type-II diabetes, also known as adult-onset diabetes. The drug aims to restore the early phase of insulin release which helps control blood glucose levels at mealtime. We licensed the compound from Ajinomoto Co., Ltd. and own marketing rights for the drug worldwide, except for Japan and several other Asian markets.

Compounds in Development

Co-Diovan is a combination product of valsartan and hydrochlorthiazide and is in development for hypertension. *Co-Diovan* has been approved by the FDA and a product registration file has been submitted to regulatory authorities in the EU.

Diovan (valsartan) has been approved for congestive heart failure in the US and is in Phase III development for this indication in the EU. *Diovan* is the only ARB to have demonstrated clinical benefits in heart failure in a large scale trial. The product is also in development for post and pre-myocardial infarction (Phase III), and high-risk hypertension (Phase III).

Lescol (fluvastatin sodium) is in development for the secondary prevention of cardiovascular events, based on the LIPS trial (Lescol Intervention Prevention Study). Product registration files for this additional indication have been filed in the US and the EU.

Lotrel (benazepril & amlodipine) has two new dosages under development for hypertension (*Lotrel* 5-40 and *Lotrel* 10-40). A product registration file for these additional dosages has been submitted to the FDA in the US and will be submitted to regulatory authorities in the EU in 2003.

Starlix (nateglinide) is currently under development in fixed combination with thiazolidinedione for patients with Type-II diabetes mellitus inadequately controlled with nateglinide monotherapy and diet. A product registration file for this combination has been submitted to the FDA in the US.

Sandostatin LAR (octreotide acetate) is in development for diabetic retinopathy (Phase III). This condition affects approximately 15% of patients with diabetes and is one of the leading causes of blindness in people of working age. Currently there are no effective drugs available to treat diabetic retinopathy.

Starlix (nateglinide) is currently being investigated in combination with *Diovan*. In the NAVIGATOR (Nateglinide and Valsartan in Impaired Glucose Tolerance and Outcomes Research) trial, initiated in November 2001, 9,150 patients aged 50 years or older are being treated with *Diovan* and/or *Starlix* to examine the effect on progression from Impaired Glucose Tolerance to Type-II diabetes after 3 years, as well as on cardiovascular morbidity and mortality in this high-risk patient population. Results on the cardiovascular endpoint are expected to be available in 2007.

LAF237 is a DPP-IV inhibitor in Phase II development for the treatment of Type-II diabetes. Blocking the action of the enzyme DPP-IV has been shown to improve glycemic control by increasing GLP-1 levels (a peptide that augments glucose-induced insulin secretion and also affects other aspects of glycemic control). Phase I studies have shown that once-a-day dosing maintains DPP-IV activity below the levels believed to be needed to increase GLP-1 activity sufficiently for a therapeutic effect.

NKS104 (pitavastatin) is a lipid-lowering agent, in development for the treatment of dyslipidemia. We acquired European marketing rights to pitavastatin in 2001. Clinical trials to date have shown that NKS104 lowers LDL cholesterol and triglycerides while increasing HDL cholesterol levels. The compound is in Phase II.

SPP100 is an orally effective renin inhibitor being developed for the treatment of hypertension and other cardiovascular indications. Blood pressure lowering effects have been demonstrated in Phase II trials, with no significant adverse events observed. The compound was out-licensed to Speedel, but we exercised a call-back option in June 2002. As a result, we have global rights to develop and commercialize this compound.

Starlix (nateglinide)/metformin has been terminated.

Oncology and Hematology

The Oncology and Hematology disease area is a rapidly growing and increasingly important specialty segment. We market products for the treatment of a number of different cancers and for cancer complications, including advanced malignancies involving bone. Research and development in this disease area is aimed at the discovery and development of innovative approaches to the treatment of cancer, focusing in particular on the major forms of solid tumors (breast, prostate, lung, colorectal and ovarian cancer), which account for approximately 50% of all deaths from cancer. In addition, compounds are being developed for the treatment of other forms of oncologic and hematologic conditions.

Recently Launched Products

Zometa (zoledronate) is a more potent bisphosphonate than *Aredia*, with efficacy across a broad range of tumor types. It is administered as a 4 mg infusion over 15 minutes. In 2002, *Zometa* received approval in most key markets for prevention of skeletal related events in patients with advanced malignancies involving bone. These tumor types include prostate cancer, breast cancer, lung cancer, and multiple myeloma.

Key Marketed Products

Aredia (pamidronate) is a therapy for tumor-induced hypercalcemia, osteolysis from multiple myeloma and bone metastases from breast cancer. Our patent protection for *Aredia* is limited. Generic versions of *Aredia* were launched in the United States in 2001 and 2002. Generic products in competition with *Aredia* are also on sale in Canada and elsewhere.

Femara (letrozole) is an oral aromatase inhibitor for the treatment of advanced breast cancer in women with natural or artificially induced post-menopausal status. It recently received approval for first-line therapy in major markets, based upon superior efficacy over the most widely used previous standard therapy, tamoxifen. It also is being developed for adjuvant therapy of breast cancer.

Gleevec/Glivec (imatinib mesylate/imatinib) is a signal transduction inhibitor, which in 2002 gained approval in the US and EU for the treatment of certain forms of gastrointestinal stromal tumors (GIST). This is the second form of cancer which this drug has been approved to treat. *Gleevec/Glivec* was originally approved in 2001 for the treatment of patients with chronic myeloid leukemia (CML) in the blast crisis, accelerated phase or in chronic phase after failure of interferon-alpha therapy. The CML indication was expanded by the FDA (in December 2002) and the EU (in January 2003) to permit *Gleevec/Glivec* to be used to treat newly diagnosed patients with CML. *Gleevec/Glivec* is being studied as a potential treatment of solid tumors in other forms of cancer, primarily as part of a combination therapy.

Sandostatin (octreotide) is a synthetic octapeptide derivative of the hormone somatostatin indicated for the treatment of pancreatic and gastrointestinal endocrine tumors, acromegaly, and acute variceal bleeding. Patent protection or regulatory exclusivity will expire in the next five years

in major markets for this product. The basic octreotide substance patents expired in 2002 in the United States and Japan, and will expire in April 2003 in the UK and Germany, in 2006 in France, and in 2007 in Italy. However, protection extending to 2010 (and 2013 and beyond in the United States) continues in major markets for *Sandostatin LAR*, which represents a significant and growing proportion of our octreotide sales.

Sandostatin LAR/Sandostatin SC (octreotide) is a long-acting release formulation (once every 28 days) approved for the control of symptoms such as the severe diarrhea and flushing associated with metastatic carcinoid tumors, and the severe diarrhea associated with vasoactive intestinal polypeptide secreting tumors. It also is indicated for the treatment of acromegaly.

Compounds in Development

Gleevec/Glivec (imatinib mesylate/imatinib) is being studied as part of potential combination therapies against several solid tumors as a basis for widening the range of indications to include other types of cancers. Phase II trials are in progress. In January 2003, a product registration file was submitted to regulatory authorities in Japan for the treatment of GIST tumors, an indication which was approved in the US and EU in 2002. A product registration file has been submitted to regulatory authorities in the US and EU to manufacture this product in a tablet form, rather than in its current capsule form.

Zometa (zoledronate) is in Phase II development for the prevention of bone metasteses. A product registration file has been submitted to regulatory authorities in Japan for the treatment of hypercalcemia of malignancy, an indication which was approved in the US and EU in 2001.

ICL670 is an iron chelator currently in Phase III clinical development. It was designed to enhance patient acceptance of such treatment. Iron accumulation resulting from red blood cell lysis can lead to organ damage and, ultimately, death. ICL670 has been shown preclinically to efficiently induce iron excretion. Bioavailability has been demonstrated orally. Recently published clinical data (American Society of Hematology 2001) demonstrate clinical effectiveness of ICL670 in achieving negative iron balance. The goal is to make iron chelation therapy more practical for patients with chronic iron overload.

Femara (letrozole) is in Phase III development for adjuvant therapy in the treatment of breast cancer.

PTK787 (vatalanib) is a new chemical entity with a novel mechanism of action, which inhibits tumor growth and the development of metastases through inhibition of tumor vascularization. It is expected to be biologically effective as an oral anti-angiogenic agent, in particular in combination with standard therapies against a broad range of tumor types. No significant toxicities are expected at efficacious doses that would preclude chronic administration. PTK787 is in Phase III development, and has shown no significant toxicity to date. The compound is being developed in collaboration with Schering AG of Germany.

EPO906 (epothilone B), a novel tubulin polymerizing compound, is a cytotoxic with a similar mechanism of action as Taxol® (paclitaxel). The taxane segment is the largest cytotoxic market segment in oncology. Preclinically, epothilone B has shown more potency than paclitaxel and more activity in paclitaxel resistant tumors. Responses have been observed in Phase I in several solid tumors and it is now in Phase II clinical development. Dose limiting toxicity is diarrhea. Significant myelosuppression has not been reported to date.

OctreoTher is a peptide hormone analog that carries a radioactive element specifically to somatostatin receptor positive malignant cells and is in Phase II trials for the treatment of solid tumors.

PKC412 (midostaurin) is a protein kinase inhibitor and is in development for the treatment of acute myeloid leukemia. PKC412 is currently in Phase II.

RAD001 is an mTOR pathway inhibitor and is in Phase II development for the treatment of solid tumors. RAD001 is an orally available rapamycin derivative. Experiments have shown it to possess antiproliferative properties in a wide range of tumor models through its inhibition of the mTOR protein kinase. This makes it an attractive candidate for a broad range of cancer indications both as a single agent, and as part of combination therapies.

SOM230 is a somastatin analog with a higher receptor affinity to sst 1, 2, 3 and 5 than currently marketed products. In addition, compared to currently available somastatin analogs, the SOM230 in vitro and in vivo data indicates a more effective and selective inhibition of GH secretion, and thus a unique hormone inhibitory profile. It provides longer lasting IGF-1 suppression across species and a longer half life of (t1/2) 23 hours. SOM230 Phase II trials in acromegaly and GEP tumors were initiated in 2002.

LAQ824 is a histone deacetylase inhibitor in Phase I development for the treatment of solid tumors.

XAA296 is a microtubule stabilizer in Phase I development for the treatment of solid tumors.

PKI166 was terminated.

Central Nervous System

Novartis Pharmaceuticals markets a broad range of central nervous system products, including agents to treat patients with schizophrenia, epilepsy, Parkinson's disease, Alzheimer's disease, and attention deficit hyperactivity disorder. Ongoing research to extend the current product portfolio in this disease area includes projects in psychiatric disease (psychoses, depression, and anxiety), neurological disorders (epilepsy, Parkinson's disease, and Alzheimer's disease), learning disorders and chronic pain.

Recently Launched Products

Ritalin LA (methylphenidate) has been approved in the United States for the treatment of attention-deficit hyperactivity disorder (ADHD). *Ritalin LA* is a once-daily formulation of *Ritalin* (methylphenidate HCl) which eliminates the need for a mid-day dose during school. *Ritalin LA* uses SODAS technology, a proprietary drug delivery technology of Elan Corporation, plc. We have also submitted a product registration file for this product to regulatory authorities in the EU for this condition.

Key Marketed Products

Comtan (entacapone) treats Parkinson's disease by enhancing the action of levodopa, the standard therapy for Parkinson's disease. The compound is licensed from Orion Pharma of Finland.

Exelon (rivastigmine) is a therapy for the treatment of patients with mild to moderate Alzheimer's disease. *Exelon* has been approved in all major markets, including the 15 member-states of the EU and the United States.

Focalin (dexmethylphenidate) is the single isomer version of methylphendiate and is approved in the United States for the treatment of ADHD. This compound is licensed from Celgene Corporation.

Leponex/Clozaril (clozapine) is a neuroleptic agent used in treatment-resistant schizophrenia and is experiencing competition from generic competitors in many markets, including the United States.

Tegretol (carbamazepine) was launched in 1963 for the treatment of epileptic seizures and remains a mainstay in the treatment of that disorder.

Trileptal (oxcarbazepine) is an anti-epileptic drug for the treatment of partial seizures as adjunctive or monotherapy in adults, or as adjunctive therapy in children.

Compounds in Development

Clozaril (clozapine) has been approved by the FDA for the additional indication of the prevention of suicide behavior in patients suffering from schizophrenia and schizoaffective disorder. A product registration file has also been submitted to regulatory authorities in the EU for this indication.

Entacapone Triple Combination (ECL200 Entacapone/Levodopa/Carbidopa) product registration files have been submitted to regulatory authorities in the US and EU for the treatment of Parkinson's Disease.

Trileptal NP (oxcarbazepine) is in Phase III development for the treatment of diabetic neuropathic pain.

Exelon (rivastigmine) is in development for additional indications and formulations. *Exelon* is being investigated in Phase III trials for the treatment of non-Alzheimer's dementia. A transdermal formulation, *Exelon TDS*, is in Phase II development for Alzheimer's disease.

ILO522 (iloperidone) is a mixed serotonin/dopamine antagonist for the treatment of schizophrenia and other related psychotic disorders. Iloperidone is licensed from Titan Pharmaceuticals, Inc. and is currently in Phase III clinical trials.

AMP397 is an AMPA receptor antagonist and is in Phase II development for the treatment of epilepsy.

TCH346 is in Phase II development and is targeted as first line intervention for neurodegenerative diseases such as Parkinson's disease, and amyotrophic lateral sclerosis, where it functions to provide neuroprotection and thereby delays further progression of these diseases.

AAG561 is in Phase I development, and could be the first in class among the corticotrophin-releasing factor 1 antagonists, a novel concept in the treatment of depression and anxiety which encompasses huge patient populations. Phase II trials are expected to start during 2003.

Transplantation/Immunology

We are a leader in the development of transplantation medicine, producing widely used products that help to prevent the rejection of organs following transplantation. A wide-ranging research and development program is aimed at developing new compounds and interventions in the area of chronic rejection, tolerance induction, Beta-cell inhibition, ischemia/reperfusion injury to reduce delayed graft function, inhaled therapies for lung transplantation and pancreatic islet transplantation.

Key Marketed Products

Neoral (cyclosporin) builds on the established clinical utility of *Sandimmun* to provide improved primary immunosuppression in organ transplant patients. *Neoral* is formulated as a microemulsion, thereby providing improved absorption and less variability in dosing. Despite our patent protection, generic companies have launched competing

products in the United States and will continue to compete vigorously. Marketing authorizations have also been granted for generic products in Europe and elsewhere. *Neoral* was launched in Japan in 2000, and these sales have partially offset the reduction of sales in the United States and elsewhere.

Sandimmun (cyclosporin) was introduced in 1982 for the prevention of organ rejection among patients with solid organ (kidney, heart, lung and liver) transplants and bone marrow transplantation.

Simulect (basiliximab) is a chimeric monoclonal antibody that suppresses interleukin-driven proliferation of T-cells. *Simulect* is designed to complement *Neoral* in preventing acute rejection episodes in organ transplantation.

Compounds in Development

Certican (everolimus) is a new immunosuppressant being developed for transplantation, and is intended for use in combination with *Neoral* to prevent rejection episodes in patients with kidney, lung, heart and liver transplants. Product registration files for *Certican* have been submitted to regulatory authorities in the US and EU.

