NOVO NORDISK A S
Form 20-F
March 27, 2003

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UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 20-F

(Mark One)

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

OR

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

For the fiscal year ended 31 December 2002

OR

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

Commission File Number: 1-8164

NOVO NORDISK A/S

(Exact name of Registrant as specified in its charter)

Not applicable	**The Kingdom of Denmark**
(Translation of Registrant s name into English)	(Jurisdiction of incorporation or organization)

Novo Allé
DK-2880 Bagsværd
Denmark
(Address of principal executive offices)

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

Title of each class:	**Name of each exchange on which registered:**
B shares, nominal value DKK 2 each	New York Stock Exchange*
American Depositary Receipts, each representing one B share	New York Stock Exchange

* Not for trading, but only in connection with the registration of American Depositary Receipts, pursuant to the requirements of the Securities and Exchange Commission.

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

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

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:

A shares, nominal value DKK 2 each:	53,743,600
B shares, nominal value DKK 2 each:	291,553,719

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

Yes x No o

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

Item 17 x Item 18 o

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INTRODUCTION

In this Form 20-F, the terms the Company , Novo Nordisk and the Group refer to the parent company Novo Nordisk A/S together with its consolidated subsidiaries. The term Novo Nordisk A/S is used when addressing issues specifically related to this legal entity.

Novo Nordisk is organized under Danish law as a public limited liability company. As such, the Company has a two-tier board structure consisting of a Board of Directors and Executive Management. The Board of Directors supervises the performance of the Company, its management and organisation on behalf of the shareholders. It also participates in determining the company strategy. Executive Management, on the other hand, has responsibility for the Company s daily operations. The two bodies are separate, and no individual serves as a member of both.

Throughout this Form 20-F the Company incorporates information to the various items by reference to its *Annual Financial Report 2002* and *Annual Financial Report 2001*. Therefore the information in this Form 20-F should be read in conjunction with the *Annual Financial Report 2002* and *Annual Financial Report 2001*, which were filed on Form 6-K on 20 February 2003 and on 26 April 2002, respectively.

The Company publishes its financial statements in Danish kroner (DKK).

PART I

ITEM 1 IDENTITY OF DIRECTORS, EXECUTIVE MANAGEMENT AND ADVISORS

Not applicable.

ITEM 2 OFFER STATISTICS AND EXPECTED TIMETABLE

Not applicable.

ITEM 3 KEY INFORMATION

SELECTED FINANCIAL DATA

Reference is made to Note 35 in the *Annual Financial Report 2002* regarding selected financial data.

Exchange rates

The following table sets forth, for the calendar periods indicated, certain information concerning Danmarks Nationalbank s daily official exchange rates for US dollars (USD) in terms of Danish kroner expressed in DKK per USD 1.00. These rates closely approximate the noon buying rate for Danish kroner for cable transfers in New York City as announced by the Federal Reserve Bank of New York for customs purposes on the relevant dates.

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Month	High	Low
September 2002	7.6975	7.4455
October 2002	7.6320	7.5117
November 2002	7.4977	7.3357
December 2002	7.5231	7.0822
January 2003	7.1592	6.8408
February 2003	6.9421	6.8155

Year	Average rate[1]	Period end rate	High	Low
1998	6.6970	6.3865	7.0673	6.0667
1999	6.9834	7.3988	7.4135	6.3046
2000	8.0903	8.0205	9.0060	7.1800
2001	8.3619	8.4095	8.8611	7.8186
2002	7.8812	7.0822	8.6591	7.0822

CAPITALIZATION AND INDEBTEDNESS

Not applicable.

REASONS FOR THE OFFER AND USE OF PROCEEDS

Not applicable.

RISK FACTORS

The disclosure and analysis set forth herein and in the Company s *Annual Financial Report 2002* contain forward-looking statements as the term is defined in the US Private Securities Litigation Reform Act of 1995. Forward-looking statements provide current expectations or forecasts of events such as new product introductions, product approvals and financial performance. Such forward-looking statements are subject to risks, uncertainties and inaccurate assumptions. This may cause actual results to differ materially from expectations. Factors that may affect future results include interest rate and currency exchange rate fluctuations, delay or failure of development projects, production problems, unexpected contract breaches or terminations, wholesaler inventory movements, government-mandated or market-driven price decreases for Novo Nordisk s products, introduction of competing products, Novo Nordisk s ability to successfully market both new and existing products, exposure to product liability and other lawsuits, changes in reimbursement rules and governmental laws and related interpretation thereof and unexpected growth in costs and expenses.

No undue reliance should be placed on these forward-looking statements, which are applicable only as of the date hereof. The Company has no obligation to revise or update these forward-looking statements to reflect events or circumstances that arise after the date hereof or to reflect the occurrence of unanticipated events.

Although it is impossible to predict or identify all possible risk factors, the following section includes a discussion of important factors that could affect Novo Nordisk s actual future results of operations. Some of these and other risks and uncertainties are also described in the *Annual Financial Report 2002,* elsewhere in this Form 20-F and in other reports filed by Novo Nordisk with the Securities and Exchange Commission (SEC) and readily available to the public.

1 The average exchange rate is calculated by using the exchange rate on the last day of each month according to Danmarks Nationalbank#s daily official exchange rates.

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Specific risk factors

Market risks

Novo Nordisk s diabetes care business accounted for approximately 70% of its total consolidated sales in 2002. If new and more effective treatment regimens for insulin users were introduced by a competitor, the impact on Novo Nordisk s sales and net income could be significant. A significant part of the future growth in insulin sales is expected to come from product upgrades. Novo Nordisk cannot assure the success of such upgrades.

The market for diabetes care products continues to be competitive. The introduction by competitors of new oral antidiabetic drugs for the treatment of type 2 diabetes has in the past had and may in the future have a negative impact on the rate of growth in sales of the Company s products.

NovoSeven® accounted for approximately 14% of the total consolidated sales in 2002. The current indication for NovoSeven® is narrow and sales fluctuate in each market from month to month depending on individual bleeding episodes and use in relation to surgery in hemophilia patients with inhibitors and also to a certain extent on investigational use of the product. Novo Nordisk cannot assure that NovoSeven® sales will continue to grow.

Increasing parallel importation of Novo Nordisk s products from low-price markets to higher-priced markets may impact the sales and profitability of the Company negatively.

Novo Nordisk s total sales may also fluctuate, e.g., due to fluctuations in wholesaler ordering patterns. Sales in markets dominated by tender orders and large contracts are especially exposed to unexpected shortfalls.

Development, product and production risks

Successful clinical development of the Company s new drug candidates is by nature highly uncertain and dependent on a variety of factors, many of which are beyond the Company s control. Drug candidates that appear promising in the early phases of development may fail to reach the market for numerous reasons including, but not limited to, adverse side-effect profiles, insufficient efficacy, failure to obtain regulatory approval by relevant health authorities, including the United States Food and Drug Administration, and intellectual property rights held by others. Novo Nordisk cannot assure that it will be able to continue to successfully develop new products, to manufacture these products in a commercially viable manner, to obtain required regulatory approvals or to gain satisfactory market acceptance for its products.

Novo Nordisk is currently marketing a broad variety of pharmaceutical products. Undetected and/or unexpected problems related to the Company s products including, but not limited to, product defects, unexpected side effects or obsolescence could materially affect results of operations.

Difficulties or delays in product manufacturing or marketing including, but not limited to, the inability to build up sufficient manufacturing capacity to meet the market demand for the Company s products, failure to obtain regulatory approval of new facilities by relevant health authorities, including the United States Food and Drug Administration, or the failure to obtain market acceptance of approved products, could affect future results.

Unexpected shortages or increases in the costs of materials and resources used in the manufacture of Novo Nordisk s products could have an adverse impact on Novo Nordisk s profitability.

Financial risks

Changing business conditions, including fluctuations in foreign currency exchange rates and interest rates, could adversely affect future results. For example, a 5% movement in each of the USD, JPY, and

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GBP exchange rates is estimated to produce an annual change in operating profit of approximately DKK 160 million, DKK 130 million and DKK 75 million, respectively. The assumptions underlying the calculation are based on the expectations for 2003. For further information on financial risk factors, please refer to Financial risk factors and financial risk management on pages 17 18 of the *Annual Financial Report 2002*.

Other operational risks

Additional factors affecting Novo Nordisk s ability to grow earnings in 2003 and beyond include, but are not limited to, income from other licensing agreements, earnings from new products, and productivity improvements.

Government-mandated or market-driven price decreases for the Company s products in the Company s major markets including Japan, North America and Europe, could adversely affect future results.

Tax risks

The Company has operations in a number of countries which have differing tax laws and rates. Consequently, the Company s effective tax rate may vary depending on several factors including, but not limited to, changes in domestic as well as international tax laws, and tax rates and tax audits by local tax authorities in the countries in which the Company operates.

Intellectual property risks

Patents and other proprietary rights are important to the business of Novo Nordisk. Novo Nordisk also relies upon trade secrets, know-how, continuing technological innovations and licensing opportunities to develop and maintain its competitive position. Novo Nordisk currently holds numerous patents and patent applications which relate to aspects of the technology used in certain of Novo Nordisk s products. Novo Nordisk cannot assure that patent applications filed by Novo Nordisk will result in the issuance of patents or that any patents owned or licensed to Novo Nordisk will provide competitive advantages for Novo Nordisk s products or will not be challenged or circumvented by others, or that the rights granted thereunder will provide proprietary protection to Novo Nordisk.

Litigation risks

Novo Nordisk is party to various legal proceedings, including patent infringement suits and various other matters. Executive Management does not believe that any of these currently pending suits will have a material negative effect on the Company s financial position. However, significant adverse litigation could affect the Company s future results and financial position. Please refer to Item 8 on Legal Proceedings for further information.

