

NOVO NORDISK A S  
Form 6-K  
February 14, 2011

**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

**FORM 6-K**

**REPORT OF FOREIGN PRIVATE ISSUER**

Pursuant to Rule 13a-16 or 15d-16  
of the Securities Exchange Act of 1934

**FEBRUARY 14, 2011**

**NOVO NORDISK A/S**

(Exact name of Registrant as specified in its charter)

**Novo Allé  
DK- 2880, Bagsvaerd  
Denmark**

(Address of principal executive offices)

Indicate by check mark whether the registrant files or will file annual reports under cover of Form 20-F or Form 40-F

Form 20-F  Form 40-F

Indicate by check mark whether the registrant by furnishing the information contained in this Form is also thereby furnishing the information to the Commission pursuant to Rule 12g3-2(b) under the Securities Exchange Act of 1934.

Yes  No

If  Yes is marked, indicate below the file number assigned to the registrant in connection with Rule 12g-32(b):82-\_\_\_\_\_



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# Key figures

## 2010

		2010	2009	Change
<b>Financial performance</b>				
Sales total	DKK million	<b>60,776</b>	51,078	19.0%
Diabetes care	DKK million	<b>45,710</b>	37,502	21.9%
of which modern insulins	DKK million	<b>26,601</b>	21,471	23.9%
Biopharmaceuticals	DKK million	<b>15,066</b>	13,576	11.0%
Gross profit	DKK million	<b>49,096</b>	40,640	20.8%
Gross margin	% of sales	<b>80.8</b>	79.6	
Sales and distribution costs	% of sales	<b>29.9</b>	30.2	
Research and development costs	% of sales	<b>15.8</b>	15.4	
Administrative expenses	% of sales	<b>5.0</b>	5.4	
Operating profit	DKK million	<b>18,891</b>	14,933	26.5%
Net profit	DKK million	<b>14,403</b>	10,768	33.8%
Effective tax rate	%	<b>21.2</b>	23.0	
Capital expenditure, net	DKK million	<b>3,308</b>	2,631	25.7%
Return on equity (ROE)	%	<b>39.6</b>	31.3	
Free cash flow	DKK million	<b>17,013</b>	12,332	38.0%
<b>Long-term financial targets</b>				
Operating profit growth	%	<b>26.5</b>	20.7	
Operating profit margin	%	<b>31.1</b>	29.2	
Return on invested capital (ROIC)	%	<b>63.6</b>	47.3	
Return on invested capital (ROIC) excl non-recurring impact from divestment of ZymoGenetics, Inc. in 2010	%	<b>62.4</b>	47.3	
Cash to earnings (three-year average)	%	<b>115.6</b>	111.5	
<b>Non-financial performance</b>				
Donations	DKK million	<b>84</b>	83	1.2%
Least developed countries where Novo Nordisk sells insulin according to the differential pricing policy <sup>1</sup>	%	<b>67</b>	73	
New patent families (first filings)	Number	<b>62</b>	55	12.7%
Employees (total)	Number	<b>30,483</b>	29,329	3.9%
Employee turnover	%	<b>9.1</b>	8.3	
Energy consumption	1,000 GJ	<b>2,234</b>	2,246	(0.5)%
Total waste	Tons	<b>20,565</b>	21,019	(2.2)%
<b>Non-financial targets</b>				
Maintain a level of engaging culture of 4.0 or above up to 2014 <sup>2</sup>	Scale 1 5	<b>4.3</b>	4.3	
Diversity in all 28 senior management teams by 2014 <sup>3</sup>	%	<b>54</b>	50	
Water consumption: 11% reduction by 2011 compared to 2007	%	<b>(37)</b>	(34)	
CO <sub>2</sub> emissions: 10% reduction by 2014 compared to 2004	%	<b>(55)</b>	(31)	

Share performance

Diluted earnings per share/ADR	DKK	<b>24.60</b>	17.82	38.0%
Dividend per share (proposed)	DKK	<b>10.00</b>	7.50	33.3%
Closing share price (B shares)	DKK	<b>629</b>	332	89.5%
Market capitalisation (B shares) <sup>4</sup>	DKK billion	<b>292</b>	159	83.7%

- Novo Nordisk offers insulin at a price not exceeding 20% of the average western world price to least developed countries as defined by the
1. United Nations.
  2. Based on eVoice, an employee survey using a scale of 1 - 5, with 5 being the best.
  3. Diverse in gender and nationality.
  4. Novo Nordisk B shares (excluding treasury shares).

See more financial and non-financial highlights and non-financial targets on pp 14 - 15.

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For nearly 90 years, Novo Nordisk has combined drug discovery with technology to turn science into solutions for people with diabetes. We also provide treatments for people with haemophilia and growth hormone deficiency and for women experiencing the symptoms of menopause. We leverage our expertise with protein molecules, chronic disease management and device technology to provide innovative treatments that make a difference in quality of care.

Novo Nordisk has more than 30,000 employees in 74 countries and markets products in about 180 countries. Our B shares are listed on NASDAQ OMX Copenhagen and our ADRs are listed on the New York Stock Exchange under the symbol NVO. For more information about our company, visit [novonordisk.com](http://novonordisk.com).

Since 2004, we have reported on financial, social and environmental performance in one integrated report, with both financial and non-financial statements. We report additional information online.<sup>1</sup> The most material and business critical information is reported in the annual report. Information for specific stakeholder groups is reported at [annualreport2010.novonordisk.com](http://annualreport2010.novonordisk.com). We value feedback and welcome questions or comments about this report or our performance at [annualreport@novonordisk.com](mailto:annualreport@novonordisk.com).

1 This public filing contains references and links to information posted on the company's website; such information is not incorporated by reference into the public filing.

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 2010 accomplishments and results

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# Letter from the Chairman

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Sten Scheiby  
Chairman of the Board of Directors

The world economy was on the mend in 2010. Much of the rebound has been due to strong fiscal stimulus provided by governments, which has put pressure on public budgets, particularly in Europe and the US. This may in due course put further pressure on the already strained healthcare environment in these parts of the world. Economic growth has been maintained in emerging markets, and many of these countries are investing in improved services, including healthcare.

As part of the global response to the recent financial crisis, efforts have been made to improve corporate governance systems and make companies more transparent. In Denmark, new corporate governance recommendations were introduced in early 2010. While Novo Nordisk's practices are in accordance with the majority of the new recommendations, the company's remuneration principles have been revised to ensure that long-term management incentives and shareholder interests remain aligned, and these will be presented to the 2011 Annual General Meeting for approval. The proposed remuneration principles include incentive guidelines and introduce claw-back provisions allowing Novo Nordisk to recover variable remuneration paid on the basis of data that is subsequently determined to be misstated.

The Board of Directors oversees the strategic direction of the company, and in this capacity we have approved new long-term financial targets. The business and competitive environment has been quite favourable for Novo Nordisk recently, as have exchange rates, allowing the company to achieve the previous targets in an unusually short time frame.

In recognition of Novo Nordisk's strong balance sheet, sustainable significant cash flow and the Board's confidence in the strategic direction and long-term prospects for the business, we have consistently increased the dividend paid over the last five years. During 2010, dividends paid to Novo Nordisk shareholders increased by 25% to 7.50 Danish kroner per share. The proposed dividend for 2011 is up 33% to 10.00 Danish kroner per share. Also in 2010 Novo Nordisk repurchased shares worth 9.5 billion Danish kroner in 2010, helped by the 1.1 billion kroner profit from sale of shares in ZymoGenetics, Inc. In continuation of this, Novo Nordisk intends to buy back 10 billion kroner worth of shares in 2011.

As Novo Nordisk marks its 10th year as a focused pharmaceutical company, the Board would like to express its appreciation of the leadership shown by President and CEO Lars Rebie Sørensen and the Executive Management team. On behalf of the Board, I would also like to thank all Novo Nordisk employees around the world for their contribution to what has been an outstanding year.

Sten Scheiby  
Chairman of the Board of Directors

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# Letter from the CEO

Lars Rebien Sørensen  
President and chief executive officer

Novo Nordisk continued to deliver on our commitment to improve the lives of people with diabetes and other chronic diseases during 2010, with very positive performance for the year.

We achieved the long-term financial targets we set in our 2008 Annual Report with growth in operating profit of 27%. Sales increased by 19% in Danish kroner and 13% measured in local currencies. Our diabetes care sales increased 22% in 2010, while sales of our biopharmaceutical products increased 11%, both measured in kroner.