Myfortic (mycophenolate sodium) is a new immunosuppressant in development for transplantation. Product registration files have been submitted to regulatory authorities in the EU regarding this compound. Switzerland has granted marketing authorization for the product. *Myfortic* is intended for use in combination with *Neoral* and corticosteroids to prevent rejection episodes in patients with kidney transplants. *Myfortic* is being developed as an advanced enteric coated tablet formulation of mycophenolate.

FTY720 is a novel immunosuppressant being developed for transplantation. The compound currently is at the end of Phase II clinical trials and is planned to be used in combination with *Neoral* or *Certican* to prevent rejection episodes or to enhance graft survival in patients with kidney transplants. FTY720 has a new mechanism of action altering lymphocyte homing. FTY720 is being developed in capsule, oral liquid and injectable formulations. This product has been licensed from Yoshitomi Co., Ltd. of Japan.

Respiratory/Dermatology

Our Dermatology portfolio covers a broad range of indications, with marketed products for the treatment of atopic dermatitis (eczema), fungal infections, psoriasis and wound healing. In addition, ongoing research and development is aimed at developing new compounds and extending the clinical utility of existing compounds in the areas of allergic and inflammatory skin disease, such as contact eczema and psoriasis. There is considerable demand for new dermatology treatments in these areas where current therapies are handicapped by limited efficacy or unacceptable side effects. We are committed to expanding our product range in the important Respiratory disease area. A discovery and development program is aimed at providing improved therapeutic options in the treatment of asthma and chronic obstructive pulmonary disease ("COPD"), which includes chronic bronchitis and emphysema. In addition, we market an oral antiviral agent for the treatment of herpes infections.

Recently Launched Products

Elidel (pimecrolimus cream) is a selective inflammatory cytokine inhibitor used in the treatment of atopic dermatitis (eczema). The compound is a member of a new class of agents the ascomycin macrolactams*Elidel* is the only non-steroid treatment for atopic dermatitis clinically proven to prevent flare progression and improve disease control versus conventional practice with topical steroids. The non-steroid safety profile makes *Elidel* suitable for all body areas for both children and adults. *Elidel* is now approved in 43 countries globally including the US and 12 EU countries. It has so far been launched in 19 countries, including the US and 8 EU countries.

Key Marketed Products

Lamisil (terbinafine) is used in the treatment of fungal infections of the skin, nails and scalp. *Lamisil* kills the fungus (fungicidal in vitro), rather than simply preventing further fungal growth. An "over-the-counter" formulation is marketed by Novartis Consumer Health in many markets, including the United States.

Foradil (formoterol) is a long-acting bronchodialator indicated for the treatment of asthma and COPD, approved and launched in the United States in 2001. During the fourth quarter of 2002, we licensed the exclusive US distribution and marketing rights of *Foradil* to Schering-Plough Corporation. We continue to market and distribute *Foradil* outside the US, where the brand has achieved broad acceptance amongst specialists and general practitioners. The long-acting bronchodilator is a relatively new addition to the range of treatments for asthma, and is

distinguished by its rapid onset of action (one to three minutes) and long-lasting effect from a single dose (12 hours). *Foradil* is currently marketed principally in Europe in a single-dose dry powder inhaler (the *Aerolizer*), and in certain markets as a pressurized metered dose inhaler. Our commitment to developing a global respiratory business through research, development and marketing, remains a strategic priority.

Compounds in Development

Foradil (formoterol) product registration files have been submitted to the FDA seeking marketing authorization for the *Foradil Certihaler,* a novel, breath-activated multi-dose dry powder inhaler technology which was developed by, and will be manufactured by affiliates of SkyePharma Plc, and which will give patients confirmation that the full dose of *Foradil* medication has been taken. Product registration files for the *Foradil Certihaler* are also in the process of being filed with regulatory authorities in Europe. We have also signed an agreement with Ivax Corporation for the EU and certain other countries (excluding the US and Japan) to market *Foradil* in the *Airmax* device, a new multi-dose dry powder inhaler developed by Ivax. This device containing *Foradil* is approved in Denmark and we intend to register it through the Mutual Recognition Procedure in other EU countries. (See " Regulation European Union.") In addition, *Foradil* is in Phase III development aimed at extending the clinical utility of *Foradil* by registering the product for use as asthma rescue medication on an as-needed ("prn") basis.

Xolair (omalizumab) is an anti-IgE monoclonal antibody developed to treat allergic disease, irrespective of allergen, by normalizing serum IgE. The drug is being developed in collaboration with Genentech and Tanox for the treatment of allergic asthma and seasonal allergic rhinitis. We have filed product registration files for *Xolair* with the FDA and EMEA. Both have requested that we submit additional information regarding the drug. In response, in December 2002, we made a complete resubmission of our product registration files to FDA, including the additional pre-clinical and clinical data analyses which FDA had requested. In response to the EMEA's request, we are conducting an additional study in patients with severe asthma, and plan to submit the results of that study to EMEA by the end of 2003.

Lamisil (terbinafine) is in Phase III development for tinea capitis.

Elidel (pimecrolimus cream) oral and ointment formulations are also in Phase II development for inflammatory skin diseases. In addition, *Elidel* is in Phase II development for the treatment of asthma.

QAB149 is in Phase II development for the treatment of asthma and COPD. QAB149 is a selective agonist of B2 adreno-receptors. QAB149 is an inhaled long-acting b2-adrenoceptor agonist, with the potential to be the first truly once-daily administered compound from this class. The molecule is a single enantiomer, and is anticipated to have an improved side-effect profile compared to currently prescribed b2-adrenoceptor agonists. Phase II clinical trial results are expected in the second half of 2003.

DNK333 was terminated.

Rheumatology/Bone/Hormone Replacement Therapy/Gastrointestinal

We are a leader in the rheumatology/bone/hormone replacement therapy/gastrointestinal therapeutic area with products intended to treat arthritis, osteoporosis and early menopausal symptoms, such as hot flashes, and prevent the long-term complications of these conditions, which

include cardiovascular disease and osteoporosis resulting from menopausal change. The bone and rheumatology research and development pipeline includes new compounds for the treatment of rheumatoid arthritis, osteoarthritis and bone metabolism disorders, such as osteoporosis. Research and development in hormone replacement therapy is primarily focused on improving the delivery of therapy via transdermal patch technology.

Novartis Pharmaceuticals has recently entered the gastroenterology market with the launch of *Zelnorm/Zelmac* for irritable bowel syndrome with constipation, and with further development efforts regarding the use of *Zelnorm/Zelmac* to treat chronic constipation, functional dyspepsia, gastroesophagal reflux disease (GERD) and other conditions. The gastrointestinal disease area is an increasingly important segment due to the high level of as-yet unmet patient needs with regard to disorders with no identified cause. Research and development in this disease area is aimed at the discovery and development of innovative approaches to the treatment of upper and lower gastrointestinal disorders.

Recently Launched Products

Zelnorm/Zelmac (tegaserod maleate/tegaserod) is a 5-HT_4 partial agonist developed to address the need for a safe and effective treatment of irritable bowel syndrome with constipation, relieving such symptoms as abdominal pain, discomfort, constipation and bloating. The FDA has approved this product for sale in the US, as have the authorities in Switzerland, Mexico, Australia, Venezuela, Argentina, Colombia, the Czech Republic and approximately 35 other nations. In certain countries, including the US, *Zelnorm/Zelmac* is approved for the treatment of women only.

Key Marketed Products

Estalis (estradiol, norethisterone acetate) transdermal patch is a treatment for symptoms of estrogen deficiency in post-menopausal women, and prevention of post-menopausal osteoporosis. The product is sub-licensed from Aventis, and offers a convenient treatment in a single patch for patients with an intact uterus.

Estraderm TTS and *Estraderm MX* (estradiol) transdermal patches are treatments for symptoms of estrogen deficiency in post-menopausal women, and prevention of post-menopausal osteoporosis. These are earlier generations of transdermal patches.

Estradot (estradiol) transdermal patch, licensed from Noven Pharmaceuticals, Inc., is a treatment for symptoms of estrogen deficiency in post-menopausal women, and prevention of post-menopausal osteoporosis. *Estradot* is the smallest estrogen patch available and offers a thin, flexible and discreet hormone therapy.

Estragest TTS (estradiol, norethisterone acetate) transdermal patch is a low-dose treatment for symptoms of estrogen deficiency in post-menopausal women, and prevention of post-menopausal osteoporosis. *Estragest TTS* offers a high amenorrhea rate in a single patch which is changed twice a week.

Famvir (famciclovir) is used in the treatment of acute herpes zoster and genital herpes, and was acquired in 2000 from SmithKline Beecham. The acquisition included global marketing rights, production rights and all intellectual property rights.

Miacalcic (salmon calcitonin) is a treatment for the prevention of progressive loss of bone mass, mainly in post-menopausal women and in elderly patients, Paget's disease and hypercalcemia. *Miacalcic* is available both in an injectable form and as a nasal spray.

Voltaren (diclofenac) is a non-steroidal anti-inflammatory drug (NSAID) for the treatment of inflammatory and degenerative forms of rheumatism (articular and non-articular), post-operative and post-traumatic pain and acute attacks of gout and migraines. This product faces generic competition. An "over-the-counter" formulation of the topical form of this product is marketed by Novartis Consumer Health in several markets under the name *Voltaren Emulgel*, for the treatment of inflammation of tendons, ligaments, muscles and joints, and for localized forms of soft-tissue and degenerative rheumatism.

Compounds in Development

Prexige (lumiracoxib) is an NSAID that selectively inhibits the COX-2 enzyme. We have submitted Product Registration Files for this product to the FDA and to European regulatory authorities.

The *Prexige* Product Registration Files were accepted for review by the FDA for the indications of osteoarthritis and acute pain, including primary dysmenorrhea. For rheumatoid arthritis, an additional pivotal trial has been started. An additional study, TARGET, is ongoing to investigate long-term gastrointestinal benefits and cardiovascular safety with and without low dose aspirin. Interim study results from TARGET are expected in the second quarter of 2003. New formulations (an oral suspension and a parenteral) of *Prexige* are also in Phase I development. These additional formulations will provide dosing options for those people who can not swallow tablets.

Zelnorm/Zelmac (tegaserod maleate/tegaserod) was approved by the FDA for irritable bowel syndrome with constipation in July 2002. In Europe, the product registration file was withdrawn, and discussions are ongoing with the European Medical Evaluations Agency. During these discussions, the EMEA requested an additional Phase III trial, which is currently ongoing. *Zelnorm/Zelmac* is also in development for chronic constipation (Phase III), functional dyspepsia (Phase II) and gastroesophagal reflux disease (Phase II). A strategic alliance with Bristol-Myers Squibb Company for the co-development and co-promotion of *Zelnorm/Zelmac* was terminated during 2001.

Zoledronic acid (ZOL446 zoledronate acid) is being developed for postmenopausal osteoporosis and Paget's disease. Phase II trials in osteoporosis have shown that zoledronic acid, administered as a once per year 5 mg injection, causes significant increases in bone mineral density. Phase III trials in postmenopausal osteoporosis and Paget's disease are currently in progress.

AAE581 is being developed for the treatment of osteoporosis and is in Phase II. AAE581 is a specific inhibitor of osteoclast-derived cathepsin K, leading to reduced collagen breakdown and osteoclast-mediated bone resorption. The compound represents a novel mode of action and has been shown to effectively suppress biological markers of bone turnover up to 28 days in healthy volunteers, compared to placebo.

RAD001 is being developed for the treatment of rheumatoid arthritis and is in Phase II. RAD001 is an inhibitor of T-cell proliferation. See " Oncology and Hemotology Compounds in Development."

SMC021 is a regulator of calcium homeostasis and is in Phase II development for the treatment of osteoporosis. SMC021 is an oral formulation of salmon calcitonin. Calcitonin, a peptide, inhibits bone resorption by acting on specific receptors on osteoclasts. In addition, salmon calcitonin has been shown to have analgesic properties. Injectable and nasal spray calcitonins are currently on the market. SMC021 is a novel concept in oral peptide delivery.

SAB378 is a cannabinoid (CB1) agonist which is in Phase I development. This compound represents a novel concept in treating pain which, on the basis of preclinical results, could be more potent than major current treatments. Results of proof of efficacy studies are expected during 2003.

Ophthalmics

We develop and market products for the treatment of a number of different ophthalmic diseases. Research and development in this disease area is aimed at the discovery and development of innovative approaches to the treatment of glaucoma, age-related macular degeneration, eye inflammation, ocular allergies and other diseases and disorders of the eye.

Key Marketed Products

Visudyne (verteporfin) is a light activated drug (photosensitizer) and is used as a two-step procedure that can be performed in a doctor's office. First, the drug is injected intravenously into the patient's arm. A non-thermal laser light is then shone into the patient's eye to activate the drug. *Visudyne* is commercially available in 68 countries for the treatment of predominantly classic subfoveal choroidal neovascularization (CNV) caused by age-related macular degeneration. It is approved in 24 countries for the treatment of occult subfoveal CNV secondary to AMD (including

the EU which gained approval this year). It is also approved in over 45 countries, including the EU, US and Canada, for the treatment of subfoveal CNV due to pathologic myopia (severe near-sightedness). Further geographic expansion is planned for regions including Japan and China.

Zaditen (ketotifen) is an eye drop which provides fast relief of symptoms in patients suffering from ocular allergy. *Zaditen* works through multiple mechanisms of action to provide relief within minutes and a duration of action of up to 12 hours. *Zaditen* provides rapid relief and long lasting control of allergy symptoms with a twice daily dosing regimen. *Zaditen* is approved in more than 30 countries, including the United States (where it is marketed as *Zaditor*) and the EU.

Rescula (unoprostone isopropyl 0.15%) is an intraocular pressure lowering medication indicated for the treatment of primary open angle glaucoma and/or ocular hypertension. It acts by increasing the outflow of aqueous humor from the anterior chamber of the eye which leads to a reduction of the pressure. It is administered as eye drops twice daily. *Rescula* is approved in more than 40 countries around the world, including the US, and is currently undergoing the Mutual Recognition Procedure for approval in the EU.

Compounds in Development

Visudyne (verteporfin) is in development for additional indications. A Phase III trial is ongoing in occult AMD in the US and Phase II trials are in progress for minimally classic AMD and different regimens for optimizing treatment outcomes.

AFU057A is a 1A-adrenoreceptor antagonist, currently in development for the treatment of glaucoma (Phase II).

ABJ409A is a dopaminergic, currently in development for the treatment of glaucoma (Phase II).

Elidel (pimecrolimus), our Dermatology product, is also currently in development for the treatment of dry eye (Phase II).

PKC412 was terminated.

Principal Markets

The world market for our Pharmaceuticals Division is concentrated in the United States, Europe and Japan. The following table sets forth certain data relating to our principal markets.

Pharmaceuticals	**Sales 2002**	
	(CHF millions)	**(%)**
United States	8,914	42
Americas (except the United States)	1,543	7
Europe	6,667	32
Japan	2,259	11
Rest of the World	1,619	8
Total	**21,002**	**100**

Many of our Pharmaceuticals Division's products are used for chronic conditions that require patients to consume the product over long periods of time, from months to years. Sales of the vast majority of our products are not subject to material changes in seasonal demand.