ITEM 4 INFORMATION ON THE COMPANY

HISTORY AND DEVELOPMENT OF THE COMPANY

Novo Nordisk A/S was formed in 1989 by a merger of two Danish companies, Nordisk Gentofte A/S and Novo Industri A/S. Novo Industri A/S was the continuing company and its name was changed to Novo Nordisk A/S. The business activities of Nordisk Gentofte were established in 1923 by August Krogh, H. C. Hagedorn and A. Kongsted, and the business activities of Novo Industri were established in 1925 by Harald and Thorvald Pedersen. The business of both companies from the beginning was production and sale of insulin for the treatment of diabetes. Having demerged the enzyme business into a separate company, Novozymes A/S, in November 2000 Novo Nordisk today is a focused healthcare company.

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Legal name:	Novo Nordisk A/S
Commercial name:	Novo Nordisk
Domicile:	Novo Allé, DK-2880 Bagsværd, DENMARK Tel: +45 4444 8888 Fax: +45 4449 0555 Website: www.novonordisk.com (The contents of this website are not incorporated by reference into this Form 20-F.)
Date of incorporation:	28 November 1931
Legal form of the Company:	A Danish limited liability company
Legislation under which the Company operates:	Danish law
Country of incorporation:	Denmark

Important events in 2002

In January 2002 Novo Nordisk acquired 76% of the voting shares and 39% of the total capital of Biobrás a well-established company in the Brazilian diabetes care market. On 19 November Novo Nordisk acquired an additional 55.4% of the total share capital in Biobrás. During December the remaining shares were redeemed and Biobrás was delisted from the São Paulo stock exchange. Consequently, Biobrás is now a wholly-owned subsidiary of Novo Nordisk. The total purchase price of Novo Nordisk s shareholding after the redemption is BRL 133.5 million (DKK 380 million). The acquisition and full integration of Biobrás in the Novo Nordisk organisation is still subject to final clearance by the Brazilian competition authorities. This clearance is expected to be obtained during the first half of 2003.

Novo Nordisk is the largest shareholder of the Seattle-based biotech company ZymoGenetics, Inc., which in January 2002 completed an initial public offering on the US NASDAQ stock exchange of 10,000,000 shares of its common stock. ZymoGenetics is listed under the ticker symbol ZGEN . The issuance of new shares in ZymoGenetics provides Novo Nordisk with an unrealized pretax capital gain of DKK 236 million. After the completion of the offering, Novo Nordisk holds 39% of the company on a fully diluted basis.

In a press release on 10 April 2002 Novo Nordisk announced that due to lower than expected sales in the first quarter, full-year performance was not likely to meet the Company s previous guidance. The expected growth in operating profit for 2002 was reduced to a 5 10% range, dependent on the development in foreign exchange rates.

On 22 July 2002 Novo Nordisk suspended the phase 3 trials of ragaglitazar (NN622), a dual-acting insulin sensitiser. This was done based on urine bladder tumor findings in one mouse and a number of rats. Novo Nordisk has now decided not to pursue further development of NN622 based on a renewed benefit/risk assessment of the compound. The analysis included both data from the terminated clinical phase 3 studies and further animal tumor mechanism studies that turned out not to be conclusive. Novo Nordisk continues its efforts to develop new type 2 diabetes drugs. It has decided to proceed with the development of NN2344, another insulin sensitiser, based on the completed analysis of phase 2, where Novo Nordisk found a good clinical efficacy and safety profile.

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Capital expenditure in 2002

The total net capital expenditure for property, plant and equipment was DKK 4.0 billion in 2002 (includes fixed assets acquired in connection with the acquisition of Biobrás) compared with DKK 3.8 billion in 2001 and DKK 2.1 billion in 2000. This reflects a significant increase in investment in production capacity. Such increase is intended to further support the continued roll-out of existing products and the launch of new products. Investments in 2002 were mainly capacity expansion within the diabetes care area and capacity expansion program for NovoSeven®. The investments are primarily taking place in Denmark and are financed internally. The most significant parts of the expansion programs are human insulin and insulin as part of bulk production capacity, NovoSeven® bulk capacity and expanded production capacity for the new insulin doser InnoLet® and other future insulin delivery devices. Novo Nordisk expects to invest DKK 3.5 billion in new facilities in 2003. The investment level is expected to decrease in 2004. For further information on investments please refer to Investment in facilities on page 2 and Outlook for the year 2003 on page 4 in the *Annual Financial Report 2002*. Apart from the acquisition of the shares in Biobrás S.A. in Brazil and the initial public offering of the common stock of ZymoGenetics, no significant acquisitions or divestitures of financial fixed assets have occurred during 2002 or 2003 to date.

Public takeover offers in respect to the Company s shares

No such offers have occurred during 2002 or 2003 to date.

BUSINESS OVERVIEW

Novo Nordisk is a focused healthcare company and a world leader in diabetes care. In addition, Novo Nordisk has a leading position within areas such as hemostasis management, growth hormone therapy and hormone replacement therapy. Novo Nordisk manufactures and markets pharmaceutical products and services that make a significant difference to patients, the medical profession and society. With headquarters in Denmark, Novo Nordisk employs more than 18,000 people in 68 countries and markets its products in approximately 180 countries.

Segment information

Novo Nordisk is engaged in discovery, development, manufacturing and marketing of pharmaceutical products and has only one business segment healthcare. Within the healthcare segment Novo Nordisk has four main therapy areas: diabetes care, hemostasis management, growth hormone therapy and hormone replacement therapy.

For information on certain net turnover (amounts realized from sales excluding value added tax and after deduction of goods returned, trade discounts and allowances) information by therapy areas and geographical areas and the development in price and volume/mix and currency, reference is made to *Annual Financial Report 2002* page 12 Financial highlights .

Diabetes care

Information relating to diabetes care may be found in the Company s *Annual Financial Report 2002* on pages 5, 10 11 and 14-15, under the sections Insulin analogues and oral treatment sales growth , Research and development pipeline and Diabetes care , and is incorporated herein by reference.

Hemostasis management

Information relating to hemostasis management may be found in the Company s *Annual Financial Report 2002* on pages 5, 10 11 and 15, under the sections Demand for NovoSeven® increasing , Research and development pipeline and Hemostasis management and is incorporated herein by reference.

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Growth hormone therapy

Information relating to growth hormone therapy may be found in the Company s *Annual Financial Report 2002* on pages 5, 10 11 and 15 16, under the sections Increase in sales for Norditropin® SimpleXx® , Research and development pipeline and Growth hormone therapy , and is incorporated herein by reference.

Hormone replacement therapy

Information relating to hormone replacement therapy may be found in the Company s *Annual Financial Report 2002* on pages 5 and 16, under the sections Low-dose preparations with natural estrogen and Hormone replacement therapy , and is incorporated herein by reference.

Seasonality

Sales of individual products in individual markets may be subject to seasonality and fluctuations from quarter to quarter, but besides the first and third quarters often being relatively weak, and a trend of increasing sales per quarter in general going from first quarter to fourth quarter, the Company s consolidated results of operations have not been subject to significant seasonality.

Raw materials

As a focused healthcare company the impact on the overall profitability of Novo Nordisk from variations in raw material prices is unlikely to be significant. No raw material supply shortage has had a significant impact on the Company s ability to supply the market. The Company s production is mostly based on common, readily available and relatively inexpensive raw materials. Certain specific raw materials are, however, less available. For such raw materials, it is the policy of the Company to develop close and long-term relationships with key suppliers as well as to secure dual sourcing whenever possible.

Marketing and competition

Novo Nordisk s insulin and other pharmaceutical products are marketed and distributed through subsidiaries, distributors and independent agents with responsibility for specific geographical areas. The most important markets for these products have been North America, Japan and the major European countries.

Market conditions within the pharmaceutical industry continue to change, including efforts by both private and governmental entities to reduce/control costs in specific therapeutic areas.

Historically, the market for insulin has been more sensitive to quality of products and services than to price. Most of the countries in which the Company sells insulin subsidize or control pricing. In most of these markets insulin is a prescription drug, but in the United States, human insulin may be sold over the counter, whereas insulin analogues require a prescription.

In the normal course of its business the Company enters into numerous contracts with customers, suppliers and industry partners. Some of the most important contracts include: in- and out-licensing (patent rights, products and development projects), co-promotion and co-development agreements, large tender orders and long-term sub-supplier agreements.

New manufacturing processes, efficient quality systems and innovative research and development are all important competitive factors affecting the Company.

Several of the major international pharmaceutical companies have entered the diabetes market, specifically in the area of oral products for treatment of type 2 diabetes. The insulin market has fewer producers with Novo Nordisk and Eli Lilly on the world market as leading players, and with Aventis historically acting locally in certain European markets and recently also in the United States.

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Patents

Patents are important intellectual property rights of Novo Nordisk. The Company does not anticipate any patent expirations that will have a significant negative impact on the sales of the Company within the next five years. Activelle®/Activella® sales may become exposed to generic products due to patent expiration in United States in 2006 and in Europe where the patent expires in 2004 for some countries and 2009 for the rest of the countries. The patent on NovoSeven® in Japan expires in 2008. Novo Nordisk seeks patents whenever there are products or processes which may qualify for patent protection. In common with other companies engaged in production based upon rDNA technology, Novo Nordisk has obtained licenses under various patents which entitle the Company to use processes and methods of manufacturing covered by such patents.

Impact of regulations

As a pharmaceutical company, Novo Nordisk is dependent on governmental approvals concerning production, development, marketing and reimbursement of its products. Important regulatory bodies include the United States Food and Drug Administration and the European Agency for the Evaluation of Medicinal Products in Europe. Treatment guidelines from non-governmental organizations like the European Association for the Study of Diabetes and the American Diabetes Association may also have an impact on the Company.