Uncertainties in early 2010, such as the pending approval of Victoza® and the potential for generic competition to our oral antidiabetic agent Prandin® in the US, made us cautious from the beginning of the year. Victoza® was approved in the US in January 2010 and the launch came off to a very good start, while Prandin® remained uncontested in the US throughout the year. This, combined with our strong business performance, allowed us to exceed our expectations for 2010.

We saw tremendous progress in 2010 in our development pipeline, with positive results from phase 3 trials for our next-generation insulins, Degludec (insulin degludec) and DegludecPlus (insulin degludec/insulin aspart). We also achieved significant milestones

related to the development of innovative new treatments for haemophilia, and continued our build-up of a robust pipeline of therapies for chronic inflammatory diseases.

As the global leader in diabetes care, with 51% of the insulin market measured by volume, the success of our core business is linked to innovations and improvements in global diabetes care.

Our strong sales growth has been driven by sales of our modern insulins, particularly in North America and our International Operations region, and by Victoza®.

Modern insulins accounted for close to 70% of our total insulin sales in 2010. These therapies have the potential to improve glucose control compared with human insulins, lowering the risk of hypoglycemia.

Victoza®, our new Glucagon-Like Peptide-1 treatment, which is an analogue of the naturally occurring hormone involved in glucose regulation, has expanded the market for GLP-1 treatment. Victoza® is used for treating type 2 diabetes when oral antidiabetic therapy will no longer suffice, offering another option for managing this progressive disease at early stages.

We have continued our efforts to improve access to care throughout the world, donating a portion of income from our net insulin sales to the World Diabetes Foundation and supporting improvements in the ability of healthcare systems to diagnose and treat diabetes.

As part of our Changing Diabetes® in Children programme, we established 13 new clinics to improve diagnosis and treatment of children with type 1 diabetes in developing countries.

Our manufacturing organisation reached a very ambitious milestone, increasing productivity to the extent that our cost of goods sold in 2010 fell to less than 20% of the sales volume. As the efficiency



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## 2010 accomplishments and results

of our production activities has increased, we have also reduced our environmental impact. We reduced energy and water consumed for production activities during the year and CO<sub>2</sub> emissions from energy consumption fell 35% compared with 2009 levels.

### Pursuing new ambitions

Ten years ago, when I was first appointed CEO, I went on an educational journey to study what our customers, employees and other stakeholders expected from our company. This led to the establishment of our values-based management system called the Novo Nordisk Way of Management.

I made this journey again in 2010 and was pleased to find that despite having tripled our workforce and sales and becoming a much more global business over the past decade, the values expressed in the Novo Nordisk Way of Management are more ingrained than ever. In the words of our people, we are continuing to manage our business in a responsible and sustainable way, with a focus not only on improving the company's finances but also on improving our social and environmental performance.

Part of the Novo Nordisk Way of Management framework has been our vision to become the world's leading diabetes care company. I am proud to report that we have realised this vision and are introducing a new set of milestones reflecting the challenges of the next decade. As part of our 2010 update of what is now called the Novo Nordisk Way, we are now focusing on strengthening our leadership in diabetes and aspiring to change possibilities in haemophilia and other serious chronic conditions where we can make a difference.

What has not changed is our dedication to achieving good business results in a responsible way. Our newly updated values-based management system holds all employees accountable for working in accordance with our principles and provides concise, clear guidance on how we work. The update is the outcome of an extensive, inclusive process involving consultation of employees from all over the world, patient organisations, healthcare providers and other stakeholders.

### Preparing for future growth

In 2011, we will work to solidify our leadership in diabetes care and expand into new markets and therapy areas. Our future success will depend on our performance in a number of key areas:

We expect to file for regulatory approval of Degludec (insulin degludec) and DegludecPlus (insulin degludec/insulin aspart) this year.

We are exploring entry into the obesity market, following the first phase 3 clinical results for liraglutide in obesity, which demonstrated weight loss in people with severe obesity and other co-morbidities.

We will initiate phase 3 trials for a fixed combination of Degludec (insulin degludec) and Victoza® which may offer the benefits of both compounds in a fixed, convenient solution.

We will initiate the final clinical and regulatory studies for a new recombinant factor VIIa analogue to treat people with haemophilia who have developed inhibitors. This new analogue offers the possibility of forming even stronger clots in less time.

We are anticipating a continued successful roll-out of Victoza® worldwide as well as continued market penetration of our portfolio of modern insulins.

Finally, we will continue to pursue further productivity improvements throughout our organisation.

Succeeding in these areas requires that we attract, retain and engage the most talented people to support global growth and as well as continuously improving our ability to manage innovation.

I want to thank everyone at Novo Nordisk for their contributions to our success. With the capabilities of our talented employees around the world, I believe 2011 will be yet another successful year for Novo Nordisk, one with significant growth and continued innovation for the benefit of all of our stakeholders.

[Lars Rebien Sørensen](#)  
President and chief executive officer

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2010 accomplishments and results

## Valuing therapeutic innovation

Interview with Lars Rebien Sørensen,  
Novo Nordisk's chief executive officer

### *What are the benefits of therapeutic innovations?*

The research-based pharmaceutical industry's continued efforts to discover new therapeutic offers are intended to benefit patients as well as society. In our field of business, we have seen how treatment of diabetes has improved dramatically since insulin was discovered nearly 90 years ago. Through a combination of incremental development and more radical breakthroughs, significant improvements have been achieved over just one generation, enabling people with diabetes to lead their lives in full and achieve a normal life expectancy.

Improvements have been made possible because products were priced in a way that allows for reinvestment into research in new products. Our modern insulins are now widely available, and the improvements they entail will have a cumulative impact on chronic disease treatment over decades. In our view, innovations will eventually benefit all people with diabetes.

Our diabetes care portfolio today includes human insulins as well as modern insulins, which makes it possible for Novo Nordisk to offer life-saving treatments at affordable prices and continue to improve treatment regimes that meet individual needs. Our goal is to develop the best diabetes care portfolio for healthcare systems in all parts of the world.

### *What do you consider to be reasonable price levels for new pharmaceutical products?*

The price of a new therapeutic treatment reflects the clinical benefit as well as the societal value of the therapeutic innovation, but also takes into account the cost of innovation. If pharmaceutical companies cannot recoup their investments in research and development, the business of pharmaceutical innovation will not be sustainable. And in the long run it would be patients who would pay the price.

To conduct business responsibly, we have to be profitable and provide economically viable solutions. For example, Novo Nordisk's newest product, Victoza®, was in development for nearly two decades. When planning development projects, we know we must finance larger and more complex trials over longer and longer trial periods before we can hope to receive product approval.

### *How should innovation be valued?*

Ideally, a product would be priced on the basis of an assessment of its benefits in a real world setting. Today, this is not the case. It is difficult to get sufficient information about the relative treatment benefit before a new product is launched. Allowing for conditional pricing when new products are launched would be an option to ensure that the price is right based on clinical utility and benefits to the patients. In such a pricing model, prices for new therapies could be

subsequently increased or decreased based on efficacy when compared with other treatment options.

### *What role does pricing play for Novo Nordisk in terms of ensuring availability of treatment?*

When looking at the full impact of diabetes on healthcare budgets, the price of diabetes treatment is a fraction of that. The most costly part of diabetes lies with the late-stage complications that require hospitalisation, costly interventions and leave people incapacitated for longer periods of time. That said, we do recognise that availability and affordability of medicines are preconditions for expanding access to health care. Our premise is that access to essential medicines is a human right, and we acknowledge our responsibility in addressing the barriers for proper diagnosis, treatment and care.

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In the world's poorest countries, as defined by the United Nations, we sell human insulin through our long-standing differential pricing policy, offering products at a price not more than 20% of the average prices in the western world.

In other countries, we market the full Novo Nordisk portfolio of insulins with the goal of reaching the majority of patients with diabetes with a product mix of human and modern insulins and a range of devices to suit the affordability levels of both public and private customers as well as patients who may pay out of pocket.

### *Why does Novo Nordisk remove products from the market?*

We make every effort to ensure that life-saving medicines are available to patients. This year, as several governments in Europe mandated price cuts to address their economic problems, we faced dilemmas between operating profitably and continuing to serve people who rely on our products.

In May 2010, the Greek government announced temporary price cuts of up to 27%. As a consequence, we made a decision to temporarily withdraw some products from the Greek market, but we continued to offer human insulin in vials.

In a situation like this, there is a major dilemma for a company like ours. The proposed price reductions for patented products would not have allowed us to continue running a profitable business in Greece. In the long term, if we cannot maintain profitability, we will be unable to continue to provide and improve treatment for the people who most need it. While pricing issues remain unresolved in Greece, we have been able to continue to offer our broad portfolio of products, including modern insulins, with Penfill® cartridges in the NovoPen® 4 device.