Production

The key goal in our manufacturing and supply chain management program is to ensure the uninterrupted, timely and cost-effective supply of products that meet all product specifications. In order to achieve this objective, we manufacture our prescription medicines at 8 bulk chemical and 18 secondary production facilities. Major bulk chemical sites are located in Basel, Switzerland; Grimsby, United Kingdom; and Ringaskiddy, Ireland. Bulk chemical production involves the manufacture of therapeutically active compounds, mainly by chemical synthesis or by a biological process such as fermentation. Secondary production involves the manufacture of "galenical" forms of drug products such as tablets, capsules, liquids, ampoules, vials and creams. Significant secondary production facilities are located in Stein, Switzerland; Wehr, Germany; Torre, Italy; Barbera, Spain; Suffern, New York, United States; in Sasayama, Japan and in various locations in Europe, including Italy, Spain, Germany, France, the United Kingdom, and Turkey.

During clinical trials, which can last several years, the manufacturing process is rationalized and refined. By the time clinical trials are completed and products are launched, the manufacturing processes have been extensively tested and are considered stable. However, improvements to these manufacturing processes may continue throughout a product's life cycle.

While we have not experienced material supply interruptions in the past, there can be no assurance that supply will not be interrupted in the future as a result of unforeseen circumstances. The manufacture of our products is heavily regulated, making supply never an absolute certainty. If we or our third party suppliers fail to comply fully with such regulations then there could be a government-enforced shutdown of production facilities, which in turn could lead to product shortages.

Raw materials for the manufacturing process are purchased from a number of third party suppliers. Where possible, our policy is to maintain multiple supply sources so that the business is not dependent on a single or limited number of suppliers. However, our ability to do so may at times be limited by regulatory requirements. We monitor market developments that could have an adverse effect on the supply of essential materials. All raw materials we purchase must comply with our quality standards. Overall, prices are not volatile for materially significant raw materials.

Marketing and Distribution

We have invested significant resources in our sales and marketing organizations to achieve a competitive presence in all of the main pharmaceutical markets worldwide. In particular, Pharmaceuticals Division affiliates have a strong presence in the US and the EU.

Products are sold to wholesale and retail drug distributors, hospitals, clinics, government agencies and managed care providers. In each market, to the extent permitted by law, we deploy sales representatives to market our products and supporting medical staff to provide medical information to prescribers and healthcare purchasers. As of December 31, 2002 Pharmaceuticals Division affiliates had more than 6,000 medical representatives in the US field forces (including contract field forces), and more than 17,000 medical representatives worldwide. Our sales and marketing reach is further extended through various agreements with promotion and marketing partners, licensees, associates and distributors.

Competition

Other companies selling branded prescription pharmaceutical products include Abbott Laboratories, Alcon, Allergan, AstraZeneca, Aventis, Bausch & Lomb, Bayer, Bristol-Myers Squibb, Eli Lilly, GlaxoSmithKline, Johnson & Johnson, Merck, Pfizer, Pharmacia, Roche, Santen, Schering-Plough and Wyeth. Competition within the pharmaceutical industry is intense and extends across a wide range of commercial activities, including pricing, product characteristics, customer service, sales and marketing, and research and development.

In addition to the other pharmaceutical companies selling patented pharmaceuticals under trademarked brand names, our Pharmaceuticals Division faces an increasing challenge from companies

selling generic forms of our products following the expiry of patent protection. In response to generic challenges that infringe upon our patents and trademarks, we vigorously defend our intellectual property rights. Where we have made meaningful improvements to existing products, we seek to extend the product range with patent-protected value-added line extensions. We also seek to use marketing efforts to increase brand awareness and loyalty toward our products. Ultimately, there is no guarantee that any product, even with patent protection, will remain successful if another company develops a new product offering significant improvements over existing therapies.

Research and Development

We are among the leaders in the pharmaceuticals industry in terms of research and development investment. In 2002, we invested approximately CHF 3.6 billion in Pharmaceuticals Division research and development, which represents 17% of total pharmaceuticals sales. Our

Pharmaceuticals Division invested CHF 3.4 billion and CHF 3.3 billion on research and development in 2001 and 2000 respectively. There are currently more than 60 projects in clinical development. Products expected to be launched in 2003 from our efforts include new indications or formulations for *Gleevec/Glivec*, *Xolair*, *Clozaril*, *Comtan* (Entacapone Triple Combination), *Certican*, *Lescol*, and *Myfortic*.

Development of a new drug is a lengthy process, usually requiring 10 to 12 years from the initial research to bringing a drug to market, including six to eight years from Phase I clinical trials to market. At each of these steps, there is a substantial risk that we will not achieve our goals and accordingly we may be required to abandon a product in which we have made a substantial investment.

Research program

The discovery of new drugs is a complex and challenging process which is split into different phases. These phases provide tools that allow our Research team to manage and benchmark their activities. Milestones are established for each phase of the evaluation process. Candidates only advance to the next stage if defined sets of criteria are met. One of the most important major milestones to occur is when a compound meets our early selection criteria, at which time it is declared an Early Selection Compound (ESC). Once a compound has been declared an ESC, significant resources are spent in preclinical activities to satisfy safety requirements, including toxicology studies. Only those compounds that pass this more comprehensive series of preclinical testing (on average, about one in ten candidates) advance to the development stage of a drug's life-cycle. See " Clinical development program."

The completion of the human genome sequence and advances in technologies and computing are changing the way we are discovering new drugs. Functional genomics at Novartis aims at focusing our discovery efforts on drug targets which are disease-relevant and offer potential for new medicines which prevent or slow the progression of a disease, rather than just treat its symptoms. Genomics research groups are located in Basel, Switzerland, and New Jersey (United States) with further support from the Genomics Institute of the Novartis Research Foundation in San Diego California (United States). In total, these activities are staffed by more than 350 scientific and technical experts. This strong in-house capability is complemented by external collaborations with numerous highly regarded biotech companies and academic groups world-wide. Advances made at Novartis and in the alliances we have with other organizations in combinatorial chemistry, ultra high throughput screening technologies, miniaturization, computational approaches, and robotics and engineering are being incorporated into our new discovery processes in order to maximize their effectiveness. To further optimize research capabilities, Novartis established the Novartis Institutes for BioMedical Research, Inc. (NIBRI) in Cambridge, Massachusetts. This new research facility will initially provide lab and office space for 400 scientists and technology experts. Novartis plans to expand this site, and to create one of the most important research campuses in the world focusing on discovery of new drugs.

Clinical development program

Usually in Phase I clinical trials, a drug is tested with about 20 to 80 normal, healthy volunteers. The tests study the drug's safety profile, including the safe dosage range. The studies also determine how a drug is absorbed, distributed, metabolized and excreted, and the duration of its action. In Phase II clinical trials, the drug is tested in controlled studies of approximately 100 to 300 volunteer patients (*i.e.,* persons with the targeted disease) to assess the drug's effectiveness and safety, and to establish a proper dose. In Phase III clinical trials, the drug is further tested on larger numbers of volunteer patients (in some cases more than 15,000 patients in total) in clinics and hospitals. Physicians monitor volunteer patients closely to determine the drug's efficacy and to identify possible adverse reactions. The vast amount of data that must be collected and evaluated makes clinical testing the most time-consuming and expensive part of new drug development. The next stage in the drug development process is to seek registration for the new drug. See " Regulation."

Initiatives to optimize the discovery and development process

We are working to be more efficient in selecting candidate drugs for development. For example, we are now better able to select the best compounds for development by having senior management focus on development projects at an early stage. Under another initiative, special teams work to develop late stage products more quickly. The goal is to improve the likelihood of therapeutic and commercial success, which should reduce development costs and decrease time to market. In several other initiatives we are improving electronic management of the clinical trial processes, including data capture and transfer, reviewing site management as well as electronic storage and archiving of study data and documents. Overall, these initiatives have reduced clinical trial outsourcing, and have improved data quality and speed of clinical trial reporting, substantially reducing the time between initial research and the introduction of the drug to market.

Alliances and acquisitions

Our Pharmaceuticals Division forms strategic alliances and alliance arrangements with other industry players or academic institutions in order to develop new products, acquire platform technologies and to access new markets. We license in products which complement our current product line and that are appropriate to our business strategy. Disease area strategies have been established to focus on alliances and acquisition

activities for key disease areas/indications that are expected to be growth drivers in the future. Products and compounds we review for in-licensing are selected and evaluated using the same criteria as the ones used for our own internally discovered drugs.

We have long term research undertakings totaling CHF 893 million in the aggregate as of December 31, 2002, including CHF 330 million in milestone payments. We intend to fund these expenditures from internally generated resources.

Regulation

The international pharmaceutical industry is highly regulated. Regulatory authorities around the world administer numerous laws and regulations regarding the testing, approval, manufacturing, importing, labeling and marketing of drugs, and also review the safety and efficacy of pharmaceutical products. Further controls exist on the non-clinical and clinical development of pharmaceutical products in particular. These regulatory requirements are a major factor in determining whether a substance can be developed into a marketable product and the amount of time and expense associated with that development.

World regulatory authorities, especially those in the US, Switzerland, the EU and Japan, have high standards of technical evaluation. The introduction of new pharmaceutical products generally entails a lengthy approval process. Of particular importance is the requirement in all major countries that products be authorized or registered prior to marketing, and that such authorization or registration be subsequently

maintained. In recent years, the registration process has required increased testing and documentation for clearance of new drugs, with a corresponding increase in the expense of product introduction.

To register a pharmaceutical product, a registration dossier containing evidence establishing the quality, safety and efficacy of the product must be submitted to regulatory authorities. Generally, a therapeutic product must be registered in each country in which it will be sold. In every country, the submission of an application to a regulatory authority does not guarantee that approval to market the product will be granted. Although the criteria for the registration of therapeutic drugs are similar in most countries, the formal structure of the necessary registration documents varies significantly from country to country. It is possible that a drug can be registered and marketed in one country while the registration authority in a neighboring country may, prior to registration, request additional information from the pharmaceutical company or even reject the product. It is also possible that a drug may be approved for different indications in different countries.

The registration process generally takes between six months and several years, depending on the country, the quality of the data submitted, the efficiency of the registration authority's procedures and the nature of the product. Many countries provide for accelerated processing of registration applications for innovative products of particular therapeutic interest. In recent years, intensive efforts have been made among the United States, the EU and Japan to harmonize registration requirements in order to achieve shorter development and registration times for medical products. However, the requirement in many countries to negotiate selling prices or reimbursement levels with government regulators can substantially extend the time until final marketing approval is granted.

The following provides a summary of the regulatory process in the principal markets served by Pharmaceuticals Division affiliates:

United States

In the US, applications for drug registration are submitted to and reviewed by the FDA. The FDA regulates the testing, approval, manufacturing, importing, labeling and marketing of pharmaceutical products intended for commercialization in the US. The FDA also monitors all pharmaceutical products currently on the US market. The pharmaceutical development and registration process is typically intensive, lengthy and rigorous. When a pharmaceutical company has gathered data which it believes sufficiently demonstrates a drug's quality, safety and efficacy, then the company may file a New Drug Application ("NDA") for the drug. The NDA must contain all the scientific information that has been gathered about the drug and typically includes information regarding the clinical experiences of all patients tested in the drug's clinical trials. A supplemental new drug application ("sNDA") must be filed for a line extension of, or new indications for, a previously registered drug.

Once an NDA is submitted, the FDA assigns reviewers from the fields of biopharmaceuticals, chemistry, medicine, microbiology, pharmacology/toxicology, statistics and labeling. After a complete review, these experts then provide written evaluations of the NDA, including a recommendation. These recommendations are consolidated and are used by the FDA in its evaluation of the NDA. Based on that evaluation, FDA then provides to the NDA's sponsor an approval, or an approvable, or non-approvable letter. The approvable and non-approvable letters will state the specific deficiencies in the NDA which need to be addressed. The sponsor must then submit complete responses to the deficiencies in order to restart the review procedure.

Once the FDA has approved an NDA or sNDA, the company can make the new drug available for physicians to prescribe. The drug owner must submit periodic reports to the FDA, including any cases of adverse reactions. For some medications, the FDA requires additional post-approval studies (Phase IV) to evaluate long-term effects or to gather information on the use of the product under special conditions. The FDA also requires compliance with standards relating to good laboratory, clinical and manufacturing practices.

European Union

In the EU, there are two main procedures for application for marketing authorization, namely the Centralized Procedure and the Mutual Recognition Procedure. National authorizations are only possible for products intended for commercialization in a single EU member-state only, or for line extensions to existing national product licenses.

In the Centralized Procedure, applications are made to the European Medical Evaluations Agency ("EMEA") for an authorization which is valid across all EU member-states. The Centralized Procedure is mandatory for all biotechnology products and optional for other new chemical compounds or innovative medicinal products. When a pharmaceutical company has gathered data which it believes sufficiently demonstrates a drug's quality, safety and efficacy, then the company may submit an application to the EMEA. The EMEA then receives and validates the application, and appoints a Rapporteur and Co-Rapporteur to review it. The entire review cycle requires 210 days, although there is a "clock stop" at day 120, which allows for the company to respond to questions set forth in the Rapporteur/Co-Rapporteur's Assessment Report. When the company's complete response is received by the EMEA, the clock restarts on day 121. If there are further aspects of the dossier requiring clarification, the EMEA will then request an Oral Explanation on day 180, in which the sponsor must appear before the EMEA to provide the requested additional information. On day 210, the EMEA will then take a vote to approve or not approve the application. The final decision is an EU Community decision and applicable to all Member States.

In the Mutual Recognition Procedure, a first authorization is granted by a single EU member-state. Subsequently, mutual recognition of this first authorization is sought from the remaining EU Member-States or a subset thereof. The Mutual Recognition Procedure, commonly called MRP, requires 90 days. Within this procedure, each Member State reviews the application and can issue objections or requests for additional information. On Day 90, each Member State must be assured that the product is safe, effective and that there are no risks to the public health. Once agreement has been reached, each Member State grants separate marketing authorizations for the product.

After the Marketing Authorizations have been granted, the company must submit periodic safety reports to the EMEA (Centralized Procedure) or to the National Health Authorities (Mutual Recognition Procedure). The licenses are renewed on a 5 year basis.

Japan

In Japan, applications for new products are made through the Pharmaceutical and Medical Devices Evaluation Center ("PMDEC"). After a data reliability survey and a Good Clinical Practice inspection are carried out by the Organization for Pharmaceutical Safety and Research, a team evaluation is passed to the Central Pharmaceuticals Affairs Council ("CPAC"), whose special members, committees and executive committees provide a report back to the PMDEC. After a further team evaluation, a report is provided to the Ministry of Health, Labor and Welfare ("MHLW"), which makes a final determination for approval and refers this to the CPAC which then advises the MHLW on final approvability. Drug manufacturing or import license approval is issued by the local prefecture government. Once the MHLW has approved the application, the company can make the new drug available for physicians to prescribe. For some medications, the MHLW requires additional post-approval studies (Phase IV) to evaluate safety, effects and/or to gather information on the use of the product under special conditions. The MHLW also requires the Sponsor to submit safety reports.