ORGANIZATIONAL STRUCTURE

Novo Nordisk A/S is a publicly quoted Danish company with an A and B share capital structure. The B shares are traded on the stock exchanges of Copenhagen and London and in the form of American Depositary Receipts (ADRs) on the New York Stock Exchange (ticker symbol NVO).

The A share capital is not listed on any stock exchange. Novo Nordisk s A shares with a total nominal value of DKK 107,487,200 are held by Novo A/S (based in Gladsaxe, Denmark), a private limited Danish company which is 100% owned by the Novo Nordisk Foundation (based in Gentofte, Denmark). In addition, Novo A/S holds Novo Nordisk B shares with a nominal value of DKK 81,948.580. Holding approximately 27% of the total share capital, Novo A/S controls approximately 70% of the total number of votes. The accounts for Novo Nordisk are included in the consolidated financial statements for the Novo Nordisk Foundation.

Information about the companies in the Novo Nordisk Group, set forth in the Company s *Annual Financial Report 2002* on pages 50 51, Companies in the Novo Nordisk Group , is incorporated herein by reference.

PROPERTY, PLANTS AND EQUIPMENT

The Company s headquarter is located in Bagsværd, Denmark where the Company occupies several office buildings, the majority of which are owned by the Company.

The Company s major research and development facilities are located at a number of sites in Denmark. A number of smaller research and development operations around the world focus primarily on their local markets.

The major production facilities owned by the Company are located at a number of sites in Denmark and the major international production or processing facilities are located in the US, France, Japan, China, South Africa and Brazil.

The Company believes that its current production facilities and those facilities under construction are adequate to meet its future capacity requirements. Please refer to the section Capital expenditure under

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Item 4 for more information about the current expansion programs. The following table sets forth the nature and location of the Company s tangible fixed assets as of 31 December 2001 and 2002:

Figures in DKK million	2001	2002
Nature of assets:		
Land and buildings	5,353	**5,689**
Plant and machinery	3,072	**3,483**
Other equipment	1,073	**1,137**
Fixed assets in course of construction and payments on account	4,128	**5,896**
Total tangible assets	**13,626**	**16,205**
Location:		
Europe	12,647	**15,301**
North America	481	**425**
Japan & Oceania	411	**329**
International Operations	87	**150**
Total tangible assets	**13,626**	**16,205**

The tangible fixed assets include several production sites worldwide at the end of 2002. There are no material charges on the properties. All bulk production is located in Denmark, primarily in Kalundborg and secondarily in Bagsværd and Gentofte. Further NovoSeven® bulk capacity is currently being constructed in Hillerød. Below is a tabular presentation of all the production sites.

Major production facilities	Size of site, square meters	Major activities
Kalundborg, Denmark	107,000	
1. Diabetes Bulk Production		Active pharmaceutical ingredients for diabetes and hemostasis
2. Site Factor VII		Active pharmaceutical ingredients for diabetes and hemostasis
3. Diabetes Pharmaceutical Production		Finished products for diabetes
Hillerød, Denmark	80,000	
1. Medical Systems Production		Devices
2. Diabetes Disposable Pens		Finished products for diabetes
3. Factor VII, site under construction		Active pharmaceutical ingredients for hemostasis
Bagsværd, Denmark	26,000	Finished products for diabetes
Gentofte, Denmark	44,000	Finished products for growth disorders, glucagon and hemostasis
Måløv, Denmark	23,000	HRT tablets, tablets for type 2 diabetes
Hjørring, Denmark	9,000	Needles
Tianjin, China	7,000	Packaging of products for the Chinese market
Koriyama, Japan	8,000	Packaging of products for the Japanese market
Chartres, France	15,000	Finished products for diabetes
Johannesburg, South Africa	5,000	Finished products for diabetes and other therapeutic areas
Clayton, USA	12,000	Finished products for diabetes
Montes Claros, Brazil	20,000	Active pharmaceutical ingredients for diabetes Finished products for diabetes

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Novo Nordisk is committed to conducting business in an environmentally responsible manner. The Company pursues new ways of reducing the Company s negative impact on the environment while continuing to grow and bringing new products to market. No currently identified environmental issue is expected to have a material negative effect on the Company s ability to use its assets efficiently.

After a year of preparation, the first stage of implementation of Novo Nordisk s new Environmental Management System (EMS) was completed in 2002, with seven production sites obtaining ISO 14001 certifications. By third quarter 2003 all production sites worldwide are expected to be certified. The goal is optimal control of significant environmental impacts of our operations worldwide.

With the implementation of Novo Nordisk s ISO 14001 system, the annual target-setting process has been changed to a bottom-up process, involving not only management but also a vast number of employees. Approximately 4,000 employees have been trained in environmental management during the year.

ITEM 5 OPERATING AND FINANCIAL REVIEW AND PROSPECTS

CRITICAL ACCOUNTING POLICIES

The consolidated financial statements in Novo Nordisk s *Annual Financial Report 2002* are prepared in accordance with Danish GAAP. The Directors and Executive Management believe that the accounting policies applied give a true and fair view of the Group s assets, liabilities, shareholders funds, financial position, results and cash flows.

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date(s) of the financial statements and the reported amounts of revenues and expenses during the reporting period(s). Actual results could differ from those estimates. The following significant accounting policies[2] applied are the most significant to fully understand and evaluate Novo Nordisk s consolidated financial statements.

Income recognition

Sales of goods are recognized as income at the time of risk transfer related to the goods sold. As a principal rule sale of intellectual property is recorded as income at the time of the sale. Where the Group assumes an obligation in connection with a sale of intellectual property the income is recognized in accordance with the term of the obligation. On the sale of intellectual property where the final sale is conditional on future events, the amount is recorded as income at the occurrence of such future events.

In November 2002, the Emerging Issue Task Force (EITF) reached a final consensus on EITF 00-21, Revenue Arrangements with Multiple Deliverables. EITF 00-21 addresses certain aspects of the accounting of revenue arrangements with multiple deliverables by a vendor. The Issue outlines an approach to determine when a revenue arrangement for multiple deliverables should be divided into separate units of accounting and, if separation is appropriate, how the arrangement consideration should be allocated to the identified accounting units. The consensus reached in the Issue will be effective for Novo Nordisk in its financial statements beginning 1 January 2004. Novo Nordisk is currently determining the impact of the adoption of EITF 00-21 on the Group s consolidated financial statements.

2 Please refer to Note 1 in the *Annual Financial Report 2002* for a full description of accounting policies applied.

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Investments in research and development companies

The Group s share of loss in associated research and development companies is included under research and development costs if the activities in these companies are considered to be within Novo Nordisk s focus areas. Minor investments in such research and development companies in which the Novo Nordisk Group does not obtain significant or controlling influence are charged to the profit and loss account as research and development costs on acquisition. Further, capital gain from dilution or sale of interests in such research and development companies is included under License fees and other operating income .

Financial instruments

All financial instruments are measured at market value at the balance sheet date and recognized in the balance sheet. Unrealized foreign exchange rate adjustments of financial instruments hedging future income and expenses are deferred via shareholders funds until the hedged item is recognized in the profit and loss account.

Share options

Share options granted have an exercise price corresponding to the market price of the Company s shares at the time of option program announcements or issuance, and all share options granted have been hedged by the Group s holding of own shares and shares in Novozymes A/S. Consequently, no cost or obligation at the date of grant or in connection with any subsequent value adjustment is recognized in the profit and loss account.

Indirect production costs

Work in progress and finished goods are stated at cost assigned by using the first-in, first-out method. Cost comprises direct production costs such as raw materials, consumables, energy and labor, and indirect production costs such as employee costs, depreciation, maintenance etc.

The indirect production costs are measured based on a standard cost method which is reviewed regularly in order to ensure relevant measures of utilization, production lead time etc. Changes in the method for calculation of indirect production costs including, utilization levels, production lead time etc. in the calculation of indirect production costs could have an impact on the gross margin and the overall valuation of Stocks .

Allowance for write-down for doubtful debtors

Debtors are stated at amortized cost less write-downs for potential losses on doubtful debts. The write-downs are based on individual assessments of each debtor, which also include an evaluation of payment risk associated with individual countries. Based on actual losses in the last three years the uncertainty connected with the allowance for write-down for doubtful debtors is considered limited.

Provisions and contingencies

Management of the Company makes judgments about provisions and contingencies, including the probability of pending and future litigation outcomes that in nature are dependent on future events that are inherently uncertain. In making its determinations of likely outcomes of litigation and tax matters etc., management consider the evaluation of outside counsel knowledgeable about each matter, as well as known outcomes in case law. See Item 8 on Legal Proceedings and the Annual Financial Report note 33 (page 40) for a detailed discussion of the key litigation matters the Company faces.

New Danish accounting standards

The Danish Accounting Standards Board has issued a number of new accounting standards, which have effect for 2002. Generally the standards are in line with the new Danish Company Accounts Act of 2001 and International Accounting Standards (IAS) and have not had impact on the recognition and measurement in the consolidated financial statements.

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NEW ACCOUNTING PRONOUNCEMENTS

In August 2001, SFAS No. 143 Accounting for Asset Retirement Obligations was issued. This statement is effective for fiscal years beginning after 15 June 2002 and requires obligations associated with the retirement of a tangible long-lived asset to be recorded as a liability when those obligations are incurred, with the amount of the liability initially measured at fair value. Novo Nordisk does not have any such obligations and accordingly SFAS 143 does not have any impact on Novo Nordisk s financial position or results of operations. On a prospective basis this standard could have an affect on Novo Nordisk, but there are no current activities or initiatives which the standard addresses.