### *How should governments assess the value of treatment?*

We understand the budget constraints governments are facing. Medical costs can be an easy target in times of tough political choices. While there may be short-term savings, the cost to society can be greater over a longer time frame. The cost of treatment is usually a small fraction of overall spending on diabetes care, with most spending allocated to treat serious complications related to inadequate medical care. In the US and Europe, for instance, insulin accounts for 3% of the total costs associated with treating diabetes.



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## Performance in 2010

2010 was another successful year for Novo Nordisk with achievement of long-term financial targets set in the 2008 Annual Report, strong sales growth, continued improvement in gross margin and very significant progress in the clinical development pipeline. Following the initial 2009 launch of Victoza®, the first once-daily human GLP-1 analogue, the roll-out has succeeded in expanding the market for GLP-1 treatment.

Sales increased by 19% in Danish kroner and by 13% measured in local currencies. Sales growth was realised in both diabetes care and biopharmaceuticals. Victoza® and modern insulins were the main contributors to growth, with modern insulin sales increasing by 24% (18% in local currencies). NovoSeven® and Norditropin® sales also contributed to the strong sales growth, increasing by 14% (8% in local currencies) and 9% (4% in local currencies) respectively.

Sales growth was realised in all regions. Sales in North America increased by 29% and International Operations by 24% in Danish kroner, and by 22% and 15% respectively in local currencies.

Managing our business according to the Triple Bottom Line business principle helps ensure that decisions are balanced and take a long-term view, with the objective of protecting and enhancing shareholder value while at the same time creating societal value. In addition to strong financial performance, in 2010 we met long-term targets relating to employee engagement and adherence to our values and exceeded long-term targets for reduction of energy and water consumption and CO<sub>2</sub> emissions.

## Financial performance

### Diabetes care

We continue to be the global leader in the diabetes care market with 51% of the total insulin market and 46% of the modern insulin market, both measured by volume. Sales of diabetes care products increased by 22% measured in Danish kroner to DKK 45,710 million and by 16% in local currencies compared with 2009.

### North America

Sales in North America increased by 26% in Danish kroner and by 19% in local currencies in 2010, reflecting a continued solid market penetration of the modern insulins, Levemir®, NovoLog® and NovoLog® Mix 70/30. Novo Nordisk maintains its leadership position in the US insulin market with 42% of the total insulin market and 37% of the modern insulin market, both measured in volume. Currently, around 43% of Novo Nordisk's modern insulin volume in the US is being sold in the prefilled device FlexPen®.

### Europe

Sales in Europe increased by 4% measured in Danish kroner and by 2% in local currencies in 2010, reflecting continued progress for the portfolio of modern insulins and declining human insulin sales. Novo Nordisk holds 53% of the total insulin market and 51% of the modern insulin market, both measured in volume. Device penetration in Europe remains high with more than 95% of Novo Nordisk's insulin volume being used in devices, primarily NovoPen® and FlexPen®.

### International Operations

Sales in International Operations increased by 26% in Danish kroner and by 17% in local currencies in 2010. The main contributor to growth was sales of modern insulins, primarily in China. Sales of human insulins continue to add to overall growth in the region, also driven by China. As of 1 January 2011, a fifth Novo Nordisk region, Region China, has been established comprising China, Taiwan and Hong Kong; therefore, these countries are no longer part of International Operations. In China, Novo Nordisk currently holds 63% of the total insulin market and 70% of the modern insulin market, both measured in volume.

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Modern insulins, human insulins  
and protein-related products

In 2010, sales of modern insulins, human insulins and protein-related products increased by 17% in Danish kroner to DKK 40,642 million and by 11% measured in local currencies compared with 2009, with North America and International Operations having the highest growth rates.

Our portfolio of modern insulins was the main contributor to growth with sales increasing by 24% in Danish kroner to DKK 26,601 million and by 18% in local currencies compared with 2009, reflecting steady organic sales growth globally. All regions realised solid growth rates, with North America accounting for more than half of the growth, followed by International Operations and Europe. Sales of modern insulins now constitute nearly 70% of Novo Nordisk's insulin sales.

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**Japan & Korea**

Sales in Japan & Korea increased by 10% measured in Danish kroner and decreased by 2% in local currencies in 2010. The sales development reflects sales growth for all three modern insulins, Levemir®, NovoRapid® and NovoRapid Mix® 30, offset by a decline in human insulin sales. In a continuously challenging competitive environment, Novo Nordisk now holds 63% of the total insulin market in Japan and 56% of the modern insulin market. Device penetration in Japan remains high with more than 98% of Novo Nordisk's insulin volume being used in devices, primarily NovoPen® and FlexPen®.

**Victoza® (GLP-1 therapy for type 2 diabetes)**

Victoza® sales reached DKK 2,317 million during 2010 reflecting solid market performance in both Europe and the US. The global launch has continued throughout 2010, most recently in Russia, Argentina, Mexico and four countries in the Middle East. The market performance globally has been encouraging in 2010 with Victoza® reaching solid market shares in the GLP-1 segment as well as significantly increasing the GLP-1 class's share of the total diabetes care market.

**NovoNorm®/Prandin®/PrandiMet®  
(Oral antidiabetic products)**

In 2010, sales of oral antidiabetic products increased by 4% in Danish kroner to DKK 2,751 million and decreased by 1% measured in local currencies compared with 2009. The sales development reflects sales growth in China being offset by lower sales in Europe due to generic competition in several European markets, with the main impact in Germany.

**Biopharmaceuticals**

In 2010, sales of biopharmaceutical products increased by 11% measured in Danish kroner to DKK 15,066 million and by 5% measured in local currencies compared with 2009.

**NovoSeven® (Bleeding disorders therapy)**

Sales of NovoSeven® increased by 14% in Danish kroner to DKK 8,030 million and by 8% in local currencies compared with 2009. Sales growth for NovoSeven® was primarily realised in North America, but Japan & Korea and International Operations also contributed to the growth.

**Norditropin® (Growth hormone therapy)**

Sales of Norditropin® increased by 9% measured in Danish kroner to DKK 4,803 million and by 4% measured in local currencies compared with 2009. Novo Nordisk is the second-largest company in the global growth hormone market with a 24% market share measured in volume.

**Other products**

Sales of other products within biopharmaceuticals, which predominantly consist of hormone replacement therapy related products, increased by 6% in Danish kroner to DKK 2,233 million and decreased by 1% measured in local currencies. This development primarily reflects continued sales progress for Vagifem® being partly offset by generic competition to Activella® in the US.

**Development in cost  
and operating profit**

The cost of goods sold was DKK 11,680 million in 2010, reflecting a gross margin of 80.8% compared with 79.6% in 2009. This improvement primarily reflects a favourable product mix impact due to increased sales of modern insulins and Victoza® and a positive 0.4 percentage point currency impact.

In 2010, total non-production-related costs increased by 18% to DKK 30,862 million and by 14% in local currencies compared with 2009.

Sales and distribution costs increased by 18% to DKK 18,195 million, primarily reflecting the launch costs of Victoza® in Europe and the US, as well as a continued expansion of the field sales forces in Europe, Japan, China and the US, and an increase in the provision level for legal cases.

Research and development costs increased by 22% to DKK 9,602 million, primarily reflecting the ongoing phase 3 programme for the company's next generation of insulins, Degludec<sup>1</sup> (insulin degludec) and DegludecPlus<sup>2</sup> (insulin degludec/insulin aspart).

Licence fees and other operating income constituted DKK 657 million in 2010 compared with DKK 341 million in 2009. This development primarily reflects a sustainable higher level of licence fees as well as non-recurring income of approximately DKK 100 million related to a patent settlement during the first quarter of 2010.

Operating profit in 2010 increased by 27% to DKK 18,891 million compared with 2009. In local currencies the growth was approximately 16%.

1. Internal designation for insulin degludec.
2. Internal designation for insulin degludec/insulin aspart.

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 2010 accomplishments and results

## Net financials and tax

Net financials showed a net expense of DKK 605 million in 2010 compared with a net expense of DKK 945 million in 2009. For 2010, the foreign exchange result was an expense of DKK 1,341 million compared with an expense of DKK 751 million in 2009. This development reflects losses on foreign exchange hedging, particularly of US dollars due to the appreciation versus Danish kroner in 2010 compared with the exchange rate level prevailing in 2009.