Price Controls

In many of the markets where we operate, the prices of pharmaceutical products are subject to direct price controls (by law) and to drug reimbursement programs with varying price control mechanisms. Due to increasing political pressure and governmental budget constraints, we expect these mechanisms to

remain in place and to perhaps even be strengthened and to have a negative influence on the prices we are able to charge for our products.

In the United States, debate over the reform of the healthcare system has resulted in an increased focus on pricing. Although there are currently no government price controls over private sector purchases in the United States, federal legislation requires pharmaceutical manufacturers to pay prescribed rebates on certain drugs to enable them to be eligible for reimbursement under healthcare programs. In the absence of new government regulation, managed care has become a potent force in the US market place that increases downward pressure on the prices of pharmaceutical products. In addition, the current national debate over Medicare reform could influence prices. If Medicare reform results in the provision of outpatient pharmaceutical coverage for beneficiaries, the US government could use its enormous purchasing power to demand additional discounts from pharmaceutical companies thereby creating *de facto* price controls on prescription drugs. On the other hand, Medicare drug reimbursement legislation may increase the volume of pharmaceutical drug purchases and may alleviate the pressure from the uninsured, offsetting, at least in part, potential additional price discounts. With the 2002 elections now completed, it seems more likely that a Medicare Prescription Drug Benefit will be passed in 2003 or 2004.

In the EU, governments influence the price of pharmaceutical products through their control of national healthcare systems that fund a large part of the cost of such products to consumers. The downward pressure on healthcare costs in general in the EU, particularly with regard to prescription drugs, has become very intense. As a result, increasingly high barriers are being erected to the entry of new products. In addition, in some countries, cross-border imports from low-priced markets (parallel imports) exert commercial pressure on pricing within a country. The expected EU enlargement (with 10 countries expected to join the EU beginning in 2004) will probably complicate the environment and have some influence on prices in the region and parallel trade.

In Japan, the MHLW reviews the prices of individual pharmaceutical products every two years. In the past, these reviews have resulted in price reductions. The Japanese government is currently undertaking a healthcare reform initiative, and the pharmaceutical pricing system is one of the issues being reviewed. In particular, the government is reviewing the pricing of older products, including the biannual reduction of reimbursement prices adjusted for actual discounts given. The government has abandoned the previously proposed reference price system. These efforts on the part of the government may well lead to substantial reforms of the Japanese healthcare system in the near future. Such reforms likely would include additional price control mechanisms, and would place additional pressure on the prices charged for pharmaceutical products.

Intellectual Property

We attach great importance to patents, trademarks, and know-how in order to protect our investment in research and development, manufacturing and marketing. It is our policy to seek the broadest possible protection for significant product developments in all major markets. Among other things, patents may cover the products themselves, including the product's active substance and its formulation. Patents may also cover the processes for manufacturing a product, including processes for manufacturing intermediate substances used in the manufacture of the products. Patents may also cover particular uses of a product, such as its use to treat a particular disease, or its dosage regimen.

The protection offered by such patents extends for varying periods depending on the legal life of patents in the various countries. The protection afforded, which may also vary from country to country, depends upon the type of patent and its scope of coverage. We monitor our competitors and vigorously challenge infringements of our intellectual property.

Patent protection is no longer available in several major markets for the active substances used in a number of our Pharmaceuticals Division's leading products:

Neoral. Patent protection exists for the Neoral micro-emulsion formulation and other cyclosporin formulations through 2009 and beyond in major markets. Despite this protection, generic

cyclosporin products competing with Neoral have entered the transplantation market segment in the US, Germany and elsewhere. We have filed patent infringement actions against manufacturers of these generic products. However, despite a finding of infringement and an award of damages against one of these manufacturers in the US, we have so far not succeeded in obtaining an injunction, or a final judgment of damages against any of the manufacturers we have sued.

Aredia. Our patent protection for *Aredia* is limited. Generic versions of *Aredia* were launched in the US in 2001 and 2002. Generic products in competition with *Aredia* are on sale in Canada and elsewhere. However, in 2002, we launched *Zometa,* our more potent successor product to *Aredia*.

Sandostatin. Basic patent protection for *Sandostatin* has expired in the US and Japan and will expire April 2003 in Germany and the UK, 2006 in France, and 2007 in Italy. However, protection extending to 2010 (2013 and beyond in the US) continues in major markets for *Sandostatin | LAR*, which represents a substantial and growing proportion of our octreotide sales.

Cibacen/Lotensin/Cibadrex. The basic benazepril substance patent for *Cibacen/Lotensin/Cibadrex* expired in Japan in 2002 and will expire in the US in August 2003 (or expected to expire in February 2004 with any six-month pediatric exclusivity) and in 2004-08 in major markets in the EU. However, *Lotrel,* which is a combination of benazepril with amlodipine, is patented in the US until 2017.

Lamisil. *Lamisil* is covered generically by a patent family which will expire in 2004 in the US, March 2003 in Japan and has expired in other major countries. Another patent family covers the product specifically and expires in 2006 in the US, 2004-05 in Japan and 2005-07 in major EU countries. The specific US patent is being challenged by Dr. Reddy Laboratories in the US.

Voltaren. *Voltaren* is off-patent. As a result, revenue from *Voltaren* may decline significantly over the next few years.

The loss of patent protection can have a significant impact on our Pharmaceuticals Division. We work to offset these negative effects by developing and patenting inventions that result in process and product enhancements and by positioning many of our products in specific market niches. However, there can be no assurance that this strategy will be effective in the future to extend competitive advantage, or that we will be able to avoid substantial adverse effects from future patent expirations.

CONSUMER HEALTH

The business of our Consumer Health Division is conducted by a number of affiliated companies throughout the world. In 2002, the Consumer Health Division was reorganized to include our Generics, OTC self-medication, Animal Health, Medical Nutrition (including our Nutrition & Santé unit), Infant & Baby, and our CIBA Vision Business Units. Each Business Unit has a leading market position in its segment by producing and marketing high quality health-related products. In 2002, the affiliates of the Consumer Health Division employed 27,552 associates and had CHF 11.4 billion in sales, which represented 35% of the Group's sales.

In February 2002, we announced our intention to divest our Health and Functional Food business before the end of 2002. This was intended to better meet customer needs and strengthen growth initiatives, furthering our strategic focus on healthcare with pharmaceuticals at the core. In November 2002, we completed the divestment of our Food & Beverage business, including Ovaltine®/Ovomaltine®, Caotina® and Lacovo®, to Associated British Foods plc for EUR 272.5 million (approximately CHF 402 million). In November 2002, we also announced that we were delaying the divestment of the remainder of the Health and Functional Food business due to a lack of attractive offers. These remaining Health and Functional Food businesses the Health Food & Slimming and Sports Nutrition lines have been reorganized into a stand-alone unit called Nutrition & Santé. For reporting purposes, Nutrition & Santé's results will be included in the results of the Medical Nutrition Business Unit. We have announced our intention to sell Nutrition & Santé once an attractive bid is received.

GENERICS

The business of our Generics Business Unit is conducted by a number of affiliated companies throughout the world. We are a world leader in the development, manufacture and marketing of pharmaceutical products and substances which are no longer protected by patents. In January 2003, we announced plans to unite 14 of our Generics company brands under a single global umbrella name, *Sandoz*, to strengthen recognition and leverage share of voice in the highly competitive marketplace for generics products. The initiative capitalizes on the strong reputation of the *Sandoz* name, which still commands a high level of awareness and trust among physicians, pharmacists and patients.

The affiliated companies of our Generics Business Unit compete in three principal product segments: finished dosage forms (the "Generic Pharmaceuticals Business"), active pharmaceutical ingredients and their intermediates (the "Industrial Business") and biopharmaceuticals (the "Biopharmaceuticals Business"). In the Generics Pharmaceuticals Business, we develop and manufacture drugs no longer protected by patents in finished dosage forms, and sell them to pharmacies, hospitals and other healthcare outlets around the world. In the Industrial Business, we manufacture active ingredients for pharmaceutical and biotechnological substances, and their intermediates, and sell them to customers who use them to manufacture finished goods. In developing our new Biopharmaceuticals Business, we are seeking to leverage our technology and

expertise in manufacturing to develop, manufacture and market high-quality biopharmaceutical products, such as interferones, growth hormones, and insulin, both on behalf of third parties and, as originating biopharmaceutical products lose patent protection, on our own behalf.

As of December 31, 2002, the affiliates comprising our Generics Business Unit employed 7,932 associates. Our Generics products are sold in over 140 countries throughout the world. In 2002, the affiliates comprising Generics had CHF 2.8 billion in sales, which represented 9% of the Novartis Group's total sales.

In 2002, Generics sales grew by approximately 25% in local currencies. The business year was characterized by strongly developing US sales, the acquisition of Lek Pharmaceuticals d.d., the continued integration of recently acquired companies and the successful launch of some generics blockbusters, including the US launch of the generic form of the blockbuster antibiotic Augmentin®, amoxicillin/potassium clavulanate.

In the United States, our Generics sales increased by 50% mainly driven by the launch of amoxicillin/potassium clavulanate in July. This more than made up for the January 2002 expiration of our exclusivity period for the ten milligram capsule formulation of fluoxetine, the generic form of the blockbuster anti-depressant Prozac®.

In Germany, the second most important market for our Generics products, the introduction of new regulations served to limit our sales and the growth in the profitability or our Generics affiliate there. In many other key European markets we achieved excellent performance with strong double digit growth. These markets included the United Kingdom, France, Italy, the Netherlands, Belgium and Austria.

Our key Austrian affiliate, Biochemie GmbH ("Biochemie"), achieved considerable global sales growth in 2002, with good results for products in all three business segments. Biochemie's main growth drivers were amoxicillin/potassium clavulanate, and active ingredients and intermediates for penicillins and cephalosporins.

In November 2002, Novartis Generics acquired Lek Pharmaceuticals d.d., Slovenia's largest pharmaceuticals company. Except where otherwise noted, information in this section does not include information regarding Lek. Only a provisional balance sheet for Lek has been included in our 2002 consolidated financial statements. Lek sales will be consolidated with our sales as of January 1, 2003.

With the acquisition of Lek, Novartis Generics is now a major supplier of generic pharmaceutical products in Central and Eastern Europe and in the former Soviet Union. The Lek group employs approximately 3900 associates. In the first six months of 2002, the Lek group achieved sales of CHF 305 million, operating income of CHF 51 million, and net income of CHF 36 million. Lek manages a wide

ranging business portfolio, with anti-infectives, cardiovascular and gastrointestinal tract products. Lek also launched a generic version of Augmentin® in the US in 2003. For the time being, Lek products will continue to be sold under that well-regarded name, as agreed between the management of Novartis and Lek.

In 2002, our Industrial Business achieved improved performance in active ingredients (penicillins, cephalosporin and intermediates) as a result of increased penicillin productivity which led to increased sales volumes, a shift to high-value compounds for cephalosporin antibiotics and additional long-term contracts with major pharmaceutical and biotech companies.

Key Marketed Products

Approximately 71% of our Generics sales are derived from our Generic Pharmaceuticals Business, approximately 27% of sales are derived from our Industrial Business and approximately 2% are attributable to the Biopharmaceuticals Business.

Key marketed products include antibiotics (such as penicillins, cephalosporins, macrolides and medicines for the treatment of tuberculosis), central nervous system drugs, cardiovascular drugs, alimentary tract preparations and hormonal tract preparations.

Recently Launched Products

The following is a summary of the most important products launched by us in 2002.

Loratadine (a generic version of the allergy treatment Claritin®) was launched in the United Kingdom, Netherlands, Norway and Finland in December 2002. In the US, loratadine was approved in January 2003, and we launched the product immediately. For the US launch, Novartis Generics is supporting the over-the-counter launch of this product by Novartis' OTC Business Unit, through a series of supply agreements between affiliates of the two Business Units.

Amoxicillin/potassium clavulanate (a generic version of the antibiotic Augmentin®) was launched in the US by our affiliate Geneva Pharmaceuticals, Inc. in July 2002. Our affiliate Lek launched its own generic version of Augmentin® in the US in January 2003.

Lisinopril hydrochlorothiazide (a generic version of the hypertension, heart failure and acute myocardial infarction treatment Prinivil® and Prinizide®) was launched in the US in July 2002.

Mefloquine (a generic version of the malaria treatment Lariam®) was launched in the US in May 2002.

Omeprazole (a generic version of the a proton-pump inhibitor Losec®) was launched in the Netherlands in April 2002.

Citalopram (a generic version of the antidepressant Cipramil®) was launched in the Netherlands, Sweden, Finland and Germany on various dates early in 2002.

Metformin (a generic version of the diabetes, alimentary tract and metabolism treatment Glucophage®) was launched in the US in January 2002.

Nabumetone (a generic version of the anti-inflammatory/anti-rheumatic Relifex®) was launched in the US in February 2002.

Principal Markets

The principal markets of our Generics Business Unit are the two largest generics markets in the world: the United States and Europe. The following table sets forth the aggregate 2002 sales of Generics by region:

Generics	**Sales 2002**	
	(CHF millions)	**(%)**
United States	1,086	39
Americas (except the United States)	188	7
Europe	1,059	37
Rest of the World	476	17
Total	**2,809**	**100**

In 2002, our dynamic sales growth in the United States of 50% was driven by a favorably developing base business and the launch of amoxicillin/potassium clavulanate.

In Germany, new generic substitution regulations became effective on February 23, 2002 which required pharmacists to substitute a prescribed drug with a less expensive drug, if available. Where more than one generic product was available for the pharmacist to choose from, the pharmacist was required to choose one of the lowest priced options. As a result, our largest German affiliate, Azupharma, was forced to reduce the prices it charged for many of its products in order to remain competitive. We expect the German market to remain difficult in the near future as a result of these new regulations. We are taking steps to improve Azupharma's performance.

Many of our Generics Business Unit's products are used for chronic conditions that require patients to consume the product over long periods of time, from months to years. Sales of the vast majority of our products are not subject to material changes in seasonal demand.

Production

We manufacture our Generics products at more than 15 production facilities around the world. Among these, our principal production facilities are located in Kundl, Austria and Broomfield, Colorado. While we have not experienced material supply interruptions in the past, there can be no assurance that supply will not be interrupted in the future as a result of unforeseen circumstances. The manufacture of our products is heavily regulated, making supply never an absolute certainty. If we or our third party suppliers fail to comply fully with such regulations then there could be a government-enforced shutdown of production facilities, which in turn could lead to product shortages.

We obtain agricultural raw materials such as flours and sugars from multiple suppliers based in both the US and the EU. We obtain chemicals and other raw materials from suppliers around the world, though we focus on US- and EU-based suppliers. The raw materials we purchase are generally subject to market price fluctuations. We seek to avoid these fluctuations, where possible, through the use of long-term supply contracts. In addition, several of our Generics affiliates use e-procurement systems to further strengthen their purchasing productivity.