On 30 July 2002, the FASB issued SFAS No. 146, Accounting for Costs Associated with Exit or Disposal Activities . This statement nullifies Emerging Issues Task Force (EITF) Issue No. 94-3, Liability Recognition for Certain Employee Termination Benefits and Other Costs to Exit an Activity (including certain Costs Incurred in a Restructuring) . This statement requires costs associated with exit or disposal activities to be recognized when the costs are incurred, rather than at a date of commitment to an exit or disposal plan. The provisions of SFAS 146 are effective for disposal activities initiated after 31 December 2002. On a prospective basis this standard could have an affect on Novo Nordisk, as there is no immediate decision to change accounting principle.

In December 2002, the FASB issued SFAS No. 148, Accounting for Stock-Based Compensation Transition and Disclosure an Amendment of SFAS No. 123 . This standard provides two additional transition methods for companies electing to adopt the fair value accounting provisions of SFAS 123, Accounting for Stock-Based Compensation but does not change the fair value measurement principles of SFAS 123. In the US GAAP reconciliation Novo Nordisk accounts for the stock-based compensation according to APB 25 and has not adopted the new rules for voluntary transition to the fair value based method of accounting for stock-based employee compensation. On a prospective basis this standard could have an affect on Novo Nordisk, but there is no immediate decision to change accounting principle.

In November 2002, the FASB issued Interpretation No. 45 (FIN 45), Guarantor s Accounting and Disclosure Requirements for Guarantees, Including Indirect Guarantees of Indebtedness of Others . The Interpretation expands on the accounting guidance of FAS 5, Accounting for Contingencies , FAS 57, Related Party Disclosures , and FAS 107, Disclosures about Fair Value of Financial Instruments , and incorporates without change the provisions of FIN 34, Disclosure of Indirect Guarantees of Indebtedness of Others , an interpretation of FASB Statement No. 5, which is being superseded. FIN 45 elaborates on the existing disclosure requirements for most guarantees, including loan guarantees, such as standby letters of credit. It also clarifies that at the time a company issues a guarantee, the company must recognize an initial liability for the fair value, or market value, of the obligations it assumes under that guarantee and must disclose that information in its interim and annual financial statements. FIN 45 will be effective to the Company on a prospective basis to guarantees issued or modified after 31 December 2002. The disclosure requirements in this Interpretation are effective for financial statements of periods ending after 15 December 2002. This new Interpretation is not expected to have a material impact on the Group s consolidated financial statements.

In January 2003, the FASB issued Interpretation No. 46, Consolidation of Variable Interest Entities (FIN 46). Under that Interpretation, certain entities known as Variable Interest Entities (VIE) must be consolidated by the primary beneficiary of the entity. The primary beneficiary is generally defined as having the majority of the risks and rewards arising from the VIE. For VIEs in which a significant (but not majority) variable interest is held, certain disclosures are required. The measurement principles of this interpretation will be effective for the Company s 31 December 2003 financial statements. Management currently is evaluating whether the classification of a VIE under FIN 46 apply to any arrangements.

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OPERATING RESULTS

The following discussion includes certain forward-looking statements. Such forward-looking statements are subject to a number of risk factors, including material risks, uncertainties and contingencies which could cause actual results to differ materially from the forward-looking statements. For a discussion of important factors that could cause actual results to differ materially from the forward-looking statements, see the discussion under the caption Risk factors contained under Item 3.

The condition and development in the financial conditions of the Group are described in the Annual Financial Reports for 2001 and 2002. The information in this section is based on these reports and should be read in conjunction with the Annual Financial Reports. The analysis and discussions included in the Annual Financial Reports are based primarily on financial statements which are prepared in accordance with Danish GAAP.

2002 compared with 2001

The following portions of the *Annual Financial Report 2002* constitute the Board of Directors and Executive Management s discussion and analysis of results of operations (incorporated herein by reference):

Management report (pages 1 4)
Financial discussion (pages 13 18)

On a US GAAP basis, net profit increased by 22% in 2002 compared with 2001. The net profit under US GAAP was 4% higher than the net profit in accordance with Danish GAAP, which is mainly due to differences in treatment of unrealized gains and losses on cash flow hedges, accounting for investments in research and development companies and accounting for goodwill. For further information on the reconciliation of net profit to US GAAP for the years 1998 to 2002, please refer to Note 35 in the *Annual Financial Report 2002*.

2001 compared with 2000

The following portions of the *Annual Financial Report 2001* constitute the Board of Directors and Executive Management s discussion and analysis of results of operations (incorporated herein by reference):

Management report (pages 1[3]-4
Financial discussion (pages 6-10)

On a US GAAP basis, net profit decreased by 2% in 2001 as compared with 2000. The decrease in net profit is caused by the inclusion of net profit from discontinued operations (the enzyme business) in 2000. Net profit from continuing operations (the healthcare business) increased 11% from 2000 to 2001. Net profit on a US GAAP basis was 11% lower than net profit on a Danish GAAP basis in 2001 mainly due to differences in treatment of employee shares, unrealized gains and losses on cash flow hedges and investments in research and development companies. For further information on the reconciliation of net profit to US GAAP for the years 1998 to 2002, please refer to Note 35 in the *Annual Financial Report 2002*.

3 When referring to page 3 of the Annual Financial Report 2001 Outlook for the year 2002 , please note that the Group adjusted its outlook for 2002 on 10 April 2002 due to lower than expected sales in the first quarter of 2002. This is further discussed in the discussions and analysis in the Annual Financial Report 2002, cf. above.

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Inflation

Inflation for the three most recent fiscal years has not had a material impact on the Group s net sales and revenues or on net profit.

Foreign currencies

The major part of Novo Nordisk s sales are in foreign currencies, mainly EUR, USD, JPY and GBP, whereas the predominant part of the production costs and research and development costs are in DKK. As a consequence Novo Nordisk has a significant exposure to foreign exchange risks and engages in significant hedging activities, where the most significant exposure and hedging are relating to USD, JPY and GBP. For further description of foreign currency exposure and hedging activities, please see the description of financial instruments under Liquidity and capital resources .

LIQUIDITY AND CAPITAL RESOURCES

Novo Nordisk maintains a centralized approach to the management of the Group s financial risks. The overall objectives and policies for Novo Nordisk s financial risk management are outlined in the Novo Nordisk Treasury Policy, which is approved by the Board of Directors. The Treasury Policy governs the Group s use of financial instruments, please refer to Item 11.

Financial resources

It is part of Novo Nordisk s Treasury Policy to maintain sufficient financial resources. Financial resources amounted to DKK 9,195 million at 31 December 2002 and consist of the Group s cash and cash equivalents of DKK 1,234 million together with undrawn committed credit facilities of DKK 7,961 million. The undrawn committed credit facilities consist of a USD 600 million and a EUR 500 million facility committed by a number of Danish and international banks. The facilities mature in 2004 and 2007, respectively. Cash and cash equivalents consist primarily of bank deposits and short-term government bonds. Furthermore the Group had long-term debt of DKK 824 million at 31 December 2002.

It is Executive Management s opinion that financial resources are sufficient for the present requirements of the Company. Given the significant positive cash flow from operating activities and the net cash position of the Group, credit risk is considered to be limited.

Cash flow

The free cash flow for 2002 increased to DKK 497 million from DKK 186 million in 2001. The gain in the free cash flow is a result of an increase in cash flow from operating activities of DKK 561 million in large part due to a decrease in trade debtors, however, partly offset by an increase in tax payments. Investment activities have increased, reducing cash flow, mainly due to investment in production facilities and the acquisition of Biobrás. For further information, please refer to the consolidated cash flow and financial resources on page 22 in the *Annual Financial Report 2002*.

Debt financing

Debt financing is obtained in DKK and in foreign currency. For information on currency and maturity profile, please see Notes 22 and 23 in the *Annual Financial Report 2002*. Further Novo Nordisk has asset securitization programs with two external credit institutions which cover the major part of the trade debtors in its Japanese subsidiary. These programs are designed to accelerate the receipt of cash related to those receivables. Novo Nordisk has issued a credit guarantee of up to 15% of these receivables; please see Note 33 of the *Annual Financial Report 2002*.

Financial instruments

Novo Nordisk hedges commercial exposure only and consequently does not enter into speculative positions.

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The financial instruments used in conjunction with the Group s financial risk management include currency forwards, currency options and cross-currency swaps. In addition short- and long-term debts as well as money market deposits are used in the financial risk management. For further information on financial instruments, please see Notes 31 and 32 in the *Annual Financial Report 2002*.

Commitments for capital expenditure etc.

Contractual obligations for capital expenditure and other contingent liabilities at 31 December 2002 and 31 December 2001 are shown in Note 33 of the consolidated financial statement in the *Annual Financial Report 2002*. In total the Group has contractual obligations relating to investments in fixed assets of DKK 658 million compared to DKK 1,347 million in 2001, for both years reflecting investments under the production facility expansion program which is expected to be completed in 2004.

Further, the Group has contractual obligations relating to research and development projects amounting to DKK 983 million compared to DKK 1,793 million in 2001, and other obligations amounting to DKK 535 million compared to DKK 1,071 million in 2001. For a description of the mentioned commitments and other contingencies, please refer to Note 33 in the *Annual Financial Report 2002*. In the opinion of Executive Management the Group has sufficient financial resources generated from its operating activities to cover these obligations.

RESEARCH AND DEVELOPMENT, PATENTS AND LICENSES, ETC.

Novo Nordisk s research activities utilize biotechnological methods based on genetic engineering, advanced protein chemistry and protein engineering (molecular modeling). These methods have played a key role in the development of the fermentation technology which is used in the manufacture of pharmaceutical products such as insulin, human growth hormone, recombinant Factor VIIa and glucagon.

Novo Nordisk s research and development facilities are mainly located in Denmark, but development activities take place in many other countries.

Research and development expenditures during 2002 were DKK 4,139 million (16% of net turnover), while research and development expenditures in 2001 and 2000 were DKK 3,970 million (17% of net turnover) and DKK 3,390 million (16% of net turnover), respectively. Novo Nordisk s research and development organization had approximately 3,000 employees at the end of 2002.