Also included in net financials is the result from associated companies with an income of DKK 1,070 million. In 2009, the result from associated companies was an expense of DKK 55 million. In the fourth quarter of 2010, Novo Nordisk recorded non-recurring income of approximately DKK 1.1 billion from the sale of shares in ZymoGenetics, Inc. as announced on 8 October 2010.

The realised effective tax rate for 2010 was 21.2%. The effective tax rate for 2010 is lowered by a non-recurring effect of approximately 1.5 percentage points from the divestment of Novo Nordisk's ownership share of ZymoGenetics, Inc., the income from which is exempt from tax charges under applicable Danish tax laws.

## Capital expenditure and free cash flow

Net capital expenditure for property, plant and equipment for 2010 was DKK 3.3 billion compared with DKK 2.6 billion in 2009. The main investment projects in 2010 were the insulin filling plant in Tianjin, China, and new device manufacturing lines in Denmark.

Free cash flow for 2010 was DKK 17.0 billion compared with DKK 12.3 billion in 2009. The higher cash flow is driven by higher operating profit and the non-recurring proceeds from the divestment of ZymoGenetics, Inc.

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## Equity

Total equity was DKK 36,965 million at the end of 2010, equivalent to 60% of total assets, compared with 65% at the end of 2009.

### Treasury shares and 2010 share repurchase programme

During 2010 Novo Nordisk repurchased 19,534,528 shares at an average price of DKK 486 per share, equivalent to a cash value of DKK 9.5 billion. Novo Nordisk thereby concluded the previously announced 2010 share repurchase programme.

### Employee share programmes in 2010

Employees in Denmark have participated in two general employee share programmes in 2010. Approximately 8,000 employees have purchased 262,000 shares under a share save programme. The shares were purchased at a price of DKK 583.16. There are no costs to the company for this programme. Approximately 11,000 employees have purchased 567,000 shares at a price of DKK 275. The costs of this programme, DKK 192 million, were fully expensed in 2010.

Furthermore, approximately 15,000 international employees have been awarded approximately 273,000 stock options in 2010, and the cost of these, DKK 150 million, will be amortised over a 3-year vesting period.

### Holding of treasury shares and reduction of share capital

As per 1 February 2011, Novo Nordisk A/S and its wholly owned affiliates owned 28,206,755 of its own B shares, corresponding to 4.7% of the total share capital.

In order to maintain capital structure flexibility, the Board of Directors at the Annual General Meeting in 2011 will propose a reduction in the B share capital from DKK 492,512,800 to DKK 472,512,800 by cancelling 20,000,000 B shares of DKK 1 from the company's own holding of B shares at a nominal value of DKK 20,000,000, equivalent to 3.3% of the total share capital. After implementation of the share capital reduction, the company's share capital will amount to DKK 580,000,000 divided into an A share capital of DKK 107,487,200 and a B share capital of DKK 472,512,800.

### Proposed dividend and 2011 share repurchase programme

At the Annual General Meeting on 23 March 2011, the Board of Directors will propose a 33% increase in dividend to DKK 10.00 per share of DKK 1, corresponding to a pay-out ratio of

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39.6%, compared with 40.9% for the financial year 2009. Adjusting for the effect of the ZymoGenetics, Inc. share divestment, where the increased cash flow was returned to shareholders via an expansion of the 2010 share repurchase programme, the pay-out ratio is 42.8%. No dividend will be paid on the company's holding of treasury shares.

The Board of Directors has approved a new DKK 10 billion share repurchase programme to be executed during 2011. Novo Nordisk will initiate its share repurchase programme in accordance with the provisions of the European Commission's Regulation No. 2273/2003 of 22 December 2003 (The Safe Harbour Regulation). For that purpose Novo Nordisk has appointed J.P. Morgan Securities Ltd. as lead manager to execute a part of its share repurchase programme independently and without influence from Novo Nordisk. The purpose of the programme is to reduce the company's share capital. Under the agreement, J.P. Morgan Securities Ltd. will repurchase shares on behalf of Novo Nordisk for an amount of up to DKK 2.0

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billion during the trading period starting 2 February and ending on 26 April 2011. A maximum of 155,151 shares can be bought during one single trading day, equal to 20% of the average daily trading volume of Novo Nordisk B shares on NASDAQ OMX Copenhagen during the month of January 2011, and a maximum of 8,843,607 shares in total can be bought during the trading period. At least once every seven trading days, Novo Nordisk will issue an announcement in respect of the transactions made under the repurchase programme.

## Non-financial performance

The company's long-term non-financial targets support efforts to maximise positive social impact by improving access to and quality of care, attracting and retaining employees and effectively managing resources to minimise environmental impacts. Adoption of our long-established differential pricing policy, a measure of our progress to expand access to diabetes care, continued. During 2010, we met non-financial targets related to employee engagement and adherence to the Novo Nordisk Way and made progress towards the target of diversity in all senior management teams. Performance on environmental dimensions improved and we successfully exceeded targets for reduction of energy consumption, water consumption and CO<sub>2</sub> emissions.

### Social

We actively manage three dimensions of social performance: improving care for people whose healthcare needs we serve; developing our employees and ensuring a healthy and safe work environment; and making a positive contribution to the communities in which we operate.

### Patients

#### Clinical trials

The number of people participating in Novo Nordisk's clinical trials increased by 74% in 2010. Due to the phase 3 trials for Degludec and DegludecPlus, which involve more than 9,000 people, 19,361 people participated in Novo Nordisk's clinical trials in 2010, compared with 11,130 in 2009.

#### Access to care

Novo Nordisk's long-term efforts to expand access to care and

20% of the average prices in the western world, in 67% or 33 of 49 least developed countries during 2010.

#### Capacity building

Developing healthcare infrastructure to improve the ability to diagnose and treat diabetes is key to achieving sustainable improvements in access to care and personal health. Over the years, our investments in training and education of healthcare professionals have been significantly scaled up. Since 2002, a total of 1.2 million healthcare professionals worldwide have attended training programmes conducted or sponsored by Novo Nordisk. During 2010, we also reached out to nearly 500,000 people with diabetes, providing training on how to manage their condition.

In addition to enrolling about 800 children with type 1 diabetes in our Changing Diabetes® in Children programme during 2010, taking the total to more than 1,300, we trained about 100 health-care providers and established 13 clinics. The programme supports diagnosis and treatment of children in developing countries, particularly in sub-Saharan Africa.

## Employees

Our global growth continued as projected, with new employees primarily added in International Operations and North America. At the end of 2010, the total number of employees was 30,483, which corresponds to 30,014 full-time positions. The total number of employees increased by 4%. In the same period, employee turnover increased from 8.3% to 9.1%.

#### Engagement

The ability to manage global growth and stimulate productivity and innovation is tracked through a set of engagement scores from our annual employee survey, eVoice. In 2010, the consolidated engagement score (on a scale of 1 to 5, with 5 being the best score) was 4.3, which was consistent with 2009. Annual scores have consistently met our target of 4.0 or above since 2006.

#### Diversity

We believe diverse management teams and people with different perspectives are best suited to drive performance and foster innovative thinking. Our ambition is that by 2014 all senior management teams will include employees of both genders and different nationalities.

At the end of 2010, diversity in terms of gender and nationality was reflected in 54% of the 28 senior management teams, compared with 50% at the end of 2009. While we have chosen

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treatment include the establishment of the World Diabetes Foundation in 2001. In 2010, the company donated DKK 69 million to the foundation, which supports sustainable initiatives to build healthcare capacity to prevent and treat diabetes in developing countries. This donation, equivalent to 0.18% of net insulin sales for the year, was in accordance with obligations previously agreed to by the company's shareholders.

to report on our progress annually, changing our organisational culture is a long-term objective that involves training and mentoring, talent management and succession planning.

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Novo Nordisk also supports the Novo Nordisk Haemophilia Foundation, established in 2005. In 2010, we donated DKK 15 million. For more information on the foundations, see pp 32 and 38.

### Pricing

Purchases through Novo Nordisk's long-established differential pricing policy for insulin sales in least developed countries increased by 30% by volume compared to 2009. Our goal is for our differential pricing policy to be accepted in all least developed countries. We sold human insulin at or below the policy price, not to exceed

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As a large employer in Denmark, Novo Nordisk has subscribed to the Ministry of Equality's recommendations for more women on supervisory boards. The company is thus committed to targeted efforts to develop and recruit female managers.

**Health and safety**

The frequency of occupational injuries increased to 4.9 per million working hours in 2010, compared with 4.3 per million working hours in the previous year.