We produce biotech substances like enzymes for detergents, and many of the active pharmaceutical ingredients, like penicillins, using modern bio-technological methods. These methods include fermentation processes, chemical syntheses and physical production methods, such as sterile precipitation. We are constantly developing other new manufacturing processes.

Marketing and Distribution

In our Generics Pharmaceuticals Business, we have a broad portfolio of off-patent medicines that we sell to pharmacies, hospitals, and other healthcare outlets. Depending on the structure of the local market, customers are serviced either by the field service team of the local Generics affiliate or by well established partners or joint venture associates.

In our Industrial Business, we sell active pharmaceutical ingredients and biotech substances to manufacturers in the pharmaceutical industry.

In response to rising healthcare costs, many governments and private medical care providers, such as health maintenance organizations (HMOs), have instituted reimbursement schemes that favor the substitution of generic pharmaceuticals for more expensive brand-name pharmaceuticals. In the US, generic substitution statutes have been enacted by virtually all states and permit or require the dispensing pharmacist to substitute a less expensive generic drug for the brand-name version of the drug. In Europe, the use of generic drugs is growing. But in some EU countries, reimbursement practices do not create an efficient incentive for generic substitution. As a result, generic penetration rates in many European countries are still below those reached in the US.

Competition

Other companies selling finished dosage form generic pharmaceutical products are Mylan, Teva, Watson, and Barr in the US and Hexal, Ratiopharm, Stada, Teva, Merck Generics and Alpharma in Europe.

Other companies selling active pharmaceutical ingredients & intermediates are Antibioticos and DSM-Anti-Infectives (both headquartered in the EU) as well as certain East Asian manufacturers.

The market for generic products is characterized by increasing demand for high-quality pharmaceuticals which can be produced at lower costs due to minimized initial research and development investments. Increasing pressure on healthcare expenditures and numerous patent expirations have created a favorable market environment for the generics industry. This positive market trend, however, brings increased competition within the generics industry, leading to ongoing price pressure on generic pharmaceuticals.

Research and Development

Before a generic drug may be marketed, intensive development work must be performed in order to demonstrate the bioequivalency of the generic drug to the original branded drug. Nevertheless, research and development costs associated with generic drugs are much lower than those of their original counterparts. As a result, off-patent drugs can be offered for sale at prices much lower than those of patented drugs, which

must recoup substantial basic research and development costs through higher prices over the life of the product's patent.

Currently, the affiliates of our Generics Business Unit employ almost 750 researchers and developers who explore alternative routes for the manufacture of known compounds and who aim to develop innovative forms of generic drugs. Most of these associates are based at facilities in Kundl, Austria; Dayton, New Jersey; and near Mumbai, India. In 2002, our Generics Business Unit invested CHF 215 million in research and development, which amounted to 7.6% of sales.

We have long term research undertakings totaling CHF 26 million in the aggregate as of December 31, 2002, including CHF 9 million in milestone payments. We intend to fund these expenditures from internally generated resources.

Regulation

The Waxman-Hatch Act in the United States (and similar legislation in the EU and in other countries) eliminated the repetition of extensive clinical trials for generic drugs so long as they could be shown to be of identical quality and purity and to be biologically equivalent to the original branded drug.

In the US, the decision whether a generic drug is bioequivalent to the original branded drug is made by the FDA based on an Abbreviated New Drug Application (ANDA) filed by the generic drug's manufacturer. The process typically takes approximately eighteen months from the filing of the ANDA until FDA approval. However, delays can occur if issues arise regarding the interpretation of bioequivalence study data, labeling requirements for the generic product, or qualifying the supply of active ingredients. In addition, the Waxman-Hatch Act requires a generic manufacturer to certify in certain situations that the generic drug does not infringe any current applicable patents on the drug held by the innovator, or to certify that such patents are invalid. This certification usually results in a lawsuit brought by the innovator against the generic company. In the event of such a lawsuit, the Waxman-Hatch Act imposes an automatic 30-month delay in the approval of the generic drug in order to allow the parties to resolve the intellectual property issues.

In the EU, decisions on bioequivalence can be made by the EMEA under the Centralized Procedure, or by a single member state, after which the Mutual Recognition Procedure may be followed. See "Pharmaceuticals Regulation European Union." Companies may submit Abridged Applications for approval of a generic pharmaceutical product, based upon its "essential similarity" to a medicinal product authorized and marketed in the EU for not less than ten years.

Intellectual Property

Wherever possible our products are protected by patents. Among other things, patents may cover the products themselves, including the product's active substance and its formulation. Patents may also cover the processes for manufacturing a product, including processes for manufacturing intermediate substances used in the manufacture of the products. Patents may also cover particular uses of a product, such as its use to treat a particular disease, or its dosage regimen. It is our policy to seek the broadest possible protection for significant product developments in all major markets.

We take all reasonable steps to ensure that our generic products do not infringe valid intellectual property rights held by others. Nevertheless, originating companies commonly assert patent and other intellectual property rights in an effort to delay or prevent generic competition. As a result, we can become involved in extensive litigation regarding our generic products. If we are unsuccessful in defending these suits, we could be subject to injunctions preventing us from selling our generic products, or to damages, which may be substantial.

In one significant example, we are involved in a series of lawsuits against affiliates of GlaxoSmithKline (GSK) regarding amoxicillin/potassium clavulanate, our generic version of GSK's Augmentin®. Our US affiliate, Geneva Pharmaceuticals, Inc., launched the first generic version of this GSK product in the US in July 2002, following favorable decisions by the United States District Court for the Eastern District of Virginia invalidating seven patents alleged by GSK to cover its Augmentin® product. GSK has appealed the district court's decision invalidating its patents. Should GSK be successful in this appeal, GSK has indicated that it intends to seek to recover its lost profits for sales it would have made had Geneva's product not been on the market.

GSK has also initiated actions against Geneva and several of our other affiliates (Biochemie GmbH, Biochemie SpA, and Novartis AG) in state court in Colorado and before the United States International Trade Commission, alleging that the potassium clavulanate used in

manufacturing the Geneva product is produced using a micro-organism strain allegedly stolen from GSK, an allegation which Geneva and the other Novartis affiliates deny. GSK has also filed a separate lawsuit in state court in North Carolina against our affiliate Lek, alleging that the potassium clavulanate used in manufacturing the Augmentin® generic product sold by Lek is produced using a micro-organism strain allegedly stolen from GSK, an allegation which Lek denies. Should GSK ultimately be successful in any of these actions, we may be subject to an injunction against further sales, and to damages claims, which may be considerable.

OTC

Our Over-the-Counter (OTC) Business Unit manufactures and distributes products for the treatment and prevention of common medical conditions and ailments to enhance people's overall health and well being. In 2002, our OTC business posted CHF 2.4 billion in sales, representing 7% of group sales, and ranking it the sixth largest global self-medication company on the basis of sales, with strong positions in Europe (second largest) and North America (seventh largest), as well as a growing presence in Latin America and Asia. As of December 31, 2002, our OTC Business Unit employed 3,797 associates worldwide.

Key Marketed Products

The OTC Business Unit's main product categories are cough, cold and allergy treatments, gastrointestinal treatments, dermatological treatments, analgesics, vitamins, minerals and supplements, venous disorder treatments and smoking cessation treatment. The major OTC brands are:

Key brands	Market/segment
Nicotinell/Habitrol	Smoking cessation
Voltaren Emulgel	Topical Muscle Pain
Sandoz	Minerals
LamisilAT Cream	Athlete's foot treatment
Otrivin	Nasal decongestant
Triaminic	Pediatric cough & cold
NeoCitran/TheraFlu	Cold remedies and flu
Maalox	Antacid
Ex-Lax/Benefiber	Laxatives
Gas-X	Anti Gas
Denavir/Vectavir	Cold Sore
Fenistil	Wound healing

In 2002, the OTC Business Unit had a number of key brand achievements:

Lamisil, the one week treatment for athlete's foot, had strong sales results, led by Western Europe, where sales increased by 32%. This resulted in a global sales increase for *Lamisil* products of 10% over 2001.

Voltaren Emulgel, a topical analgesic for muscle pain and the largest OTC brand in our portfolio, achieved the number 1 global position in sales within the topical analgesics category with a 6.7% share of the category's sales.

Nicotinell/Habitrol, our smoking cessation franchise, increased sales by 31% over 2001 driven by the introduction of consumer-preferred chewing gum products and by major private label gains in North America and Asia.

We launched several innovative new products or formulations, including *Otrivin* nasal decongestant, which was developed based on insights from consumers. The introduction of new moisturizing and allergy formulations of *Otrivin* supported the brand's outstanding 11% increase in worldwide sales compared to 2001.

We acquired the *Buckley's* cough and cold remedy brand in Canada, and began selling *Buckley's* products in March 2002.

2002 was also the first full year of sales of the OTC *Benefiber* brand laxative product, with the brand quickly establishing a 7% share of its market segment in the US.

It is important to the overall success of the Novartis Group that we maximize the revenues we obtain from our products at each stage of their existence. The OTC Business Unit contributes to this life-cycle management goal with key brands such as *Voltaren Emulgel, Lamisil AT* and *Denavir/Vectavir* generating substantial sales after their transfer from the Pharmaceuticals Division.

Principal Markets

In 2002, OTC realized the majority of its sales in its two principal markets: the US and Europe, including Eastern Europe. In 2002, the OTC Business Unit and Kao Corporation agreed to end their joint venture to market OTC products in Japan. However, OTC remains committed to expanding its presence in the Japanese market. The following table sets out our 2002 sales by geographic region.

OTC	**Sales 2002**	
	(CHF millions)	**(%)**
United States	751	32
Americas (except the United States)	223	9
Europe	1,114	48
Rest of World	271	11
Total	**2,359**	**100**

The OTC business is marked by a high degree of seasonality, with our cough, cold and allergy brands including *Triaminic*, *NeoCitran/Theraflu* and *Tavist* heavily influenced by the timing and severity of the annual cold and flu season and allergy seasons.

Production

Our OTC Business Unit has a manufacturing and supply infrastructure comprised of the Business Unit's own plants, strategic third parties and other Novartis Group plants (which are predominantly owned and operated by the Pharmaceuticals Division). The primary OTC plants are located in Switzerland and in the United States.

The goal of our supply chain strategy is to produce and distribute high quality products in an efficient manner. The balance of internal, external and Group sites provides flexibility and predictable sources of supply in the event of capacity constraints or other potential disruptions to supply. The manufacture of our products is heavily regulated, making supply never an absolute certainty. If we or our third party suppliers fail to comply fully with such regulations then there could be a government-enforced shutdown of production facilities, which in turn could lead to product shortages. While we have not experienced

material supply interruptions in the past, there can be no assurance that supply will not be interrupted in the future as a result of unforeseen circumstances.

Raw materials for the manufacturing process are purchased from a number of our affiliates and third party suppliers. For the most part, the products and services we procure are not proprietary and are available from a number of suppliers. We often "single-source" supplies, but we have a policy of having at least a second approved and validated supplier registered for most key materials so that substitution is possible. Where practical and beneficial, we have long-term contracts in place on key production inputs. We also proactively monitor markets and developments that could have an adverse effect on the supply of essential materials.

Marketing and Distribution

We aim to be a leading global participant in fulfilling the needs of patients and consumers for self-medication healthcare. Strong brands, science-based products and in-house marketing and sales organizations are key strengths that allow the business to achieve this objective. We distribute our products through various channels, such as pharmacies, food, drug and mass retail outlets.

Competition

The fundamental trends driving the growth of our OTC business are increasing pressures on government health funding, changing consumer attitudes towards personal well being, the rise of a self-care mentality among consumers and successful switches of prescription products to OTC status. Other companies selling over-the-counter pharmaceutical products include major international corporations with substantial financial and other resources, such as Aventis, Bayer, GlaxoSmithKline, Johnson & Johnson, Roche, Pfizer, Procter & Gamble and Wyeth.

Research and Development

In OTC, the focus of research and development activities is primarily on dermatology, analgesics, cough, cold, allergy, gastrointestinal, minerals, and cardiovascular risk reduction (through smoking cessation programs). OTC also works closely with the Pharmaceuticals Division to evaluate appropriate products that can be switched from prescription to OTC status. The development of line extensions to leverage brand equities is also of high importance. These extensions can take many forms including new flavors, new galenical forms and more consumer-friendly packaging.

The OTC business employs over 200 associates in R&D with the primary research facility located in Switzerland. Local country R&D organizations largely manage compliance, regulatory needs and medical affairs. In 2002, the OTC Business Unit spent CHF 104 million in R&D, representing approximately 4.4% of net sales.

We have long term research undertakings totaling CHF 4 million in the aggregate as of December 31, 2002. We intend to fund these expenditures from internally generated resources.

Regulation

For OTC products, the regulatory process for bringing a product to market consists of preparing and filing a detailed dossier with the appropriate national or international registration authority and obtaining approval in the United States or registration in the EU and the rest of the world. See "Pharmaceuticals Regulation."

In the US, in addition to the NDA process which is also used to approve prescription pharmaceutical products, an OTC product may be sold if the FDA has determined that the product's active ingredient is generally recognized as safe and effective. FDA makes this determination through a regulatory process known as the OTC Review. In the OTC Review, the FDA establishes, in a series of monographs, the conditions under which particular active ingredients may be recognized as safe and effective for OTC use.

Pharmaceutical companies can market products containing these active ingredients without the necessity of filing an NDA and going through its formal approval process, so long as the company complies with the terms of the published monograph.

Most countries also have a regulatory process for switching a particular pharmaceutical product from prescription to OTC status. The process varies from country to country.

Intellectual Property

Our OTC business is brand-oriented and, therefore, we consider our trademarks to be of utmost value. Trademarks protect most of our brands in the majority of the markets where these brands are sold, and we vigorously protect these trademarks from infringement. Our most important trademarks are used in a number of countries. Local variations of these international trademarks are employed where legal or linguistic considerations require the use of an alternative.

Wherever possible our products are protected by patents. Among other things, patents may cover the products themselves, including the product's active substance and its formulation. Patents may also cover the processes for manufacturing a product, including processes for manufacturing intermediate substances used in the manufacture of the products. Patents may also cover particular uses of a product, such as its

use to treat a particular disease, or its dosage regimen. It is our policy to seek the broadest possible protection for significant product developments in all major markets.

ANIMAL HEALTH

Our Animal Health Business Unit enhances and extends the life of companion animals and improves the health and productivity of farm animals. At December 31, 2002, the affiliates of Animal Health employed 2,218 associates and achieved sales of CHF 971 million, which represents 3% of the Group's sales.

Animal Health researches, develops, manufactures and markets a wide variety of products for both companion and farm animals including farmed fish. In 2002, the companion animal segment accounted for 48% of our total Animal Health sales and the farm animal segment, including Vaccines and Aquaculture, for 52%. Products include parasiticides, antimicrobials, vaccines and veterinary pharmaceuticals. Our Animal Health business has a dedicated research and development team, which benefits from synergies with other Novartis businesses, most notably, research in the Pharmaceuticals Division.

We acquired Grand Laboratories Inc. and ImmTech Biologics Inc. in the United States in January 2002 for a combined minimum purchase price of CHF 168 million. The final price may increase depending on whether certain future sales and other targets are met. These businesses specialize in the development, manufacture and marketing of vaccine products for cattle and pigs. Through these acquisitions we increased the share of vaccines to 8% of total sales, strengthened our position in the vaccines market and established our presence in the US farm animal segment.