Executive Management expects its research and development spending to be between 16% and 17% of net turnover. The spending level could, however, increase in years in which several major projects are in phase 3 of development, as this is typically the most expensive phase.

Information relating to selected research and development projects, set forth on pages 10 11 in the *Annual Financial Report 2002*, is incorporated herein by reference.

TREND INFORMATION

Turnover

During the period 1998 2002 net turnover has shown an annual growth of 15% on average excluding the effect of currency and an annual growth of 17% on average including the effect of currency. This growth has primarily been driven by diabetes care and hemostasis management. Diabetes care accounted for 72% of net turnover in 1998 compared with 70% in 2002, whereas hemostasis management grew from 4% of net turnover to 14% in 2002. The relatively high growth in diabetes care sales, however with significant changes within quarters and years, has been enabled by the underlying growth in diabetes prevalence, increasing diagnosis rates, a trend towards more intensified therapy and the conversion from human

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insulin to insulin analogues, and from insulin sold in vials to premium-priced insulin sold for use in injection devices.

The therapy areas of growth hormone therapy and hormone replacement therapy have experienced modest growth rates. Growth hormone therapy accounted for 11% of net turnover in 1998, decreasing to 8% in 2002. A similar development was present in hormone replacement therapy accounting for 8% of net turnover in 1998 and only 5% in 2002.

A trend towards an increasing share of the Company s sales in North America has been observed. In 1998 12% of net turnover originated from North America. By 2002 this share had increased to 23%, primarily driven by increased market shares and the introduction of NovoSeven® in the market in 1999. The growth in North America and modest growth in Europe and Japan & Oceania in 2002 has reduced the relative share of turnover stemming from Europe and Japan & Oceania. In 1998 53% of net turnover originated from Europe and 21% from Japan & Oceania. By 2002 the share of net turnover from Europe had decreased to 43%, whereas the share from Japan was 17%.

Costs[4]

With growing net turnover during the past five years, particularly within high-margin products, and improved productivity, there has been a positive production cost development. In 1998 production costs accounted for 27% of net turnover, whereas the figure was 26% in 2002. It should be noted that production costs include indirect production costs and that 2002 includes recently hired employees dedicated to the new manufacturing facilities for insulin and NovoSeven® which are in the process of validation and subsequent regulatory approval.

During 1998 2002 non-production costs as a percentage of net turnover have decreased from 62% in 1998 to 54% in 2002. The development in sales & distribution costs and research & development costs is almost steady with 29 31% and 16 17% of net turnover, respectively. The only exception is research & development costs in 1998 which as a consequence of extraordinary costs corresponded to 20% of net turnover. Administration costs as a percentage of net turnover show a steady decrease from 10% in 1998 to 8% in 2002.

The above-mentioned cost development led to an improved operating profit margin over the period 1998 2002, growing from 21.5% to 23.7%.

Return on invested capital after tax (ROIC)

ROIC shows a positive development from 14% in 1998 to 20% in 2002. The cause of this development is threefold: 1) net turnover growth exceeding growth in invested capital, 2) improved operating margin and 3) lower effective tax rate.

Cash to earnings

The cash to earnings ratio has decreased from 35.0% in 1998 to 12.0% in 2002 and the average for the period corresponds to 43.3%. The years 2001 and 2002 are significantly impacted by investments in new production facilities.

4 The cost trends are calculated based on DK GAAP figures. According to US GAAP the trend would not have been significantly different.

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ITEM 6 DIRECTORS, SENIOR MANAGEMENT[5] AND EMPLOYEES

DIRECTORS AND EXECUTIVE MANAGEMENT

The Company s Articles of Association provide for a Board of Directors of four to ten members to be elected by the shareholders to serve for terms of three years. In addition, directors are elected for four-year terms by the Company s employees in accordance with Danish law, which provides that the Company s employees are entitled to be represented by half of the total number of directors elected at the Annual General Meeting, subject to a minimum of three.

Reference is made to page 60 in the *Annual Financial Report 2002* for name, position, date of birth and period of service as director for the members of Board of Directors.

Reference is made to page 61 for name, position, date of birth, year of appointment to executive officer and year of joining Novo Nordisk for the members of Executive Management.

The Board of Directors has the overall responsibility for the administration of the affairs of the Company. The Board meets seven times a year with the purpose of dealing with the principal issues of the Company s business and to establish and review general policies for the conduct of the Company s business.

The business address of each director and member of Executive Management is Novo Nordisk A/S, Novo Allé, DK-2880 Bagsværd, Denmark.

The activities of the directors and Executive Management outside the Company are included in the Company s *Annual Financial Report 2002* on pages 60 and 61.

There are no family relationships between the directors, Executive Management or between any of the directors and any member of Executive Management. No director or member of Executive Management is elected according to an arrangement or understanding with customers, suppliers or others. As required by the Danish Companies Act, directors are elected at shareholder meetings by simple majority vote.

COMPENSATION

For reference please refer to Note 30 in the *Annual Financial Report 2002* on pages 36 37.

BOARD PRACTICES

Reference is made to the *Annual Financial Report 2002* pages 6 9 regarding board practices.

5 In this document the term Senior Management refers to Executive Management in the Annual Financial Report *2002*.

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EMPLOYEES

The following table shows the total number of full-time employees in Novo Nordisk at year-end for the years 1998 2002:

Employees	1998	1999	2000	2001	2002
Denmark	7,338	7,409	8,767	10,127	**11,104**
Rest of Europe	1,760	1,935	1,999	2,292	**2,361**
North America	1,004	1,082	999	1,404	**1,481**
Japan & Oceania	858	825	771	787	**811**
International Operations	689	743	1,216	1,531	**2,248**
	11,649	**11,994**	**13,752**	**16,141**	**18,005**
Employees outside Denmark as percentage of total number of employees	37%	38%	36%	37%	**38%**

Workers in Denmark are generally organized in national unions where employment terms are negotiated on a national base between employee organizations and a national employers organization and implemented via local collective agreements. Novo Nordisk is not a member of a Danish employers association but negotiates collective agreements directly with local unions. Novo Nordisk holds regular meetings with the different employee organizations to discuss working conditions.

Novo Nordisk believes that some of the benefits of its personnel policy in Denmark include low staff turnover, high morale, and ease in recruiting new employees. The Company has never experienced any significant labor disputes. Three members of Novo Nordisk s current Board of Directors are elected by the employees.

SHARE OWNERSHIP

In 1998 Novo Nordisk set up a stock option plan for Executive Management and other key executives of the Company and its affiliates. The option plan provides for annual grants contingent on the fulfillment of certain performance and shareholder value goals based on long-term financial targets. No options have been granted for 2002.

Concerning information on the Board of Directors and Executive Management s individual holdings of and trading in Novo Nordisk shares during 2002, please refer to Note 30 in the *Annual Financial Report 2002*. As of 28 February 2003 the Board of Directors and Executive Management owned 158,220 B shares (unchanged from the end of 2002).

The total number of options to acquire B shares held by Executive Management and directors[6] as of 28 February 2003 equals 484,060, and the specific conditions can be summarized as follows[7]:

6 Retired members of Executive Management (Mads Øvlisen and Kurt Anker Nielsen) are Board members in Novo Nordisk today. The share options outstanding to Board members were issued to these Board members when they were part of Executive Management.

7 The number of B shares includes American Depositary Receipts (ADRs), where one ADR corresponds to one B share.

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Number of options held	Exercise price	Exercise period
10,500	190	19.2.2001 18.2.2006
19,500	125	25.3.2002 24.3.2007
55,000	198	24.3.2003 23.3.2008
55,500	198	22.2.2004 21.2.2009
296,060	198	01.2.2004 31.1.2007
47,500	332	08.2.2005 07.2.2010

For a full description of individual holdings and exercises of stock options, please refer to Note 30 in the *Annual Financial Report 2002*.

In the period from 1 January 2003 until 28 February 2003, no B shares have been bought by the directors or members of Executive Management, and no options have been exercised. The internal rules on trading in Novo Nordisk securities by members of the Board of Directors and Executive Management only permit trading in the 15 calendar-day period following each quarterly announcement.

Employee share programs

In May 2001 the Board of Directors decided to implement a global share program for the employees in Novo Nordisk A/S and its affiliates. Each employee was offered the possibility to buy up to 100 B shares at DKK 100 per share. In Denmark the program was executed in November 2001 and 991,591 B shares were sold to the employees. Outside of Denmark the shares were offered to the employees in the first half of 2002. 340,788 shares were sold to the employees at DKK 100 per share. The total number of employee shares sold in 2001 and 2002 amounts to 0.38% of the total number of shares in Novo Nordisk A/S and was sold from Novo Nordisk s holding of own shares. The proceeds from the sale of the shares have been recognized in shareholders funds and no costs have been recognized in the profit and loss account.

ITEM 7 MAJOR SHAREHOLDERS AND RELATED PARTY TRANSACTIONS

MAJOR SHAREHOLDERS

The total share capital of the Company is split in two classes, A shares and B shares, with differing voting rights.

All of the A shares of the Company are held by Novo A/S, a wholly-owned subsidiary of the Novo Nordisk Foundation (the Foundation). As of 31 December 2002, the A shares represented approximately 65% of the votes exercisable at the Annual General Meeting.

The Foundation was established in 1989 as the result of a merger between the Novo Foundation, Nordisk Insulin Foundation and Nordisk Insulinlaboratorium. It is a self-governing and self-owned foundation whose main purposes are to be a stable base for the business and research activities the affiliates of Novo A/S, and to support medical research and other scientific, humanitarian and social objectives.

Novo A/S was established in September 1999 with a contribution in kind of interest-bearing securities from the Foundation. In December 1999 the Foundation contributed its total holdings of A and B shares in Novo Nordisk A/S to Novo A/S in return for shares in Novo A/S. The purpose of Novo A/S is among other things to administer its portfolio of securities and minority capital interests and to administer and vote on the A shares and B shares in Novo Nordisk A/S, thereby creating a satisfactory financial return for the Foundation.