**Assurance**

**Quality**

As sales and production output have increased, quality levels, measured in terms of inspection findings, have been maintained. In 2010, 105 inspections of Novo Nordisk's production facilities were concluded with no re-inspections or warning letters.

In 2010, Novo Nordisk had four instances of product recalls from the market, compared with two recalls in 2009. Recalls during 2010 were for Norditropin NordiFlex® 15 mg (Switzerland), Mixtard® 30 InnoLet® 100 IU/ml (several countries), and two separate recalls of our emergency kit for treating severe hypoglycaemia, GlucaGen® Hypokit (Canada, New Zealand and Denmark). We cooperated with local health authorities to ensure appropriate information was provided to pharmacies, medical practitioners and patients.

**Values**

The Novo Nordisk Way, our values-based approach to management, outlines expectations for employee behaviour, and adherence to the corporate values is audited as part of our ongoing internal assurance process. Values audits, called facilitations, are conducted by our global facilitator team, consisting of senior people with deep understanding of our business and the business environment.

From 1 October 2009 to 30 September 2010, 58 facilitations were conducted at unit level, covering more than 12,000 employees. More than 2,800 employees were interviewed to determine how corporate values are being complied with throughout the organisation. To maintain a high level of compliance, 225 findings were issued during the 2010 facilitation year.

**Business ethics**

As we grow, adding close to 4,000 new employees annually, ongoing training helps ensure that all new employees understand their responsibilities and the company's

and have been determined to have no material impact for Novo Nordisk. Consequences for employees involved in substantiated cases ranged from counselling and training to written warnings and have been determined to have no material impact for Novo Nordisk.

**Supplier audits**

To ensure product quality and manage potential risks in our supply chain, we conduct both quality and responsible sourcing audits. In 2010, a total of 192 audits were conducted, compared with 196 in 2009. These audits resulted in 539 non-conformities. Follow-up actions for these are being performed according to Novo Nordisk procedures.

**Environment**

Performance on environmental dimensions improved and we successfully exceeded long-term targets for reduction of energy consumption, water consumption and CO<sub>2</sub> emissions

Water and energy consumption for production decreased in 2010 by 37% and 20% respectively compared with the 2007 baseline. These reductions surpassed the long-term targets of 11% reductions in both areas by 2011 compared to 2007. Consumption decreases were mainly due to optimisations in insulin bulk production in Denmark. Energy and water-saving projects at many other sites also contributed.

The total volume of waste decreased 2% to 20,565 tons in 2010 from 21,019 tons in 2009, while the percentage of recycled waste remained stable at 50%. The decrease in waste was primarily due to a 12% reduction in hazardous waste disposal.

While sales and production increased in 2010, CO<sub>2</sub> emissions related to production fell by 35% compared with 2009 levels. This was due to the full conversion to renewable power supplies for Danish operations, including energy-intensive insulin production, and increased energy efficiency in all production facilities globally.

values-based management system. Training programmes are developed to address emerging trends, such as changes in the regulatory environment. Annual business ethics training is required for all employees throughout the company. In total, 98% completed the required training in 2010.

Business ethics audits are conducted using a risk-based approach, with on-site interviews and documentation reviews to assess compliance with Novo Nordisk's business ethics procedures. During 2010, 35 business ethics audits were conducted and 200 findings were issued and agreed with local management.

Our employees have an obligation to report any instances of suspected misconduct. This obligation can be met by reporting to a manager or company legal counsel. Novo Nordisk also provides the option to report suspected business ethics misconduct anonymously through a compliance hotline monitored by the Audit Committee. During 2010, 15 cases of suspected business ethics misconduct were reported through the compliance hotline. These have been investigated and three of them have been substantiated

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## Outlook 2011

The current expectations for 2011 are summarised in the table below:

Expectations are as reported, if not otherwise stated	Current expectations 2 February 2011
Sales growth	
in local currencies	8-10%
as reported	Around 1.5 percentage points lower
Operating profit growth	
in local currencies	Around 15%
as reported	Around 2.5 percentage points lower
Net financials	Expense of around DKK 100 million
Effective tax rate	Around 23%
Capital expenditure	Around DKK 3.5 billion
Depreciation, amortisation and impairment losses	Around DKK 2.7 billion
Free cash flow	More than DKK 16 billion

Novo Nordisk expects *sales growth* in 2011 of 8-10% measured in local currencies. This is based on expectations of continued market penetration for Novo Nordisk's key products, as well as expectations of continued intense competition, generic competition to oral antidiabetic products, and an impact from the implementation of healthcare reforms primarily in the US and Europe. Given the current level of exchange rates versus Danish kroner, the reported sales growth is expected to be around 1.5 percentage points lower than growth measured in local currencies.

For 2011, growth in *operating profit* is expected to be around 15% measured in local currencies. Given the current level of exchange rates versus Danish kroner, the reported operating profit growth is expected to be 2.5 percentage points lower than growth measured in local currencies.

For 2011, Novo Nordisk expects a *net financial expense* of around DKK 100 million. The current expectation reflects that the impact of currency hedging contracts is approximately neutral.

The *effective tax rate* for 2011 is expected to be around 23%.

*Capital expenditure* is expected to be around DKK 3.5 billion in 2011, primarily related to investments in the new insulin formulation and filling plant in China and a new prefilled device production facility in Denmark. Expectations for *depreciation, amortisation and impairment losses* are around DKK 2.7 billion whereas *free cash flow* is expected to be more than DKK 16 billion.

All of the above expectations are based on the assumption that the global economic environment will not significantly change business conditions for Novo Nordisk during the remainder of 2011 and that currency exchange rates, especially the US dollar, will remain at the current level versus the Danish krone during the remainder of 2011.

Novo Nordisk has hedged expected net cash flows in a number of invoicing currencies and, all other things being equal, movements

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in key invoicing currencies will impact Novo Nordisk's operating profit as outlined in the table below:

Key invoicing currency	Annual impact on Novo Nordisk's operating profit of a 5% movement in currency	Hedging period (months)
USD	DKK 620 million	15
JPY	DKK 155 million	13
CNY	DKK 120 million	12*
GBP	DKK 85 million	10

\* USD used as proxy when hedging Novo Nordisk's CNY currency exposure.

The financial impact from foreign exchange hedging is included in Net financials .

### Forward-looking statements

Novo Nordisk's reports filed with or furnished to the US Securities and Exchange Commission (SEC), including this document and Form 20-F, both expected to be filed with the SEC in February 2011, and written information released, or oral statements made, to the public in the future by or on behalf of Novo Nordisk, may contain forward-looking statements. Words such as believe, expect, may, will, plan, strategy, prospect, foresee, estimate, project, anticipate, can, intend, target and other words and terms of similar meaning in connection with any discussion of future operations or financial performance identify forward-looking statements. Examples of such forward-looking statements include, but are not limited to:

- statements of plans, objectives or goals for future operations, including those related to Novo Nordisk's products, product research, product development, product introductions and product approvals as well as cooperations in relation thereto
- statements containing projections of or targets for revenues, income (or loss), earnings per share, capital expenditures, dividends, capital structure or other net financials
- statements regarding future economic performance, future actions and outcome of contingencies such as legal proceedings
- statements regarding the assumptions underlying or relating to such statements.

In this document, examples of forward-looking statements can be found under the headings Performance in 2010, Outlook 2011, Managing performance using long-term targets, Strategic focus areas and elsewhere.

These statements are based on current plans, estimates and projections. By their very nature, forward-looking statements involve inherent risks and uncertainties, both general and specific. Novo Nordisk cautions that a number of important factors, including those described in this document, could cause actual results to differ materially from those contemplated in any forward-looking statements.

Factors that may affect future results include, but are not limited to, global as well as local political and economic conditions, including interest rate and currency exchange rate fluctuations, delay or failure of projects related to research and/or development, unplanned loss of patents, interruptions of supplies and production, product recall, unexpected contract breaches or terminations, government-mandated or market-driven price decreases for Novo Nordisk's products, introduction of competing products, reliance on information technology, Novo Nordisk's ability to successfully market current and new products, exposure to product liability and legal proceedings and investigations, changes in governmental laws and interpretation thereof, including on reimbursement, intellectual property protection and regulatory controls on testing, approval, manufacturing and marketing, perceived or actual failure to adhere to ethical marketing practices, investments in and divestitures of domestic and foreign companies, unexpected growth in costs and expenses, failure to recruit and retain the right employees and failure to maintain a culture of compliance.

Please also refer to the overview of risk factors on pp 43-45.