Recently Launched Products

Product	Description	Registration/Launch Status
Atopica	Treatment of topic dermatitis in dogs	Registered and launched 2002 in Australia/New Zealand, Switzerland and France
Agita	Farm fly control	Launched in Thailand, Philippines, Malaysia, Turkey, Slovakia, Slovenia.
Capstar	Fast-acting oral flea control for dogs and cats	Launched in the EU countries in 2002
Clik	All-season protection against blowflies on sheep	After first EU launch in the UK in 2001, it was registered and launched in France, Ireland and Netherlands
Deramaxx	First COX-2 inhibitor approved for pain control in dogs	Approval of acute pain control claim was received in the USA in September with launch in the same month
Econor	Therapeutic antimicrobial for pigs	Re-launch in EU countries following EMEA approval of additional data
Fortekor	Congestive Heart Failure in dogs, CRI in cats	Launch in South Africa
Milbemax	Intestinal worm control in dogs and cats	Product launched after first EU approval in France and in Australia
Vaccines		
Digital Dermatitis Vaccine	Vaccine for Digital Dermatitis in dairy	Launched in the US

Product	Description	Registration/Launch Status
Forte Vaccine Range	Prevention of bacterial and viral diseases in farmed salmon	Launched in Norway
Pyceze	Control of fungal infections in fish and fish eggs	*Pyceze* is the only authorized treatment to replace previously used products now banned by the UK authorities

Key Marketed Products

Main Products	Description
Pets (dogs and cats)	
Fortekor	Treatment of congestive heart failure in dogs and chronic renal insufficiency in cats
Interceptor	Prevention of heartworm and intestinal worms
Program	Control of fleas
Sentinel	Prevention of heartworm and control of fleas and intestinal worms
Farm animals	
Clik	Season-long prevention of blowfly strikes in sheep
Endex	Treatment and control of liver fluke and gastro-intestinal worms in cattle and sheep
Fasinex	Treatment and control of liver flukes in cattle and sheep
Tiamutin, Econor	Treatment of bacterial infections in pigs and poultry
Vetrazin	Treatment of blowfly in sheep
Vaccines and Aquahealth	
Betamax, Excis	Treatment and control of salmon lice
Birnagen Forte, Furogen	Prevention of infectious pancreatic necrosis in farmed salmon
Bovidec	Prevention of bovine viral diarrhea in cattle
Fusogard	Prevention of foot rot and liver abscess control in cattle
Pyceze	Treatment and control of fungal infections in fish and fish eggs
Scourboss, Somnustar	Prevention of enteric disease in cattle
Virashield	Prevention of respiratory disease in cattle

Principal Markets

Products for companion animals are sold predominantly in North America, the EU, Australia and Japan. In most other countries, sales of farm animal products dominate. The following table sets out 2002 total sales of our Animal Health products by region:

Animal Health	Sales 2002	
	(CHF millions)	(%)
United States	364	38
Americas (except the United States)	136	14
Europe	294	30
Rest of the World	177	18
Total	**971**	**100**

Pharmaceutical and biological product sales in all of our main Animal Health business segments (aqua, farm and companion animals) fluctuate seasonally, and can be significantly affected by climatic and economic conditions, and by changing health or reproduction rates of animal populations.

Production

Approximately 80% of our production volume is manufactured by third parties, including Novartis affiliates in other Business Units. Animal Health has production facilities of its own located around the world, including the US, France and China.

The manufacture of our products is heavily regulated, making supply never an absolute certainty. If we or our third party suppliers fail to comply fully with such regulations then there could be a government-enforced shutdown of production facilities, which in turn could lead to product shortages. While we have not experienced material supply interruptions in the past, there can be no assurance that supply will not be interrupted in the future as a result of unforeseen circumstances.

We obtain our raw materials from sources around the world. We depend to a large extent on suppliers for the raw materials, intermediates and active ingredients. We make use of long term supply agreements to limit the volatility of prices charged to us for raw materials.

Marketing and Distribution

Our products are predominantly prescription-only treatments for animals. The major distribution channels are veterinarians and wholesalers of veterinary products. Primary marketing efforts are targeted at veterinarians using such marketing tools as printed materials, direct mail, advertisements and articles in the veterinary special press, our participation at conferences for veterinarians and the organization of special educational events, focusing primarily on new treatment areas. In addition, we engage in general public relations activities, including advertising in the general printed media and direct advertising of brands, respecting the relevant national legislation in each country. Novartis Animal Health has representatives in approximately 40 countries.

Competition

Other companies selling veterinary pharmaceutical products for companion and farm animals are Bayer, Elanco, Fort Dodge (Wyeth), Intervet (Akzo Nobel), Merial, Pfizer, and Schering-Plough. Most of these companies offer a broad range of products for both companion and farm animals, and their marketing efforts are at a comparable level to ours.

Research and Development

Novartis Animal Health has dedicated research facilities in Switzerland and Australia for antiparasitics. In the United States, United Kingdom and Canada, we focus on the development of new vaccines for farm animals and farmed fish. In 2002, we devoted CHF 94 million to research and development, representing 9.7% of total sales.

In these efforts, we use high-capacity, in-vitro micro-screening to assess a large number of natural products and synthetic chemicals for bioactivity. Our researchers also collaborate with external partners to develop veterinary treatments. Drug delivery projects, some in collaboration with external partners, concentrate on our key treatment areas and aim to improve efficacy and ease of use.

In addition to these research activities, we exploit synergies with other Novartis businesses to develop new products. Products originally developed for human use are further developed to treat comparable diseases in companion animals. The products *Atopica*, *Clomicalm* and *Fortekor* are examples of effective synergies with the Pharmaceuticals Division.

We have long term research undertakings totaling CHF 11 million in the aggregate as of December 31, 2002 including CHF 8 million in milestone payments. We intend to fund these expenditures from internally generated resources.

Regulation

The registration procedures for animal medicines are similar to those for human medicines. In the US, animal health products are generally regulated by the FDA. Certain product categories are regulated by the Environmental Protection Agency (EPA), and vaccines are regulated by the US Department of Agriculture (USDA). Within the FDA, the Center for Veterinary Medicine is responsible for animal drugs. A New Animal Drug Application for product registration must be accompanied by extensive data on safety, environmental effects and on clinical studies, as well as information on manufacturing, quality control and labeling.

In the EU, veterinary medicinal products need marketing authorization from the competent authority of a member-state (national authorization) or through a community procedure, which is either the Centralized Procedure or the Mutual Recognition Procedure. In the Centralized Procedure, applications are submitted to the EMEA, and the marketing authorization that is granted by the European Commission is then valid throughout the EU. In the Mutual Recognition Procedure, the marketing authorization granted by the first member-state is mutually recognized by the other member-states through a shortened approval procedure.

In Japan, veterinary medicinal products are approved by the Ministry of Agriculture Fisheries and Food ("MAFF"). The application, including supplementary local trial data, is reviewed by the MAFF and a General Investigation Committee, a Special Investigation Committee and a Permanent Investigational Committee before authorization is granted.

Intellectual Property

Our business is brand-oriented and, therefore, we consider our trademarks to be of utmost value. Trademarks protect most of our brands in the majority of the markets where these brands are sold, and we vigorously protect these trademarks from infringement. Our most important trademarks are used in a number of countries. Local variations of these international trademarks are employed where legal or linguistic considerations require the use of an alternative.

Wherever possible our products are protected by patents. Among other things, patents may cover the products themselves, including the product's active substance and its formulation. Patents may also cover the processes for manufacturing a product, including processes for manufacturing intermediate substances used in the manufacture of the products. Patents may also cover particular uses of a product, such as its

use to treat a particular disease, or its dosage regimen. It is our policy to seek the broadest possible protection for significant product developments in all major markets.

MEDICAL NUTRITION

Our Medical Nutrition Business Unit is a leader in its field, and offers a wide range of enteral and oral nutrition products and devices tailored to the varying needs of patients and healthcare professionals. We are dedicated to maintaining and improving the health and well being of consumers and patients at home or in health care delivery settings (hospitals, nursing homes and home health care) by fulfilling their nutritional needs. In partnership with health care professionals, Medical Nutrition offers the highest quality medical nutrition products, devices and services ranging from standard to disease-specific products that improve health and quality of life for all age groups from pediatrics to geriatrics. This broad range of supplements, tube feedings and food provides essential nutrients for good nutrition when illness or disabilities limit a person's ability to eat a balanced diet.

In November 2002, we divested our Food & Beverage business, including Ovaltine®/Ovomaltine®, Caotina® and Lacovo®, to Associated British Foods plc for Euro 272.5 million (approximately CHF 402 million). The transaction is in furtherance of our strategy of focusing on healthcare and our core pharmaceuticals business. Our remaining Health Food & Slimming and Sports Nutrition businesses have been reorganized into a stand-alone unit called Nutrition & Santé. For reporting purposes, this unit's results will be included in the results of the Medical Nutrition Business Unit. We have announced our intention to sell Nutrition & Santé once an attractive bid is received.

In 2002, Medical Nutrition (including Nutrition & Santé and the Food & Beverage business until the date of its divestment) posted CHF 1.4 billion in sales, representing 4% of Group sales. As of December 31, 2002, Medical Nutrition (including Nutrition & Santé) employed 2,701 associates worldwide.

Key Marketed Products

Medical Nutrition. Our Medical Nutrition Business Unit covers the full spectrum of disease and age specific nutrition. Depending on their condition, patients need specific nutritional support to protect and accelerate their recovery from a disease or surgery. From our comprehensive range of innovative and trusted products for Medical Nutrition, we have created five strong and recognizable global brands.

Key brands	Market/segment
Resource	Range of standard and disease-specific oral nutritional supplements
Isosource	A complete tube and sip feed, providing for normal nutritional requirements
Novasource	Range of nutritional tube and sip feeds for specialty or disease specific needs
Impact	Range of standard and disease-specific oral nutritional supplements
Compat	Range of standard and specialty devices to deliver tube feeds to the gastrointestinal tract of patients

Medical Nutrition will continue to focus on a disease-specific approach while leveraging its global brands especially in the Acute and Home Care market segments.

During 2002, Medical Nutrition established a major partnership in the US with the Walgreens chain of drug stores, to better capture the outpatient market. Under this partnership, Walgreens promotes our Medical Nutrition products through its promotional and advertising activities. Outpatient customers are able to purchase our Medical Nutrition products on-line through the Walgreens Medical Nutrition Center, located at the www.resource.walgreens.com website or through a toll-free telephone number, for delivery through Walgreens' order fulfillment system.

We have made successful in-roads in Japan by licensing our *Impact* brand to Ajinomoto Co., Ltd.

2002 was also the first full year of sales of the *Sustagen* brand in Australia and New Zealand. This brand was licensed in from Mead Johnson & Co. at the end of 2001.

During 2002, the Medical Nutrition Business Unit ceased doing business in Argentina due to the economic situation in that country.

Nutrition & Santé. The stand-alone unit Nutrition & Santé has the following brands:

Key brands	Market/segment
Health Food & Slimming brands:	
Céréal	A broad range of natural and dietetic foods to health conscious consumers
Gerblé	A broad range of health food products, many made with wheat germ, which deliver functional benefits

Key brands	Market/segment
Gerlinéa	An affordable slimming product range, targeting consumers who wish to remain slim whilst eating as normally as possible, rather than consumers with a medical weight issue
Modifast	Slimming products with added vitamins, minerals and proteins
Dietisa	A product portfolio range including medicinal plants, health foods, dietary supplements and cosmetics sold mostly in Spain and Portugal
Pesoforma	Similar product range as *Gerlinéa* focusing at the Italian market
Lecinova	Food supplement sold in Italy
Milical	Meal substitutes range with very low calorie diet (VLCD) and vitamins, minerals & supplements (VMS)
Sports Nutrition brands:	
Isostar	Marketed with a niche, scientific strategy to appeal primarily to professional and performance-driven athletes
Powerplay	Products targeted to bodybuilding available only in Switzerland, Germany and Austria
Mineralplus	A recovery powder targeted at athletes who participate in endurance sports. Available only in Germany and Austria

Principal Markets

In 2002, our Medical Nutrition Business Unit (including Nutrition & Santé) realized the majority of its sales in its two principal markets: the United States and the EU. The following table sets out our 2002 sales by geographic region. The figures include the sales of Nutrition & Santé and the divested Food & Beverage business through the date of its divestment.

Medical Nutrition	Sales 2002	
	(CHF millions)	(%)
United States	398	28
Americas (except the United States)	43	3
Europe	799	56
Rest of World	194	13
Total	**1,434**	**100**

Medical Nutrition's products are not subject to seasonality of demand.

Production

Our Medical Nutrition Business Unit has a manufacturing and supply infrastructure comprised of the Business Unit's own plants as well as strategic third party suppliers and other Novartis Group plants. The most significant of the dedicated Medical Nutrition plants are located in the US and Germany.

The goal of our supply chain strategy is to produce high quality products in an efficient manner. The balance of internal, external and Group sites provides flexibility and predictable sources of supply in the event of capacity constraints or other potential disruptions to ongoing supply.

Raw materials for the manufacturing process are purchased from a number of our affiliates and third party suppliers. For the most part, the products and services we procure are not proprietary and are available from a number of suppliers. Where practical and beneficial, we have long-term contracts in place on key production inputs. We also proactively monitor markets and developments that could have an adverse effect on the supply of essential materials. The manufacture of many of our products is regulated, making supply never an absolute certainty. If we or our third party suppliers fail to comply fully with such regulations then there could be a government-enforced shutdown of production facilities, which in turn could lead to product shortages. While we have not experienced material supply interruptions in the past, there can be no assurance that supply will not be interrupted in the future as a result of unforeseen circumstances.

Marketing and Distribution

The majority of the Medical Nutrition Business Unit's sales (excluding Nutrition & Santé) are to health institutions, such as hospitals, nursing homes, home healthcare providers and group purchasing organizations. In addition, in the US, outpatient consumers can purchase our products directly through our Walgreens partnership, by means of a toll-free telephone call or the internet.

Competition

Novartis Medical Nutrition (excluding Nutrition & Santé) is the second largest medical nutrition company in the US in terms of sales, and the fourth largest in Europe. Other companies selling medical nutrition products are Abbott Ross, Fresenius, Mead Johnson, Nestlé and Nutricia.

Research and Development

The Medical Nutrition research and development function is responsible for generating new products and therapies based on the needs of the market. Concepts are developed into prototypes by incorporating new and existing ingredients, processes, and packaging. Prototypes are scaled from bench top to pilot plant to production scale. Product attributes are validated through clinical trials under the direction of R&D, which assures that the product is safe and well-tolerated. Label claims, label designs, and regulatory compliance issues are also addressed. The product's attributes are reviewed by management prior to product launch. On-going product quality is monitored and improved through specification development, testing, and corrective and preventative action.

We have long term research undertakings totaling CHF 4 million in the aggregate as of December 31, 2002. We intend to fund these expenditures from internally generated resources.