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Under its statutes (Governing Articles), the Foundation is governed by a Board of Governors, which must consist of at least six and not more than twelve members, of whom at least two must have a medical or scientific background. Members of the Foundation s Board of Governors are typically proposed by the chairman and elected by a two-thirds vote of the members who have them selves been elected under the Governing Articles. Any member may be removed by unanimous vote of the other members of the Foundation s Board of Governors. In addition, employee representatives are elected for four-year terms by the employees of the subsidiaries of the Foundation in accordance with Danish law, which provides that the employees of the subsidiaries of the Foundation are entitled to be represented by at least half of the number of members who have themselves been elected under the Governing Articles. No person or entity exercises any kind of formal influence over the Foundation s Board. The Board of the Novo Nordisk Foundation currently consists of nine persons, with two being members of the Board of Directors of Novo Nordisk A/S as well.

Under its statutes, Novo A/S is governed by a Board of Directors, which must consist of at least three and not more than six members. According to the statutes of the Foundation, its Board of Governors can and shall provide for members of its own Board of Governors to be elected to Novo A/S Board of Directors. The Board of Directors of Novo A/S currently consists of four persons, with two being members of the Board of the Foundation as well and one being member of the Board of Directors of Novo Nordisk A/S. The Chairman of the Foundation s Board of Governors also serves as the Chairman of Novo A/S Board of Directors.

The Foundation is required, in exercising its voting rights through Novo A/S at Novo Nordisk A/S General Meetings, to have regard for the protection of Novo Nordisk s interests. A shares held by Novo A/S cannot be sold or be the object of any disposition as long as the Foundation exists. The dissolution of the Foundation or any change in its objectives would require the unanimous vote of the Foundation s Board of Governors and certain other changes in the Foundation s statutes would require the approval of two-thirds of the members of the Foundation s Board of Governors. In addition, changes in the Foundation s statutes would require approval of the Danish foundation authorities. The Foundation is required to maintain material influence in Novo Nordisk A/S and its majority vote in Novo A/S.

The B shares of the Company are registered with the Danish Securities Centre and are not represented by certificates. Generally, the Danish Securities Centre does not provide the Company with information as to such registration. However, set forth below is information as of 28 February 2003 with respect to (a) any shareholder who is known to the Company to be the owner of more than 5% of any class of the Company s securities and (b) the total amount of any class owned by the directors and Executive Management as a group:

Title of class	Identity of person or group	Shares owned	Percent of class	Percent of total votes
A shares	Novo A/S	53,743,600[8]	100.00	64.91
B shares	Novo A/S	40,974,290	13.61	4.95
B shares	Danish Labor Market Supplementary Pension Scheme (ATP)	23,443,511	7.79	2.83
B shares	The Capital Group Companies Inc.	17,364,513	5.77	2.10

8 The number of A shares is calculated as an equivalent of the trading size (DKK 2) of the listed B shares but is not formally divided into number of shares. The A shares are not listed on any stock exchange.

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B shares	Novo Nordisk A/S and affiliates (treasury shares)	10,421,841	3.46	0.00
B shares	Directors and Executive Management	158,220	0.05	0.02

At the Annual General Meeting on 12 March 2002 authorization was given to the Board of Directors, until the next Annual General Meeting, to allow the Company to acquire own shares of up to 10% of the share capital and at the price quoted on the date of purchase with a deviation of up to 10%, cf. Section 48 of the Danish Companies Act. In August 2002 Novo Nordisk announced a new share buy-back scheme of DKK 2 billion which has increased the holding of own shares to almost 3%. The 2002 share buy-back scheme follows the 1998 buy-back scheme which resulted in cancellation of 22.5 million treasury shares and consequently brought the Company s holding of treasury shares down from approximately 8% at the end of 2000 to 3% in August 2001. The 2002 share buy-back scheme is expected to be completed before the end of 2003.

As the B shares are in bearer form, it is not possible to give an accurate breakdown of the holdings and number of shareholders per country. It is however estimated that 64% of the B shares were held in Denmark at the end of 2002. Approximately 21% of the B shares are estimated to be held in North America. The estimated total number of shareholders is 90,000 of which 60,000 is estimated to be Danish residents and 10,000 to be resident in the US.

In December 2001 a committee established by the Danish government in March 2001 presented its recommendations for good Corporate Governance in Denmark. One of these recommendations is that companies which in their articles of association have voting rights differentiation on shares are recommended to evaluate the expediency of such voting rights restrictions. Novo Nordisk is of the opinion that the current ownership structure with differentiated voting rights has been and continues to be appropriate and preferable for the long-term development of the Company. A revocation of the current voting rights differentiation cannot be implemented as this would violate the Articles of Association of the Novo Nordisk Foundation as approved by the Danish foundation authorities.

RELATED PARTY TRANSACTIONS

Related parties are considered to be the Novo Nordisk Foundation, Novo A/S, the Novozymes Group due to joint ownership, associated companies, the directors and officers of these entities and the management of Novo Nordisk. Following the demerger, Novo Nordisk has access to certain assets of and can purchase certain services from Novo A/S and the Novozymes Group and vice versa. All agreements relating to such assets and services have been negotiated at arm s length, and most of these agreements are for one year.

Related party transactions in 2002 are primarily payments for services provided between the Novo Nordisk Group and the Novozymes Group and transactions with associated companies. The financial impact of these transactions is limited.

Transactions with associated companies have decreased in 2002, primarily due to lower fees and royalties paid to Aradigm Corp. and ZymoGenetics, Inc., and lower equity contribution to Aradigm Corp. There have not been any significant transactions with related parties out of the ordinary course of business since 31 December 2002.

There have not been and are no loans to directors or Executive Management. Members of the Board of Directors have purchased 15,150 B shares in Novo Nordisk during 2002. 9,750 of those shares have been bought by exercising options. 5,400 shares have been bought in the market.

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For further information on related party transactions, please refer to Note 34 of the *Annual Financial Report 2002*.

INTERESTS OF EXPERTS AND COUNSEL

Not applicable.

ITEM 8 FINANCIAL INFORMATION

CONSOLIDATED STATEMENTS AND OTHER FINANCIAL INFORMATION

See Item 17 Financial statements for information on balance sheet, income statement, changes in shareholders funds, cash flow statement, related notes, etc., including comparative figures. PricewaterhouseCoopers, independent accountants, have audited the *Annual Financial Report 2002* and their report does not contain qualifications.

For information on net turnover by therapy areas and geographical areas see Item 4, Business overview .

Dividend policy

At the Annual General Meeting on 25 March 2003 the Board of Directors will propose a dividend of DKK 3.60 per share. No dividends will be paid on the Company s holding of its treasury shares. It is the intention of the Board of Directors that, over time, the payout ratio of Novo Nordisk shall be at the level of comparable companies.

Legal proceedings

In Poland the local customs authorities have investigated a number of international companies, alleging misstatement of customs values regarding the period until April 2002 when new legislation came into effect. Regarding Novo Nordisk the authorities have investigated 1999, and claimed misstatement of approximately DKK 130 million. Novo Nordisk has not received claims regarding 2000, 2001 nor 2002. In the opinion of management, Novo Nordisk has acted in compliance with Polish legislation. In spite of that, there is a risk of further legal actions against Novo Nordisk from the Polish authorities. The outcome of possible legal actions and consequences hereof are uncertain.

In October 2000, the United States District Court for the Southern District of New York entered a judgment in the case of Novo Nordisk vs. Becton Dickinson. The case began in 1996 when Novo Nordisk sued Becton Dickinson for, among other things, infringement of certain patents owned by Novo Nordisk. The case has been settled in October 2002 by way of a cross license agreement between the litigants. The financial terms were not disclosed.

In addition Novo Nordisk is engaged in certain litigation proceedings. In the opinion of Executive Management, settlement or continuation of these proceedings will not have a material effect on the financial position of Novo Nordisk.

Significant changes

No significant changes have occurred since the date of the annual financial statements. For information on important events in the financial year of 2002, please refer to Important events under Item 4.

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ITEM 9 THE OFFER AND LISTING

The table below sets forth for the calendar periods indicated, in the first two columns, high and low prices for the B shares as reported by the Copenhagen Stock Exchange and, in the third and fourth columns, high and low ADR prices as reported by the New York Stock Exchange.

Following the change in trading units as of 4 April 2001, all quotes are restated to reflect the new trading unit of DKK 2 per B share and a ratio of B shares to ADRs of 1:1.

Following the demerger of Novozymes A/S in 2000, historical quoted prices have been restated to reflect the share price excluding the value of the discontinued operations.

	DKK per B share		USD per ADR	
	High	Low	High	Low
1998	218	122	30.80	19.55
1999	182	120	25.44	17.23
2000	368	168	41.22	22.45
2001	393	277	46.30	34.70
2002	340	168	40.60	21.50

	DKK per B share		USD per ADR	
	High	Low	High	Low
2001				
1st Quarter	349	277	42.70	34.70
2nd Quarter	393	303	45.53	35.50
3rd Quarter	391	311	46.30	37.91
4th Quarter	347	301	44.00	35.20
2002				
1st Quarter	339	289	40.51	33.28
2nd Quarter	340	226	40.60	28.24
3rd Quarter	245	168	32.75	21.50
4th Quarter	233	195	32.01	25.30

	DKK per B share		USD per ADR	
	High	Low	High	Low
September 2002	233	201	30.82	26.28
October 2002	225	195	30.80	25.30
November 2002	229	208	31.10	27.68
December 2002	233	206	32.01	28.00
January 2003	217	177	31.04	25.10
February 2003	200	174	29.45	25.08

PLAN OF DISTRIBUTION

Not applicable.