Unless required by law Novo Nordisk is under no duty and undertakes no obligation to update or revise any forward-looking statement after the distribution of this document, whether as a result of new information, future events or otherwise.

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## Managing performance using long-term targets

Interview with Jesper Brandgaard,  
Novo Nordisk's chief financial officer

*How does Novo Nordisk use long-term financial targets to manage the business?*

The long-term financial targets are set based on a continuation of the current organic growth strategy and the current scope of activities. The targets help management establish a balance between growing the business profitably in the near term while ensuring we are able to make investments to support long-term growth. When Novo Nordisk sets long-term targets, we have a clearly defined ambition and a plan to achieve them.

Every year, interim targets for the long-term targets are included in the company's Balanced Scorecard and cascaded to relevant parts of the business. The interim targets are set based on prior-year performance, the prevailing currency and competitive environment.

It is also important that our activities result in cash generation, a portion of which can be returned to shareholders as dividends.

*How long has Novo Nordisk used long-term financial targets?*

Financial targets, including the 15% growth target for operating profit, were introduced in 1996. The growth target for operating profit has been viewed as the cornerstone financial target from the beginning. In 1996, the target for free cash flow was only to have positive cash flow, reflecting how investment-intensive the business was at that point in time.

The first long-term targets for Novo Nordisk in its current structure were announced in 2001. Despite a very tough year in 2002, including a profit warning and the termination of clinical development of a key late-stage project, we achieved the targets in 2005 and announced new targets. At that time, it was clear that the growth rate of the overall pharmaceutical industry was declining. We decided to retain our growth target for operating profit, which has been viewed as increasingly ambitious over time.

*What are the key contributors to the company's strong performance against financial targets?*

Over the past five years, two things have had a substantial impact on our financial performance. First, there has been a very steady positive development in our overall production economy. By producing more in existing facilities without expanding capacity, we have been able to reduce costs and defer investments, which has also helped to improve our cash flows.

Second, Novo Nordisk has been especially successful in the US over the past five years. Due to trading and rebate conditions, funding requirements for growing our US business are lower than in many other countries. By contrast, in many parts of the world, accounts receivable from wholesalers may take up to three months to be paid. The lower level of invested capital required for expanding our business in the US has had a positive effect on the company's overall return on invested capital.

*How is Novo Nordisk changing its long-term financial targets?*

The company's 15% growth in operating profit target has become ever more ambitious in the current pharmaceutical environment. We believe that continuing to pursue this very challenging target shows that Novo Nordisk is striving to be among the best in the industry.

The target level for operating margin has been increased from 30% to 35%. The increase reflects our expectation of continued improvement in efficiencies from our manufacturing facilities around the world and longer-term in the productivity of our global sales force, which is approaching critical mass in terms of scale in many countries. Over the last 10 years, we have also made significant improvements in the ratio of our administration costs to sales, from 8% in 2001 to 5% today, and this will continue with a smaller relative improvement. It should be noted that the achievement of the operating margin target may be influenced by significant changes in market conditions, including regulatory developments, changes in pricing environment, healthcare reforms and exchange rate movements.

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## The four targets provide a guide to the level of growth, profitability and return to which we aspire.

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The target level for return on invested capital measured post tax has been increased from 50% to 70%. The raised target reflects the expectation of continued lower growth in invested capital relative to operating profit as well as a stable effective tax rate. In setting the new target level Novo Nordisk has assumed that the proposed accounting rules regarding treatment of operating leases will be implemented. It is currently anticipated that the introduction of this new accounting standard will have a negative effect on return on invested capital by approximately 10 percentage points.

The target level for the cash-to-earnings ratio has been increased from 80% to 90%, reflecting a sustained lower tangible investment level and an improved cash conversion ability. As previously, this target will be pursued looking at the average over a three-year period.

### *What is the time frame for the targets?*

We establish long-term targets with the ambition of achievement in a 4-5-year time horizon. If the business environment and competitive environment turn out to be favourable, then we may achieve targets earlier. That has been the case recently; currencies and the competitive environment have been more favourable than we envisioned in 2008. But the opposite may also happen, leading to delays in achieving the targets.

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*Are Novo Nordisk's targets ambitious?*

When we set targets in our 2008 Annual Report, they certainly felt ambitious. For instance, we increased our long-term target for return on invested capital by quite a bit in 2008, from 30% to 50%.

It might appear, based on recent performance, that the current cash-to-earnings target is somewhat conservative. If you look at our history of working with this target, which is measured on a three-year rolling average, we initially struggled to meet it because of our heavy investments in insulin production. It is also a target that, in a single year, may be very sensitive to external factors beyond Novo Nordisk's control.

*How do the company's long-term financial targets tie to the Novo Nordisk Way?*

We believe that the only way we can run a sustainable business is to generate strong results on multiple dimensions. Growing our business profitably and delivering competitive results is the basis of our ability to help patients live better lives, offer an attractive return to our shareholders and serve all of our stakeholders.

*What are the uncertainties in achieving the new targets?*

Exchange rates are always an unknown variable for a global business. Regulatory approval of development projects, particularly Degludec and DegludecPlus, is critical to achieving our ambitious targets. Price pressures from healthcare reforms in many parts of the world will also have an impact, notably in Europe, some emerging markets and the US. The full effect of the implementation of the US healthcare reform will only become apparent over the next few years. We expect competition to increase, and this includes biosimilar competition to our existing products, and this could have an impact.

I would also like to stress that the long-term targets are set given the current scope of activities. If strategic opportunities arise that require us to act, it could impact our ability to meet the targets. Should this situation materialise, we may have to adjust the targets. The long-term targets should not prevent Novo Nordisk from pursuing initiatives which will improve our long-term competitive situation.

## Results compared with long-term financial targets

Ratio	New target
Growth in operating profit	15%
Operating margin	35%
Return on invested capital (ROIC)	70%
Cash to earnings (three-year average)	90%





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## Performance highlights

DKK million	2006	2007	2008	2009	2010	2009 2010
<b>Sales</b>						Change
Modern insulin (insulin analogues)	10,825	14,008	17,317	21,471	<b>26,601</b>	23.9%
Human insulin	13,451	12,572	11,804	11,315	<b>11,827</b>	4.5%
Victoza®				87	<b>2,317</b>	N/A
Protein-related products	1,606	1,749	1,844	1,977	<b>2,214</b>	12.0%
Oral antidiabetic products (OAD)	1,984	2,149	2,391	2,652	<b>2,751</b>	3.7%
Diabetes care total	27,866	30,478	33,356	37,502	<b>45,710</b>	21.9%
NovoSeven®	5,635	5,865	6,396	7,072	<b>8,030</b>	13.5%
Norditropin®	3,309	3,511	3,865	4,401	<b>4,803</b>	9.1%
Hormone replacement therapy	1,607	1,668	1,612	1,744	<b>1,892</b>	8.5%
Other products	326	309	324	359	<b>341</b>	(5.0%)
Biopharmaceuticals total	10,877	11,353	12,197	13,576	<b>15,066</b>	11.0%
Total sales by business segment	38,743	41,831	45,553	51,078	<b>60,776</b>	19.0%
North America	12,280	13,746	15,154	18,279	<b>23,609</b>	29.2%
Europe	15,300	16,350	17,219	17,540	<b>18,664</b>	6.4%
International Operations <sup>1</sup>	7,156	7,892	8,984	10,371	<b>12,843</b>	23.8%
<i>of which Region China</i>	<i>1,546</i>	<i>2,022</i>	<i>2,631</i>	<i>3,536</i>	<b><i>4,508</i></b>	<i>27.5%</i>
Japan & Korea <sup>1</sup>	4,007	3,843	4,196	4,888	<b>5,660</b>	15.8%
Total sales by geographical segment	38,743	41,831	45,553	51,078	<b>60,776</b>	19.0%
Increase in local currencies	16%	13%	12%	11%	<b>13%</b>	
Currency effect (local currency impact)	(1%)	(5%)	(3%)	1%	<b>6%</b>	
Total sales increase as reported	15%	8%	9%	12%	<b>19%</b>	
<b>Financial performance</b>						
Depreciation, amortisation and impairment losses	2,142	3,007	2,442	2,551	<b>2,467</b>	(3.3%)
Operating profit	9,119	8,942	12,373	14,933	<b>18,891</b>	26.5%
Net financials	45	2,029	322	(945)	<b>(605)</b>	(36.0%)
Profit before income taxes	9,164	10,971	12,695	13,988	<b>18,286</b>	30.7%
Net profit	6,452	8,522	9,645	10,768	<b>14,403</b>	33.8%