Regulation

Foodstuffs are highly regulated in order to protect the public health. The following areas are generally subject to international and national food regulations: development, manufacturing, packaging, quality (food standards, ingredients), safety, labeling and advertising of foods. In the US, Medical Nutrition's products are covered by FDA regulations covering medical foods, dietary supplements (under the DSHEA regulations) and medical devices.

Intellectual Property

Our Medical Nutrition businesses are brand-oriented and, therefore, we consider our trademarks to be of utmost value. Trademarks protect most of our brands in the majority of the markets where these brands are sold, and we vigorously protect these trademarks from infringement. Our most important trademarks are used in a number of countries. Local variations of these international trademarks are employed where legal or linguistic considerations require the use of an alternative.

Wherever possible our products are protected by patents. Among other things, patents may cover the products themselves, including the product's active substance and its formulation. Patents may also cover the processes for manufacturing a product, including processes for manufacturing intermediate substances used in the manufacture of the products. Patents may also cover particular uses of a product, such as its use to treat a particular disease, or its dosage regimen. It is our policy to seek the broadest possible protection for significant product developments in all major markets.

INFANT & BABY

In 2002, our Infant & Baby Business Unit, best known for its *Gerber* products, posted CHF 2.1 billion in sales, which amounted to a 3% increase in local currencies over 2001, and represented 6% of the Group's sales. The major contributor to this continued solid performance is the US, spurred by innovations in the Juice, *Graduates* and *Tender Harvest* lines. An outstanding success has been *Lil' Entrees*, a new line of microwavable convenience meals in trays. These results are especially strong, given that 2002 baby products industry sales have been negatively impacted by a 1% decline in births in the US in 2001.

Besides nutrition products, the company offers a wide variety of other products for infants and toddlers, including a baby accessory line (featuring nursing and feeding aids), wellness products (such as lotions and washes), and life insurance. As of December 31, 2002, our Infant & Baby Business Unit employed 4,901 associates worldwide.

Key Marketed Products

Globally, our Infant & Baby Business Unit offers more than 200 food products. From *Gerber 1st FOODS* to *Graduates*, the company's product line covers each phase of child development with diverse flavors and textures. *Gerber* baby and toddler foods include Cereals, *1st FOODS*, *2nd FOODS*, *3rd FOODS*, *Tender Harvest* (organic food), *Finger Foods*, Fruit and Vegetable Juices and *Gerber Graduates* Toddler Food. *Gerber*'s nutrition business began in 1928, in Fremont, Michigan and will mark its 75th anniversary in 2003. *Gerber* began its baby accessory line in 1960 and now markets more than 350 *Gerber* and NUK® branded products. Bottles, teethers, pacifiers, breastfeeding accessories and spill-proof cups are just a few of the products now being distributed to babies and parents around the world.

Continuing its commitment to baby care, *Gerber* introduced a complete line of skincare and healthcare products in 1999, all designed to help parents raise happy, healthy babies. The skincare products include a full line of washes, lotions and tear-free shampoos with the *Gerber SkinNutrients* unique blend of seven vitamins and natural ingredients. The healthcare line includes Pediatric Electrolyte Solution, Tooth & Gum Cleanser, Diaper Rash Ointment, Gas Relief Drops and Vitamin Drops.

We have licensed the *Gerber* trademark to an unaffiliated company, Gerber Childrenswear, Inc., which sells bibs, apparel, shoes and similar products carrying the trademark. Gerber Childrenswear, Inc. pays royalties to our affiliate, Gerber Products Company, for the use of the trademark.

In addition, since 1967, our affiliate Gerber Life Insurance Company, has been marketing life insurance protection directly to the consumer. Currently, Gerber Life's *Grow Up* policy is the leading juvenile whole life insurance product distributed in the United States and Canada.

The major brands and product groups in Infant & Baby are:

Key Brands	Product groups	Main markets
Gerber, Graduates, Lil' Entrees, Tender Harvest, Yukery, 1st FOODS, 2nd FOODS, 3rd FOODS	Baby food	US, Latin America, Europe, Asia
Argos, Fiona, Gerber, Lillo by Gerber, Ninet, NUK®	Baby Care	US, Canada, Asia, Latin America
Argos, Capent, Gerber, Ninet	Baby Wellness	US, Latin America
Gerber Life	Insurance	US

Recently Launched Products

In the US, *Gerber* continued to build on its position as a leader in infant feeding and care with a number of innovations in 2002. In response to consumers' need for convenience, *Gerber* launched single-serve plastic packages, ideal for out-of-home feeding. *Gerber* now offers all juices and top selling fruit purees in single-serve plastic containers. The number of different products packaged in plastic will continue to expand in 2003. In addition, 2002 saw our successful launch of a new line of *Gerber* multi- compartment dinners, *Lil' Entrees*. The *Lil' Entrees* line offers parents of babies and toddlers a new alternative which provides meals for their children that are both nutritious and convenient. Finally, the launch of the single-serve cereal pouch in 2002 demonstrates the growing importance of the convenient single-serve segment.

Within the *Gerber Care/Wellness* business, a number of innovative new products were launched at the end of 2002. The new spill-proof *Insulated Cool Cup* helps beverages to retain their desired temperature longer. Also, two new cups were launched that help during key development transitions. The first helps

babies transition from the bottle to spill-proof cups. The second will later help them transition from the spill-proof cups to adult cups. For breast feeding mothers, a line of breast therapy items was introduced in 2002, which includes soothers, warm-cool packs and moistening sticks.

Principal Markets

In 2002, the Infant & Baby Business Unit realized the majority of its sales in its two principal markets: the United States and Latin America. The following table sets out our 2002 sales by geographic region.

Infant & Baby	**Sales 2002**	
	(CHF millions)	**(%)**
North America	1,635	79
Latin America	350	17
Europe/Middle East/Africa	75	3
Asia	15	1
Total	**2,075**	**100**

Infant & Baby retail sales are not significantly affected by seasonal variations.

Production

Key factors in Infant & Baby's successful supply chain strategy include a high efficiency, low cost structure and the mitigation of risks through multiple production sources. Regional sites serve specific markets but are also capable of providing support as needed to other regions in the event of supply disruption. Gerber operates production facilities in North America, South America and Eastern Europe for nutrition and care products. Major production sites ranked by size are in the US, Mexico and Poland.

The manufacture of most of our products is heavily regulated, making supply never an absolute certainty. If we or our third party suppliers fail to comply fully with such regulations then there could be a government-enforced shutdown of production facilities, which in turn could lead to product shortages. While we have not experienced material supply interruptions in the past, there can be no assurance that supply will not be interrupted in the future as a result of unforeseen circumstances. The Baby Accessory and Wellness franchises tend to utilize suppliers from a wider geographic area.

We often "single-source" supplies, but we have a policy of having at least a second approved and validated supplier registered for most key materials so that substitution is possible. Where practical and beneficial, we have long-term contracts in place on key production inputs. We also proactively monitor markets and developments that could have an adverse effect on the supply of essential materials.

Raw materials for the manufacturing process are purchased from a number of third party suppliers. For the most part, raw materials for our nutrition products are sourced from within the country of use. Our growers and suppliers are well versed in our strict agricultural requirements and tend to have long term relationships with us. We are subject to adverse weather and growing conditions, but mitigate this as much as possible with alternative geographic sourcing areas.

Marketing and Distribution

The mission for the Infant and Baby Business Unit is to leverage our brand leadership of trust in helping parents nurture happy, healthy babies into the leading infant and baby brand around the world. In 2002, *Gerber* began converting glass jars to plastic containers for its nutrition products. This major innovation is a result of consumer data which clearly indicates the preference for plastic as a better fit for today's active parents and families. Strong brands, product development based on sound nutrition

principles, and in-house marketing and sales organizations are some of our key strengths. *Gerber* products are distributed through food, drug and mass merchandiser retail outlets.

Competition

Other companies selling infant and baby foods are Del Monte and Beechnut in the US, Nestlé in Latin America, Nutricia in Eastern Europe and other regional businesses elsewhere. Other companies selling baby accessory and wellness products are Johnson & Johnson, Playtex and Avent in the US. There are other companies selling these products located in Latin America and Asia.

Research and Development

The Infant & Baby Business Unit has a Research and Development department which uses a multi-faceted approach to deliver consumer innovation by developing new processes, products and packaging for the nutrition, care and baby accessory franchises. Internally developed new processes include *NatureLock*, a patented cooking process for jarred fruits and vegetables. New products include *Lil' Entrees*, our nutritious, portable meals for toddlers. Packaging innovations include aseptic plastic packaging, which provide additional convenience for consumers.

In addition, *Gerber* R&D oversees research regarding the needs of infants and their development. For example, *Gerber*'s Feeding Infants and Toddlers Study (FITS) analyzed the nutrient intake of 3,000 infants and toddlers. The results of this Study will be published in 2003. In 2002, the Infant & Baby Business Unit invested approximately CHF 36 million in research and development (1.7% of Infant & Baby sales).

Regulation

Foodstuffs are highly regulated in order to protect the public health. The following areas are generally subject to international and national food regulations: development, manufacturing, packaging, quality (food standards, ingredients), safety, labeling and advertising of foods. Infant foods are regulated by various governmental agencies on a country by country basis. There is no global harmony of requirements and regulations. Many countries do require product registrations to document safety and nutrition of imported food products. *Gerber* food products are specifically designed to meet the nutritional needs of infants and toddlers in the regions where they are sold and generally exceed requirements of regulatory agencies. These nutritional need standards are determined based on independent, peer-reviewed research, or by studies sanctioned by authorities such as the World Health Organization (WHO) or the US Department of Health and Human Services.

In the US, agencies such as the FDA, the US Department of Agriculture (USDA), the Environmental Protection Agency and the Consumer Product Safety Commission are responsible for providing safety specifications and otherwise regulating our products and ingredients. The FDA and USDA have issued regulations and standards regarding the use of specific ingredients in certain types of food products, including which ingredients are allowed, and at what level, as well as ingredients that may be required in certain products. In addition, these agencies regulate food product labeling and the claims which can be made regarding food products. Globally, safety of ingredients and products are guided by the Codex Alimentarius, a section of the WHO.

Intellectual Property

Our Infant & Baby Business Unit is brand-oriented, with the *Gerber* baby trademark among the most recognized in the world. Therefore, we consider this trademark, as well as others within Infant & Baby, to be of utmost value. Trademarks protect most of our brands in the majority of the markets where these brands are sold, and we vigorously protect these trademarks from infringement. Our most important trademarks are used in a number of countries. Local variations of these international trademarks are employed where legal or linguistic considerations require the use of an alternative.

Wherever possible our products are protected by patents. Patents may cover products, product formulations, processes, intermediate products or product uses. It is our policy to seek the broadest possible protection for significant product developments in all major markets.

CIBA VISION

The business of our CIBA Vision Business Unit is conducted by a number of affiliated companies in more than 70 countries. CIBA Vision is a world leader in the research, development and manufacturing of eye care products, specifically soft contact lenses, lens care products, and ophthalmic surgical products. As of December 31, 2002, the affiliates of CIBA Vision employed 6,003 associates worldwide. In 2002, the affiliates of CIBA Vision had sales of CHF 1.8 billion, representing 6% of Group sales.

CIBA Vision completed the acquisition of Wesley Jessen VisionCare, Inc., a leading provider of specialty contact lenses in the United States, in October 2000.

On January 1, 2001, CIBA Vision's Ophthalmic Pharmaceuticals business became part of our Pharmaceuticals Division in a reorganization.

Recently Launched Products

Focus DAILIES Toric, the world's first and only daily disposable lens for astigmatism, was introduced in a number of European countries in June through October 2002. Additional launches are planned globally for the near future.

Focus NIGHT & DAY continuous wear lenses received the CE Mark for therapeutic use in July 2002 and are now offered throughout Europe with this indication.

We launched a number of new product additions around the world to our leading brands of cosmetic and color contact lenses. Those products include *FreshLook Radiance*, new designs for *WildEyes* novelty lenses, *GlitterEyes* specialty contact lenses, and *DuraSoft* 2 *ColorBlends*, daily wear, specialty color lenses, incorporating CIBA Vision's unique ColorBlends technology.

SOLO-care PLUS, an enhanced formulation of our one-bottle lens disinfection system, offers a one-bottle, no rub, no rinse cleaning and disinfection system and was introduced in the US in April 2002.

AQuify, an innovative lens drop that replicates the behavior of natural tears to provide long-lasting comfort of contact lenses initially launched in Europe in February 2002 and was recently launched in Benelux, Chile and Hungary.

CV232 SRE (Square Round Edge), the latest design of the pre-folded intraocular lens that allows a smaller incision during cataract surgery, was introduced in May in Europe and August in the US.

Vivarte PRESBYOPIC, an anterior chamber phakic refractive lens used for the correction of presbyopia, was launched in Europe in September 2002.

PRL Injector System, an improved convenient injector system for the *PRL* phakic refractive lens, was launched in Europe in September 2002.

VisThesia, a combination viscoelastic and anesthetic, which may help shorten cataract surgeries, was introduced in Europe in September 2002.

In February, we introduced the *Tear Film Analyzer* in the US. The *Analyzer* is a diagnostic system that helps evaluate the levels of certain proteins in tear film which can help determine the cause of dry eye symptoms.

In August 2002, we obtained exclusive rights in the US and Canada to market the *Ex-PRESS* mini glaucoma shunt, an innovative and minimally invasive approach for treating glaucoma.