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MARKETS

The Company s share capital consists of A shares and B shares. As described above, the A shares are owned by the Novo Nordisk Foundation through its fully owned company Novo A/S and are not listed or traded on any stock exchange. The B shares have been publicly traded since 1974 and have been listed on the Copenhagen Stock Exchange since that time and on the London Stock Exchange since 1978. The Copenhagen Stock Exchange is the principal trading market for the B shares.

American Depositary Receipts (ADRs) representing the B shares, as evidenced by American Depositary Receipts issued by JPMorgan Chase Bank of New York, as the Depositary, have been listed on the New York Stock Exchange since 1981. As of 31 December 2002, 10,841,883 B share equivalents (representing 3.7% of the outstanding B shares, adjusted for the treasury shares) were held in the form of ADRs.

SELLING SHAREHOLDERS

Not applicable.

DILUTION

Not applicable.

EXPENSES OF THE ISSUE

Not applicable.

ITEM 10 ADDITIONAL INFORMATION

SHARE CAPITAL

Not applicable.

MEMORANDUM AND ARTICLES OF ASSOCIATION

Articles of Association are incorporated by reference to Form 20-F for 2001 filed 26 April 2002.

MATERIAL CONTRACTS

Reference is made to the description under Item 4 Important events .

EXCHANGE CONTROLS

There are no governmental laws, decrees, or regulations in Denmark (including, but not limited to, foreign exchange controls) that restrict the export or import of capital, or that affect the remittance of dividends, interest or other payments to non-resident holders of the B shares or the American Depositary Receipts.

There are no limitations on the right of non-resident or foreign owners to hold or vote the B shares or the American Depositary Receipts imposed by the laws of Denmark or the Articles of Association of the Company.

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TAXATION

The following summary outlines certain United States and Danish tax consequences to holders of ADRs or B shares who are citizens or residents of the United States under the current Convention between the Government of the United States of America and the Government of the Kingdom of Denmark for the Avoidance of Double Taxation and the Prevention of Fiscal Evasion with Respect to Taxes on Income (the Current Convention).

For purposes of the United States Internal Revenue Code of 1986 as amended (the US Code), and the Current Convention, the holders of ADRs will be treated as the owners of the underlying B shares.

Under the usual Danish tax procedure tax is withheld from dividend payments to United States residents and corporations at a 28% rate, the rate which is generally applicable in the case of non-residents in Denmark without regard to eligibility for a reduced treaty rate. Under the Current Convention, however, the maximum rate of Danish tax which may be imposed on a dividend paid to a United States resident or corporation not having a permanent establishment (as defined therein) in Denmark is 15%. United States residents and corporations who are eligible for the reduced treaty rate may apply to the Danish tax authorities to obtain a refund of the over withheld amount.

Effective in 1987, the Danish tax authorities approved the Company s proposal to simplify such procedure. Under the approved procedure, US resident shareholders holding ADRs will receive their dividends from the Depositary reduced only by the 15% Danish withholding tax provided for in the Current Convention if they certify to being US residents. Accordingly, US resident shareholders that have submitted the required form (Form 6166) to the Depositary will not have to file for any tax withholding refund from the Danish tax authorities.

Subject to the limitations and conditions provided in the US Code, a United States citizen, resident or domestic corporation may elect to credit against its United States federal income tax liability Danish taxes paid on dividends from a Danish corporation. The credit includes taxes initially withheld from dividends declared to the extent the withheld taxes are not repayable to the United States shareholder. Alternatively, subject to applicable limitations, a US shareholder may elect to deduct Danish taxes withheld from dividend payments which will generally constitute passive income for certain shareholders. For United States federal income tax purposes, the full dividend payment, without reduction for Danish withholding tax, is treated as a foreign source dividend.

Under the US Code, dividend payments by Danish corporations generally are taxable as income for United States corporations and are not eligible for any dividend-received deduction. The full amount of dividends declared, without reduction for any Danish tax withheld, will be included in the gross income of the recipient United States corporation for United States federal income tax purposes, subject to the aforementioned foreign tax credit.

Sales of ADRs or B shares

Gains or losses derived from the sale of ADRs or B shares by an individual not a resident in Denmark or a non-Danish corporation not doing business in Denmark are not subject to Danish taxation, but are subject to the general United States tax rules applicable to such transactions by United States citizens, residents or domestic corporations. A United States shareholder will recognize capital gain or loss for United States federal income tax purposes on a sale or other disposition of ADRs or B shares in the same manner as on the sale or other disposition of any other shares. In addition, any non-resident of Denmark may transfer out of Denmark any convertible currency representing the proceeds of the sales of ADRs or B shares in Denmark.

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Estate and gift taxes

The Company s Danish counsel has advised the Company that no Danish tax would be payable as a result of a gift of ADRs or B shares where neither the donor nor the donee were a resident in Denmark or as a result of the death of an individual owning ADRs or B shares not a resident in Denmark and whose estate is not administered in Denmark. United States citizens or residents, however, will be subject to the normal United States estate and gift tax rules with respect to such transfers.

DIVIDENDS AND PAYING AGENTS

Not applicable.

STATEMENT BY EXPERTS

Not applicable.

DOCUMENTS ON DISPLAY

It is possible to read and copy documents referred to and filed with the SEC together with this Form 20-F at the SEC s public reference room located at 450 Fifth Street, NW, Washington, DC 20549. Please call the United States Securities and Exchange Commission at 1-800-SEC-0330 for further information on the public reference rooms.

Copies of this Form 20-F Report can be downloaded from the Investors pages on www.novonordisk.com. (The contents of the website are not incorporated by reference into this Form 20-F.) The 20-F is also filed and can be viewed via EDGAR on www.sec.gov.

SUBSIDIARY INFORMATION

Not applicable.

ITEM 11 QUALITATIVE AND QUANTITATIVE DISCLOSURES ABOUT MARKET RISKS

Financial exposure and financial risk management

Novo Nordisk has centralized management of the Group s financial risks. The overall objectives and policies for Novo Nordisk s financial risk management are outlined in the Novo Nordisk Treasury Policy, which is approved by the Board of Directors. The Treasury Policy consists of the Foreign Exchange Policy, the Investment Policy, the Financing Policy, and the Policy regarding Credit Risk on Financial Counterparts together with a description of allowed instruments and risk limits.

According to the policy Novo Nordisk hedges commercial exposure only and consequently does not enter into speculative positions.

Novo Nordisk uses a fully integrated Treasury Management System to manage all financial positions including accounts payable, accounts receivable, and future expected cash flows. All financial positions are marked-to-market based upon real-time quotes, and risk is assessed using generally accepted standards.

The financial instruments used in conjunction with the Group s financial risk management are e.g. currency forwards, currency options, cross-currency and interest rate swaps. For further information on financial instruments please see Note 32 in the *Annual Financial Report 2002*. Moreover, short- and long-

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term debts as well as money market deposits are used in the financial risk management. For further information please see Notes 8, 9, 18, 22, 23 and 31 in the *Annual Financial Report 2002*.

For a description and discussion of the foreign exchange risk management, interest risk management, counterparty risk management and equity price risk management please refer to the section on financial risk factors under Financial discussion in the *Annual Financial Report 2002*.

Sensitivity analysis

When conducting a sensitivity analysis, the Group assesses the change in fair value on the market-sensitive instruments following hypothetical changes in market rates and prices. The rates used to mark-to-market the instruments are market data from the end of 2002.

Interest rate sensitivity analysis

The financial instruments included in the sensitivity analysis of interest rate risk consist of the Group s marketable bonds and deposits together with short- and long-term loans with floating and fixed interest rates. Not included are foreign currency forwards, foreign currency options, and foreign currency swaps due to the very limited interest effect of these instruments when the interest rate risk is assessed through the below-mentioned risk measures.

The interest rate risk is calculated as the duration , which expresses the percentage change in the market value of the financial instruments by a 1 percentage point parallel shift in the interest rate curve.

The result of the sensitivity analysis at the end of 2002 is as follows:

An interest rate change has a very limited effect on the Group s financial instruments. In the tabular below is shown how a 1 percentage point change of the interest rate level, all other variables being unchanged, would change the fair value of the Group s financial instruments.

	Interest rate level	Fair value of Group's financial instruments (DKK million)
2002	+1 percentage point	+10
	1 percentage point	10
2001	+1 percentage point	1
	1 percentage point	+1

Foreign exchange sensitivity analysis

The financial positions included in the foreign exchange sensitivity analysis are the Group s cash, account receivables and payables, short- and long-term loans, short- and long-term financial investments, foreign currency forward contracts, currency options, and currency swaps hedging transaction exposure. Not included are anticipated currency transactions, investments and fixed assets. Further, currency swaps hedging translation exposure are excluded from the sensitivity analysis, as the effects of changing exchange rates hereon are recognized directly under shareholders funds. Moreover, the Group does not have any marketable bonds in foreign currency.

At the end of 2002, a 5% increase in the levels of all foreign exchange rates against the DKK, i.e. a unilateral weakening of DKK, would, all other variables being unchanged, result in a decrease in the fair value of the Group s financial positions of DKK 164 million. A 5% decrease in the levels of all foreign exchange rates against DKK, i.e. a unilateral strengthening of DKK, would, all other variables being unchanged, increase the value of the Group s financial positions by DKK 164 million.

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In comparison, at the end of 2001, a 5% increase in the levels of all foreign exchange rates against the DKK, i.e. a unilateral weakening of DKK, would, all other variables being unchanged, result in a decrease in the fair value of the Group s financial positions of DKK 167 million. A 5% decrease in the levels of all foreign exchange rates against DKK, i.e. a unilateral strengthening of DKK, would, all other variables being unchanged, increase the value of the Group s financial positions by DKK 167 million.