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Total assets	44,692	47,731	50,603	54,742	<b>61,402</b>	12.2%
Equity	30,122	32,182	32,979	35,734	<b>36,965</b>	3.4%
Capital expenditure, net	2,787	2,268	1,754	2,631	<b>3,308</b>	25.7%
Free cash flow <sup>2</sup>	4,707	9,012	11,015	12,332	<b>17,013</b>	38.0%
<b>Financial ratios</b>						
<b>Percentage of sales</b>						
Sales outside Denmark	99.2%	99.2%	99.2%	99.2%	<b>99.4%</b>	
Sales and distribution costs	30.0%	29.6%	28.2%	30.2%	<b>29.9%</b>	
Research and development costs	16.3%	20.4%	17.2%	15.4%	<b>15.8%</b>	
Administrative expenses	6.2%	6.0%	5.8%	5.4%	<b>5.0%</b>	
Gross margin <sup>2</sup>	75.3%	76.6%	77.8%	79.6%	<b>80.8%</b>	
Net profit margin <sup>2</sup>	16.7%	20.4%	21.2%	21.1%	<b>23.7%</b>	
Effective tax rate <sup>2</sup>	29.6%	22.3%	24.0%	23.0%	<b>21.2%</b>	
Equity ratio <sup>2</sup>	67.4%	67.4%	65.2%	65.3%	<b>60.2%</b>	
Return on equity (ROE) <sup>2</sup>	22.3%	27.4%	29.6%	31.3%	<b>39.6%</b>	
Payout ratio <sup>2</sup>	34.4%	32.8%	37.8%	40.9%	<b>39.6%</b>	
Payout ratio excl non-recurring events <sup>3</sup>	34.4%	34.9%	36.6%	40.9%	<b>42.8%</b>	
<b>Ratios for long-term financial targets</b>						
Operating profit margin <sup>2</sup>	23.5%	21.4%	27.2%	29.2%	<b>31.1%</b>	Long-term financial targets <sup>4</sup> 35%
Operating profit growth	12.7%	(1.9%)	38.4%	20.7%	<b>26.5%</b>	15%
Return on invested capital (ROIC) <sup>2</sup>	25.8%	27.2%	37.4%	47.3%	<b>63.6%</b>	70%
Return on invested capital (ROIC) excl non-recurring events <sup>3</sup>	25.8%	29.9%	38.4%	47.3%	<b>62.4%</b>	
Cash to earnings <sup>2</sup>	73.0%	105.7%	114.2%	114.5%	<b>118.1%</b>	
Cash to earnings, three-year average	80.2%	87.0%	97.6%	111.5%	<b>115.6%</b>	90%
<b>Share ratios</b>						
Basic earnings per share/ADR in DKK <sup>2</sup>	10.05	13.49	15.66	17.97	<b>24.81</b>	
Diluted earnings per share/ADR in DKK <sup>2</sup>	10.00	13.39	15.54	17.82	<b>24.60</b>	
Dividend per share in DKK	3.50	4.50	6.00	7.50	<b>10.00</b>	
Total dividend	2,221	2,795	3,650	4,400	<b>5,700</b>	

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	2006	2007	2008	2009	2010	2009 2010
<b>Social performance</b>						<b>Change</b>
<i>Patients:</i>						
Donations to the World Diabetes Foundation (DKK million)	62	65	68	68	<b>69</b>	1.5%
Donations to the Novo Nordisk Haemophilia Foundation (DKK million)	15	11	10	15	<b>15</b>	0%
Healthcare professionals trained or educated in diabetes (1,000) (accumulated)	297	336	380	805	<b>1,178</b>	
People with diabetes trained (1,000)				416	<b>494</b>	18.8%
New patent families (first filings)	149	116	71	55	<b>62</b>	12.7%
<i>Employees:</i>						
Employees (total)	23.613	26.008	27.068	29.329	<b>30.483</b>	3.9%
Employee turnover (%)	10.0	11.6	12.1	8.3	<b>9.1</b>	
<i>Internal assurance and monitoring:</i>						
Employees trained in business ethics (%)					<b>98</b>	
<b>Ratios for social performance</b>						<b>Long-term social targets</b>
LDCs where Novo Nordisk sells insulin according to the differential pricing policy (%) <sup>5</sup>	68	72	64	73	<b>67</b>	100%
Engaging culture (employee engagement) on a scale of 1 - 5	4.0	4.1	4.2	4.3	<b>4.3</b>	4.0 or above
Diverse senior management teams (%) <sup>7</sup>			43	50	<b>54</b>	100%
Company reputation with external key stakeholders (on a scale of 0 - 100) <sup>6</sup>	73.8	74.0	72.4	76.3	<b>76.1</b>	Improve (or maintain)
Warning letters and reinspections	0	0	0	0	<b>0</b>	0
Fulfilment of action points from facilitations of the Novo Nordisk Way (%) of Management	88	91	92	93	<b>93</b>	80% or above
<b>Environmental performance</b>						<b>Change</b>
<i>Inputs:</i>						

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Energy consumption (1,000 GJ)	2,712	2,784	2,533	2,246	<b>2,234</b>	(0.5)%
Water consumption (1,000 m <sup>3</sup> )	2,995	3,231	2,684	2,149	<b>2,047</b>	(4.7)%
<i>Outputs:</i>						
CO <sub>2</sub> emissions from energy consumption (1,000 tons)	229	236	215	146	<b>95</b>	(34.9)%
Wastewater (1,000 m <sup>3</sup> )	2,583	2,764	2,542	2,062	<b>1,935</b>	(6.2)%
Waste (tons)	24,165	17,576	20,346	21,019	<b>20,565</b>	(2.2)%

Ratios for environmental performance

Energy consumption (change compared to 2007 in %)			(9)	(19)	<b>(20)</b>	11% reduction
Water consumption (change compared to 2007 in %)			(17)	(34)	<b>(37)</b>	11% reduction
CO <sub>2</sub> emissions from energy consumption (change compared to 2004 in %)	9	12	2	(31)	<b>(55)</b>	10% reduction

Long-term  
environmental  
targets

- As of 1 January 2010 Korea joined Japan to form Region Japan & Korea, while Australia and New Zealand became part of Region International Operations. The historical figures for 2006-2009 have been restated and are comparable to the 2010 regional setup.
- For definitions, please refer to p 92.
- Impact of ZymoGenetics, Inc. share divestment, discontinuation of all pulmonary diabetes projects and impact of DAKO A/S share divestment.
- The long-term financial targets were updated in February 2011. Please refer to pp 12-13.
- Least developed countries, as defined by the UN, where Novo Nordisk sells insulin at or below 20% of the average prices for insulin in the western world.
- Based on eVoice, an employee survey using a scale of 1-5, with 5 being the best score.
- Diverse in terms of gender and nationality.
- Company reputation is measured by an independent external consultancy firm using a scale of 0-100, with 100 being the best score.

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 Our business

## Our business

Novo Nordisk is a focused healthcare company specialising in therapeutic proteins, providing life-saving treatments for people with diabetes and rare bleeding disorders. We also offer treatment for growth hormone deficiency, as well as low-dose hormone replacement therapy products. Finally, we carry out development projects targeting treatment of inflammation and obesity.

Offering treatment for unmet medical needs and improving care for people with chronic disease is what drives our ambition and determines our strategic focus. We seek to leverage our core strengths in protein engineering and chronic disease treatment in areas where we see potential for global market leadership.

We aim to grow our business in ways that are both responsible and sustainable, managing in accordance with the Novo Nordisk Way and the Triple Bottom Line principle. To achieve long-term success we must:

continue to develop and provide innovative treatments and delivery devices

adapt our business to changes in societies as well as in healthcare systems

maintain leadership and expand into new markets

continue to pursue production efficiencies

recruit, develop and retain talented people to support global growth.

## Strategic focus areas

One of the key differentiators for Novo Nordisk compared with other pharmaceutical companies is that our business is primarily focused on protein engineering, expression and formulation supported by innovative devices that improve treatment convenience and accuracy. Novo Nordisk is at the forefront of innovation in protein expression in yeast, which is used for insulins and GLP-1, *E. coli*, which are used for growth hormone, as well as mammalian cells, which are used for NovoSeven®.

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**One of the key differentiators for Novo Nordisk is that our business is primarily focused on protein engineering, expression and formulation.**

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## Diabetes care: expand leadership

Beginning with the first patients our company treated with insulin in the 1920s, we have been dedicated to continuously improving the safety, efficacy and convenience of diabetes treatment. Today, as the only company with a full portfolio of human and modern insulins, we are uniquely positioned to address the issues at the core of the diabetes pandemic: insulin deficiency and the complexities of treating it. For those millions of people who must live with diabetes, our goal is to offer individualised treatment options so that they can lead their lives in full.