Key Marketed Products

The table below sets out the key marketed products in each of CIBA Vision's three principal product segments:

Main Products	Description
Contact Lenses	
Focus DAILIES	One-day disposable
Focus DAILIES Progressives	One day disposable to correct presbyopia
Focus DAILIES Toric	One day disposable to correct astigmatism
Focus NIGHT&DAY	Extended wear for up to 30 days and nights continuous wear
Focus Progressives	Corrects presbyopia
Focus Toric	Corrects astigmatism
Focus Monthly	Replaced monthly
Focus 1-2 Week	Replaced every one to two weeks
Focus 1-2 Week SoftColors	Replaced every one to two weeks; enhances the color of light eyes
DuraSoft 3 Colors	Conventional cosmetic tinted lenses
FreshLook Colorblends	Opaque lenses that blend three colors on one lens creating a more natural looking cosmetic tinted lens for dark or light eyes
FreshLook Colors	Disposable lenses for eye color change
FreshLook Radiance	Lens for people with light or dark eyes that provides illuminating effects that vary based on a person's natural eye color, skin tone and hair color
GlitterEyes	Specialty contact lenses that give eyes the brilliant gleam of glitter
Precision UV	First Disposable lens with ultraviolet light protection
WildEyes	Novelty lenses
Illusions Opaque	Conventional lenses for changing the color of dark eyes
Cibasoft	Conventional lenses with handling tint
Cibasoft Softcolors	Conventional lenses for enhancing the color of light eyes
Lens Care Products	
AOSept	Hydrogen peroxide disinfectant system

AOSept Clear Care/AOSept PLUS	An enhanced formulation of our leading hydrogen peroxide disinfectant; the first one-bottle, no rub lens care solution with no added preservatives in the United States
SOLO-care	One bottle lens disinfectant system
SOLO-care Plus	An enhanced formulation of our one-bottle lens disinfection system; offers a one-bottle, no rub, no rinse cleaning and disinfection system
BLUE Sept/BLUE Vision	One-step hydrogen peroxide lens disinfection system; features blue color indicator
*QuickCARE/Insta*CARE	Five-minute disinfectant system
Pure Eyes	Two-bottle hydrogen peroxide system
Focus Lens Drops	For lubricating contact lenses
AQuify	Lens drop that replicates natural tears
Ophthalmic Surgical	
MemoryLens	Pre-folded intraocular lens, used in a surgical procedure to restore vision in people with cataracts
CV232 SRE (Square Round Edge)	Latest design of the pre-folded intraocular lens that allows a smaller incision during cataract surgery
VisThesia	Combination of viscoelastic and anesthetic
PRL (Phakic Refractive Lens)	The first and only foldable posterior chamber phakic refractive lens designed to float on a patient's natural lens and to self-center behind the iris
Vivarte	The first and only foldable anterior chamber phakic refractive lens
Vivarte PRESBYOPIC	Anterior chamber phakic refractive lens used for the correction of presbyopia
Ex-PRESS mini glaucoma shunt	Minimally invasive approach for the surgical treatment of glaucoma
Tear Film Analyzer	Diagnostic system that helps evaluate the levels of certain proteins in tear film which can help determine the cause of a patient's dry eye
Bioinsulated Punctum Plus	Provides relief from severe dry eye symptoms
UniVisc	Viscoelastic solution
Ophthalin and *Ophthalin Plus*	Viscoelastic solution offered outside the United States

Products in Development

CIBA Vision intends to expand its product portfolio through both its own dedicated research and development resources as well as the acquisition of new and innovative technologies. Product development is focused on contact lenses as well as ophthalmic surgical products and involves the creation and development of entirely new product offerings in these markets as well as line extensions of current products. The acquisition of Wesley Jessen VisionCare in October 2000 included several exciting technologies and CIBA Vision anticipates incorporating these technologies into other contact lens products in its pipeline.

In the ophthalmic surgical area, CIBA Vision is working on the development of innovative products including the Sub-epithelial Separator. The Sub-epithelial Separator (SES) is an automated microkeratome-based medical device that creates an epithelial flap delaminating (or separating) the epithelium from the basement membrane during laser surgery. This device eliminates the need for alcohol currently used during

the procedure. By eliminating the alcohol, which can be toxic to cells, the device promotes faster healing, less damage to cells and less pain for patients.

Principal Markets

Our principal markets, in terms of 2002 sales, were North America (United States and Canada), Europe and Japan. Sales are not subject to seasonality. The following table sets forth 2002 sales for CIBA Vision by region:

CIBA Vision	Sales 2002	
	(CHF millions)	(%)
United States	690	39
Americas (except the United States)	97	5
Europe	594	34
Japan	261	15
Rest of the World	120	7
Total	**1,762**	**100**

Production

CIBA Vision has major production facilities in Indonesia, Georgia and Illinois (United States), Germany, Puerto Rico and Canada. The manufacture of our products is heavily regulated, making supply never an absolute certainty. If we or our third party suppliers fail to comply fully with such regulations then there could be a government-enforced shutdown of production facilities, which in turn could lead to product shortages. While we have not experienced material supply interruptions in the past, there can be no assurance that supply will not be interrupted in the future as a result of unforeseen circumstances.

We purchase basic chemical commodity raw materials for our lens products from industrial vendors. These raw materials are then reformulated into the monomers and polymers required to produce contact lenses. Polymer chemistry is one of the innovative elements in our contact lens products. The technology to produce the polymers and monomers is stable and well-defined.

We enter into long-term supply contracts (generally over one to two years) with industrial raw material vendors, which limits volatility. In addition, most raw materials are basic chemical commodities and multiple suppliers are available. Certain lens products use proprietary chemicals that are produced specifically for us and sold exclusively to us. We also use a custom-designed process to synthesize

macromonomers, a key raw material needed in contact lens production, which are produced by a contract vendor for a negotiated price.

Marketing and Distribution

Contact lenses are considered medical devices by regulatory authorities and, therefore, are available only with a prescription from an eye-care professional in most countries. CIBA Vision lenses can be purchased from independent eye care professionals and optical chains. CIBA Vision's lens care products can be found in major drug, food and mass merchandising retail chains in the United States, Europe, Japan and elsewhere. In addition, mail order and Internet sales are becoming increasingly important channels in major markets worldwide.

Eye care professionals are CIBA Vision's primary marketing focus. In addition, we have direct-to-consumer initiatives including free trials and coupons.

Competition

Contact Lenses

Growth in the contact lenses market is driven primarily by an increased demand for lenses and an increasingly varied product mix. As consumers move toward frequent replacement lenses, including one-day disposable lenses, demand for lenses is increasing. Additionally, the customer base is expanding with the development of new contact lens options, such as daily disposable, 30-night continuous wear, toric lenses for astigmatic patients and lenses to correct presbyopia, a condition prevalent among the "Baby Boom" generation. We are well-positioned in the contact lens market as the second-leading player on the basis of market share. CIBA Vision now has the broadest product portfolio of any competitor in the industry. The colored lens technology we acquired with Wesley Jessen also creates a strong combination with our CIBA Vision products that should prove attractive to women and teenagers, in particular. Other companies selling contact lenses are Bausch & Lomb and Johnson & Johnson.

Lens Care

We expect to increase our presence in the one-bottle market segment with our *SOLO-care* lens care product and to maintain a leading position in the peroxide category with *AOSept Clear Care* lens care, which is required by wearers of frequent replacement and conventional contact lenses, is a mature market and the products will continue to face competitive pressure due to the increasing preference for daily disposable and continuous wear lenses, which require little or no lens care.

CIBA Vision is a global leader in the peroxide lens care category with *AOSept*, although this is a declining segment of the market. Market segment share is increasing in the growing one-bottle market segment with our *SOLO-care*, *BLUE Sept* and *AOSept Clear Care* disinfection systems. Other companies selling lens care products are Alcon, Advanced Medical Optics and Bausch & Lomb.

Ophthalmic Surgical

The Ophthalmic Surgical market includes intraocular lenses and phaco equipment for cataracts, laser vision correction, surgical devices, surgical adjuncts and vitreo-retinal products. We are present in the cataract segment with our intraocular lens, CV232 SRE, which is a pre-folded, intraocular lens. We are the only company with a position in both the anterior and posterior phakic refractive lens market where we have acquired licenses. Phakic refractive lenses are used for patients requiring a high degree of correction. The *Ex-PRESS* mini glaucoma shunt is an innovative and minimally invasive approach for the treatment of glaucoma. It has been shown to reduce intraocular pressure up to 35% and can be completed five times faster than conventional glaucoma surgeries. Other companies selling ophthalmic surgical products are Alcon, Advanced Medical Optics, Bausch & Lomb, Pharmacia and Staar Surgical.

Research and Development

The research results of other Novartis affiliates provide CIBA Vision with new chemical compounds for future products and access to developments in biotechnology. These resources are complemented by CIBA Vision's internal research and development capabilities, licensing agreements and joint research and development partnerships with third parties (companies, individuals and universities). We invested CHF 109 million in research and development of eye care products in 2002, representing 6% of the Business Unit's sales.

We have long term research commitments totaling CHF 2 million in the aggregate as of December 31, 2002. We intend to fund these expenditures from internally generated resources.

Regulation

Contact lenses, surgical devices and lens care products are regulated as medical devices in the United States, the EU and Japan. These jurisdictions each have risk-based classification systems that determine the type of information which must be provided to the local regulators in order to obtain the right to market a product.

In the US, all devices must receive pre-market approval by the FDA. There are two review procedures to gain this pre-market approval: a pre-market application ("PMA") and a 510(k) submission. Under a PMA, the manufacturer must submit to the FDA supporting evidence sufficient to prove the safety and effectiveness of the device. The FDA has 180 days to review a PMA. Certain products, however, may qualify for a submission authorized by Section 510(k) of the US Food, Drug and Cosmetic Act. Under this procedure, the manufacturer gives the FDA a pre-market notification that it intends to commence marketing the product, and that it has established that the product is substantially equivalent to another product already on the market. The FDA has 90 days to review a 510(k) submission. In the US, no 30-day extended-wear lenses had previously existed on the market, so we are required to proceed under the PMA procedure. Ophthalmic surgical devices fall into both PMA or 510(k) categories depending on the availability of data from previously approved devices. Lens care products generally qualify for 510(k)

submission.

In the EU, the "CE" mark is required for all medical devices sold. CIBA Vision affiliates hold a CE mark for the classes of vision care medical devices that they sell. The CE mark allows CIBA Vision to market products upon signing a declaration of conformity with the EU's Medical Device Directive requirements, which CIBA Vision affiliates do for each product sold. In addition, medical device sales in the EU require auditing by a certified third party (a "Notified Body") to ensure that the manufacturer's quality systems are in compliance with the requirements of the ISO 9000 standards. CIBA Vision has two Notified Bodies which routinely audit the company's quality systems.

In Japan, contact lenses are categorized as medical devices and are subject to an approval process similar to that in the United States. Although there is an improvement in the willingness to accept foreign data and a movement toward harmonization of requirements, in order to enter the Japanese market, local clinical trials often are required and local protocols must then be observed. Lens care products for soft lenses take several years to gain approval due to the extensive amount of additional data and clinical testing required. Surgical devices are also categorized by risk level and a lengthy testing, review and approval process is required. Saline solutions for hard lenses are unregulated.

Intellectual Property

Our CIBA Vision business is brand-oriented and, therefore, we consider our trademarks to be of utmost value. Trademarks protect most of our brands in the majority of the markets where these brands are sold, and we vigorously protect these trademarks from infringement. Our most important trademarks are used in a number of countries. Local variations of these international trademarks are employed where legal or linguistic considerations require the use of an alternative.

Wherever possible our products are protected by patents. Among other things, patents may cover the products themselves, including the product's active substance and its formulation. Patents may also cover the processes for manufacturing a product, including processes for manufacturing intermediate substances used in the manufacture of the products. Patents may also cover particular uses of a product, such as its use to treat a particular disease, or its dosage regimen. It is our policy to seek the broadest possible protection for significant product developments in all major markets.

4.C Organizational Structure

The Novartis Group is a multinational group of companies specializing in research, development, manufacture, sales and distribution of innovative healthcare products. Novartis AG, our Swiss holding company, owns, directly or indirectly, 100% of all significant operating companies. For a list of our subsidiaries, see note 30 to the consolidated financial statements.

The Group is divided operationally into two Divisions: Pharmaceuticals and Consumer Health. Our Pharmaceuticals Division is organized into five Business Units: Primary Care, Oncology, Transplantation, Ophthalmics and Mature Products. The six Business Units of the Consumer Health Division are: Generics, OTC, Animal Health, Medical Nutrition, Infant & Baby and CIBA Vision. The Business Units coordinate the worldwide research, distribution, marketing and sales of the products assigned to each. Because the Business Units of the Pharmaceuticals Division have common long-term economic perspectives, common customers, common research, development, production and distribution practices, and a common regulatory environment, their financial data are not required to be separately disclosed.

4.D Property, Plants and Equipment

Our principal executive offices are located in Basel, Switzerland. Our Business Units operate through a number of affiliates having offices, research facilities and production sites throughout the world.

It is our policy to own our facilities. A few (mainly in the United States) are leased under long-term leases. Some of our principal facilities are subject to mortgages and other security interests granted to secure indebtedness to certain financial institutions. As of December 31, 2002, the total amount of indebtedness secured by these facilities was not material to the Group. We believe that our production plants and research facilities are well maintained and generally adequate to meet our needs for the foreseeable future.

The following table sets forth our major production and research facilities. For a further description of our material facilities, see " 4.B Business Overview," and the sections entitled " Production" and " Research and Development" included within the discussions of each of our business segments.

66

Location/Division or Business Unit	Size of Site	Major Activity
Major Production facilities:		
Pharmaceuticals		
Taboão da Serra, Brazil	539,000 square meters	Suppositories, capsules, tablets, syrups, suspensions, creams, drop solutions, powders
Ringaskiddy, Ireland	532,000 square meters	Drug substances, intermediates
Basel, Switzerland Klybeck	283,000 square meters	Drug substances, intermediates
Basel, Switzerland St. Johann	219,000 square meters	Drug substances, intermediates
Basel, Switzerland Schweizerhalle	213,000 square meters	Drug substances, intermediates
Stein, Switzerland	460,000 square meters	Steriles, tablets, capsules, transdermals, intermediates
Grimsby, United Kingdom	929,000 square meters	Drug substances, intermediates
Suffern, NY (United States)	656,000 square meters	Tablets, capsules, transdermals
Horsham, United Kingdom	112,000 square meters	Tablets, capsules
Wehr, Germany	165,000 square meters	Tablets, creams, ointments
Torre, Italy	210,000 square meters	Tablets
Barbera, Spain	51,000 square meters	Tablets, capsules
Huningue, France	70,000 square meters (Pharmaceuticals and Animal Health facilities)	Suppositories, liquids, solutions, suspensions
Sasayama, Japan	104,000 square meters	Suppositories, capsules, tablets, syrups, suspensions, creams, drop solutions, powders
Generics		
Kundl, Austria	266,000 square meters total area (production and R&D facilities)	Biotech products, intermediates, active drug substances, final steps (finished pharmaceuticals)
Broomfield, CO (United States)	60,000 square meters	Broad range of finished dosage forms

67

OTC		

Nyon, Switzerland	58,400 square meters (production and R&D facilities)	Liquids and creams
Lincoln, NE (United States)	44,870 square meters	Liquids, creams and tablets
Animal Health		
WUSI-Farm, China	42,000 square meters	Insecticides, antibacterials, acaricides, powders
Dundee, Scotland	34,000 square meters	Packaging, formulation liquids, solids, creams, sterile filling vaccines
Larchwood, IA (United States)	29,700 square meters (production and R&D facilities)	Veterinary immunologicals
Medical Nutrition		
Minneapolis, MN (United States)	33,500 square meters (production and R&D facilities)	Medical nutrition products
Osthofen, Germany	44,000 square meters (production and R&D facilities)	Medical nutrition and Nutrition & Santé products
Infant & Baby		
Fremont, MI (United States)	107,000 square meters (production and R&D facilities)	*Gerber* jarred baby food, fruit and vegetable juices, dry boxed cereal
Fort Smith, AR (United States)	80,451 square meters	*Gerber* jarred baby food, dry cereal
Querétaro, Mexico	205,000 square meters	*Gerber* jarred baby food, fruit and vegetable juices, dry canned and bagged cereal
Reedsburg, WI (United States)	30,000 square meters	Baby Care products; spill-proof cups, bottles, nipples, breast pads, pacifiers, overcaps
Rzeszow, Poland	45,000 square meters	*Gerber* baby food, fruit juice
CIBA Vision		
Pulau Batam, Indonesia	16,700 square meters	Contact lenses
Duluth, GA (United States)	16,700 square meters	Contact lenses
Des Plaines, IL (United States)	26,940 square meters	