To reflect the Danish fixed rate policy vis-à-vis EUR, an alternative calculation has been made. This calculation assumes that DKK remains unchanged versus EUR, i.e. that DKK and EUR weaken by 5% against all other currencies. Likewise it is assumed that DKK and EUR strengthen by 5% against all other currencies.

At the end of 2002, a 5% increase in the levels of foreign exchange rates against DKK and EUR would, all other variables being unchanged, result in a decrease in the fair value of the Group s financial positions of DKK 360 million. A 5% decrease in the levels of all foreign exchange rates against DKK and EUR would, all other variables being unchanged, increase the value of the Group s financial positions by DKK 392 million.

In comparison, at the end of 2001, a 5% increase in the levels of all foreign exchange rates against the DKK and EUR would, all other variables being unchanged, result in a decrease in the fair value of the Group s financial positions of DKK 251 million. A 5% decrease in the levels of all foreign exchange rates against DKK and EUR would, all other variables being unchanged, increase the value of the Group s financial positions by DKK 266 million.

ITEM 12 DESCRIPTION OF SECURITIES OTHER THAN EQUITY SECURITIES

Not applicable.

PART II

ITEM 13 DEFAULTS, DIVIDEND ARREARAGES AND DELINQUENCIES

None.

ITEM 14 MATERIAL MODIFICATIONS TO THE RIGHTS OF SECURITY HOLDERS AND USE OF PROCEEDS

None.

ITEM 15 CONTROLS AND PROCEDURES

Evaluation of disclosure controls and procedures

Novo Nordisk maintains disclosure controls and procedures that are designed to ensure that information required to be disclosed in the reports that Novo Nordisk files under the Securities Exchange Act of 1934 is recorded, processed, summarized and reported within the time periods specified in the rules and forms of the Securities and Exchange Commission, and that such information is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure. In designing and evaluating the disclosure controls

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and procedures, management recognized that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives, and management necessarily was required to apply its judgment in evaluating the cost-benefit relationship of possible controls and procedures.

Novo Nordisk s Chief Executive Officer and Chief Financial Officer have evaluated the Company s disclosure controls and procedures within 90 days prior to the date of this report, and they concluded that these controls and procedures are effective.

Changes in internal controls

There are no significant changes in internal controls or in other factors that could significantly affect these internal controls subsequent to the date of completion of the evaluation.

PART III

ITEM 17 FINANCIAL STATEMENT

The financial statements required by this item accompany this Annual Report as the Novo Nordisk *Annual Financial Report 2002* (see Exhibit 10.1).

ITEM 18 FINANCIAL STATEMENT

The Registrant has responded to Item 17 in lieu of responding to this item.

ADDITIONAL INFORMATION

Enforceability of civil liabilities

The Company is a Danish corporation and substantially all its directors and officers, as well as certain independent accountants named herein, are non-residents of the United States. A substantial portion of the assets of the Company, its subsidiaries and such persons are located outside the United States. As a result, it may be difficult for shareholders of the Company to effect service within the United States upon directors, officers and independent accountants who are not residents of the United States or to enforce judgments in the United States. In addition, there can be no assurance as to the enforceability in Denmark against the Company or its respective directors, officers and independent accountants who are not residents of the United States, or in actions for enforcement of judgments of United States courts, of liabilities predicated solely upon the federal securities law of the United States.

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ITEM 19 EXHIBITS

a. Financial statements

The following pages from the Annual Financial Report 2002, filed on Form 6-K, dated 20 February 2003, are incorporated by reference.

	Page(s) in the Annual Financial Report
Management Report	[1-4]
Diabetes care, Haemostasis management, Growth hormone therapy, Hormone replacement therapy	[5]
Corporate Governance	[6-9]
Research and development pipeline	[10-11]
Financial highlights	[12]
Financial Discussion	[13-18]
Consolidated profit and loss account for the years ended 31 December [2000, 2001 and 2002]	[20]
Consolidated balance sheets at 31 December 2001 and 2002	[21]
Consolidated cash flow and financial resources for the years ended 31 December [2000, 2001 and 2002]	[22]
Consolidated statements of changes in shareholders funds for the years ended 31 December [2000, 2001 and 2002]	[23]
Notes to the consolidated financial statements	[24-43]
Note 35, Reconciliation of DK GAAP to US GAAP	[41-43]
List of companies in the Novo Nordisk Group	[50-51]
Management Statement	[56]

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b. Exhibits

List of exhibits:

Exhibit No.	Description	Method of filing
1.1	Articles of Association of Registrant, as amended on 20 March 2001	Filed in English translation together with Form 20-F for 2001 filed on 26 April 2002.
8.1	List of companies in the Novo Nordisk Group	Incorporated by reference to pages 50 51 of the *Annual Financial Report 2002* filed on Form 6-K dated 20 February 2003.
10.1	Registrant s Annual Financial Report for the fiscal year ended December 2002	Incorporated by reference to the Registrant s Report on Form 6-K dated 20 February 2003.
10.2	Registrant s Annual Financial Report for the fiscal year ended December 2001	Incorporated by reference to the Registrant s Report on Form 6-K dated 1 March 2002.

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c. Report of independent accountants

To the Board of Directors and shareholders
of Novo Nordisk A/S

We have audited the consolidated balance sheet of Novo Nordisk A/S and its subsidiaries as of 31 December 2002 and 2001 and the related consolidated profit and loss account, the consolidated statement of changes in shareholders funds and cash flow for each of the three years in the period ended 31 December 2002, expressed in Danish kroner and incorporated with reference to the Registrants Annual Financial Report filed on Form 6-K dated 20 February 2003, pages 1-53. The financial statements are the responsibility of the Company s Management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with auditing standards generally accepted in the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatements. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes evaluation of the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the consolidated financial statements audited by us present fairly, in all material respects, the financial position of Novo Nordisk A/S and its subsidiaries at 31 December 2002 and 2001, and the results of their operations and their cash flows for each of the three years in the period ended 31 December 2002, in conformity with accounting principles accepted in Denmark.

Accounting principles generally accepted in Denmark vary in certain significant respects from accounting principles generally accepted in the United States. The application of the latter would have affected the determination of consolidated net profit expressed in Danish kroner for each of the three years in the period ended 31 December 2002 and the determination of consolidated shareholders funds and consolidated financial position also expressed in Danish kroner at 31 December 2002 and 2001 to the extent summarized in Note 35 to the consolidated financial statements in the Annual Financial Report 2002.

PricewaterhouseCoopers
Copenhagen
Denmark

6 February 2003

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SIGNATURES

The registrant hereby certifies that it meets all of the requirements for filing on Form 20-F and that it has duly caused and authorized the undersigned to sign this annual report on its behalf.

NOVO NORDISK A/S

/s/ Lars Rebien Sørensen	/s/ Jesper Brandgaard
Name: Lars Rebien Sørensen Title: President and chief executive officer	Name: Jesper Brandgaard Title: Executive vice president and chief financial officer

Dated: 21 March 2003

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CERTIFICATIONS

I, Lars Rebien Sørensen, President and CEO, certify that:

1. I have reviewed this annual report on Form 20-F of Novo Nordisk;

2. Based on my knowledge, this annual report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this annual report;

3. Based on my knowledge, the financial statements, and other financial information included in this annual report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this annual report;

4. The registrant s other certifying officers and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-14 and 15d-14) for the registrant and have:

a) designed such disclosure controls and procedures to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this annual report is being prepared;

b) evaluated the effectiveness of the registrant s disclosure controls and procedures as of a date within 90 days prior to the filing date of this annual report (the Evaluation Date); and

c) presented in this annual report our conclusions about the effectiveness of the disclosure controls and procedures based on our evaluation as of the Evaluation Date;

5. The registrant s other certifying officers and I have disclosed, based on our most recent evaluation, to the registrant s auditors and the audit committee of registrant s board of directors (or persons performing the equivalent function):

a) all significant deficiencies in the design or operation of internal controls which could adversely affect the registrant s ability to record, process, summarize and report financial data and have identified for the registrant s auditors any material weaknesses in internal controls; and

b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant s internal controls; and

6. The registrant s other certifying officers and I have indicated in this annual report whether or not there were significant changes in internal controls or in other factors that could significantly affect internal controls subsequent to the date of our most recent evaluation, including any corrective actions with regard to significant deficiencies and material weaknesses.

Date: 21 March 2003

[Lars Rebien Sørensen,]
[President and CEO]

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CERTIFICATIONS

I, Jesper Brandgaard, Chief Financial Officer, certify that:

1. I have reviewed this annual report on Form 20-F of Novo Nordisk;

2. Based on my knowledge, this annual report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this annual report;

3. Based on my knowledge, the financial statements, and other financial information included in this annual report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this annual report;

4. The registrant s other certifying officers and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-14 and 15d-14) for the registrant and have:

a) designed such disclosure controls and procedures to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this annual report is being prepared;

b) evaluated the effectiveness of the registrant s disclosure controls and procedures as of a date within 90 days prior to the filing date of this annual report (the Evaluation Date); and

c) presented in this annual report our conclusions about the effectiveness of the disclosure controls and procedures based on our evaluation as of the Evaluation Date;

5. The registrant s other certifying officers and I have disclosed, based on our most recent evaluation, to the registrant s auditors and the audit committee of registrant s board of directors (or persons performing the equivalent function):

a) all significant deficiencies in the design or operation of internal controls which could adversely affect the registrant s ability to record, process, summarize and report financial data and have identified for the registrant s auditors any material weaknesses in internal controls; and

b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant s internal controls; and

6. The registrant s other certifying officers and I have indicated in this annual report whether or not there were significant changes in internal controls or in other factors that could significantly affect internal controls subsequent to the date of our most recent evaluation, including any corrective actions with regard to significant deficiencies and material weaknesses.

Date: 21 March 2003

[Jesper Brandgaard,]
[Chief Financial Officer]