# Novo Nordisk's corporate strategy

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While there is not yet a cure for diabetes or a means of reversing diabetes progression, we are conducting research in cooperation with leading academic centres to tackle the roots of the condition. Through two key projects at our Hagedorn Research Institute for applied research involving stem cell biology and beta cell regeneration, we are making progress towards preventing and ultimately curing diabetes. Hagedorn is a fully integrated part of Novo Nordisk and a market-leading incubator for innovation to change diabetes treatment. In 2010, we instituted a new funding model at Hagedorn to support efforts to identify new biological-based targets that could qualify to enter Novo Nordisk's diabetes pipeline. We are striving to develop treatments for the full span of a person's life that are as convenient and safe as possible.

We continue to invest in the expansion of insulin innovation leadership with research activities aimed at continuous improvement for all types of insulin. Our leadership position within diabetes care is bolstered by the fact that we are the only company with two next-generation insulins, Degludec and DegludecPlus, in late-stage clinical development. Degludec and DegludecPlus are engineered to be ultra-long acting. Phase 3 results are reported on p 30.

Treatment convenience is what most people with diabetes give highest priority in order to effectively manage their condition. We hope to be able to radically change insulin delivery, offering tablets in addition to injectable treatments. The development of oral formulations for both insulin and GLP-1 is still at an early stage and many technological challenges remain. Our current work involves searching for the most suitable compounds and the best method of oral delivery, one that will ensure that the active ingredients are not destroyed or degraded in the gastrointestinal tract and move through the gut to exert therapeutic effect on blood glucose.

We are also developing a faster-acting bolus insulin to be taken at mealtimes. Our faster-acting insulin aspart entered phase 1 development in 2010.

### Building a GLP-1 portfolio

With the successful launch of Victoza® (liraglutide), our once-daily Glucagon-Like Peptide-1 (GLP-1) analogue, we have a strong product offering for the earlier stages of type 2 diabetes, before insulin is needed, expanding our diabetes product range and potential market.

Over the past 25 years, we have built a portfolio of modern insulin products covering the full spectrum of treatment needs for insulin. We are now building a GLP-1 portfolio, developing oral and GLP-1/ insulin combination treatments and researching the combination of GLP-1 with insulin, with the

Receiving regulatory approval for antiobesity medications remains a major challenge. Several compounds targeting obesity have recently failed to obtain regulatory approval due to limited efficacy outweighed by side effects. However, given the initial results seen in randomised controlled trials with liraglutide, we believe the compound can offer significant benefit for people challenged with weight issues.

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Given the initial results seen in randomised controlled trials with liraglutide, we believe the compound can offer significant benefit for people challenged with weight issues.

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### Haemophilia: expand portfolio

We have a solid position in the treatment of haemophilia with inhibitors due to the success of NovoSeven®, which remains the leading recombinant bypassing agent available for these patients. We are also working to develop two potential successors to NovoSeven®, a long-acting recombinant factor VIIa derivative and a fast-acting recombinant factor VIIa analogue, both in clinical development.

Our long-term ambition is to develop more convenient treatment and safe options for all people with rare bleeding disorders. We are therefore leveraging our core protein capabilities to develop recombinant and long-acting factor VIII and IX compounds for the treatment of haemophilia A and B respectively. The primary focus in haemophilia treatment is to prevent bleeds and subsequently reduce damage to joints.

### Strategies for other biopharmaceutical business areas

As the global market leader by value in growth hormone therapy, Novo Nordisk's strategy is to provide innovative, simple, convenient products and devices as well as a full range of service offerings for physicians and patients in markets where services can be delivered. We are also seeking approval for additional uses of Norditropin®, which is still the only liquid, room-temperature-stable growth hormone product in a prefilled pen device. During 2010, we launched a new prefilled, ergonomic Norditropin® FlexPro® auto-injector pen device in some markets.



intention to provide an even broader range of treatment options.

Our GLP-1 pipeline includes oral GLP-1 and a fixed combination of Victoza® with Degludec, which may offer the benefits of both compounds in a fixed convenient solution.

### Obesity: establish a presence

Obesity is known to be a major risk factor in developing type 2 diabetes, cardiovascular disease and a range of other life-threatening diseases. Obesity has been estimated to account for 60-90% of new cases of type 2 diabetes. Liraglutide has shown the potential in clinical studies of people with diabetes and of obese people without diabetes to reduce food intake and control weight. We have therefore chosen to explore this as a potential new way to treat obesity.

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The overall strategy for our hormone replacement business is to focus on ultra-low-dose offerings, with a particular focus on Vagifem® 10 µg, which was launched in 2010.

The development of an inflammation franchise is a long-term investment to create growth opportunities. Chronic autoimmune inflammation is a disease area where our core competences in protein molecules and chronic disease care can be leveraged. In the core disease areas of rheumatoid arthritis, psoriatic arthritis and inflammatory bowel diseases, clinical use of first-generation protein-based biologic agents that modify overactive immune response have been shown to offer significant benefit to patients. However, in each of these disease areas, there are also significant

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numbers of patients who do not adequately respond to current treatments, so there is an opportunity for new treatments to address these unmet medical needs.

In order to successfully build a presence in this treatment area, we are investing in early-stage research with the hope of finding the underlying causes of inflammatory conditions and developing new treatments for these conditions, particularly for patients who are unresponsive to current treatments. Our research and development centres in the US, China and Denmark are successfully recruiting talent and medical teams are being established to support pipeline progression.

## Device innovation

Novo Nordisk produces the world's most widely used prefilled and durable insulin pen devices. Striving to continuously improve chronic disease therapy, we have designed these devices to improve dose accuracy, convenience and general user-friendliness.<sup>2,3</sup> The same technologies are used for modern insulins and Norditropin<sup>®</sup>.

Our research and development priorities for device innovation are guided by customer insight studies. The ultimate goal is convenient and simple device technology that supports treatment compliance, with positive implications for patients' health.<sup>4,5</sup> Our devices also positively differentiate our products from competitor products.

1. Kasuga. *J Clin Invest.* 2006;116:1756-1760.
2. Asakura T, Seino H, Nakano R, et al. A comparison of the handling and accuracy of syringe and vial versus prefilled insulin pen (FlexPen<sup>®</sup>). *Diabetes Technol Ther.* Oct 2009;11(10):657-661.
3. Korytkowski M, Bell D, Jacobsen C, Suwannasari R. A multicenter, randomized, open-label, comparative, two-period crossover trial of preference, efficacy, and safety profiles of a prefilled, disposable pen and conventional vial/syringe for insulin injection in patients with type 1 or 2 diabetes mellitus. *Clin Ther.* 2003 Nov;25(11):2836-48.
4. Korytkowski M, Bell D, Jacobsen C, Suwannasari R. A multicenter, randomized, open-label, comparative, two-period crossover trial of preference, efficacy, and safety profiles of a prefilled, disposable pen and conventional vial/syringe for insulin injection in patients with type 1 or 2 diabetes mellitus. *Clin Ther.* 2003 Nov;25(11):2836-48.

5. Graff MR, McClanahan MA. Assessment by patients with diabetes mellitus of two insulin pen delivery systems versus a vial and syringe. *Clin Ther.* 1998 May Jun;20(3):486-96.

## Delivering on our strategy

We believe that the current functional organisational structure, governance set-up, resources and competences are sufficiently effective and robust. In support of our strategic objectives and future growth, we are:

improving global governance in key areas

focusing on attracting and developing talents in key markets to drive diversity and growth

developing business and organisational roadmaps for new business areas.

We are also improving our ability to manage innovation, the globalisation of our business and supply chain, and the pursuit of production efficiencies.

### Improving global governance

Operating globally as a pharmaceutical company with a strong patient focus means that the company is inevitably faced with dilemmas relating to ethical business conduct and behaviour. One clear dilemma is related to our objective of providing therapies to patients wherever they are. Novo Nordisk consequently engages in business in countries where the general business environment is challenging. We have taken a number of measures to ensure compliance with both our own and international ethical standards, and in 2010 we strengthened governance to enhance the monitoring of the ethical climate within our organisation.

The internal governance structure for business ethics was upgraded to a larger board structure with representation from all regions. Steps were also taken to strengthen the global legal compliance structure, clearly separating compliance responsibility from other legal tasks. We have also changed the way we track business ethics training. Previously, we required all managers to be trained in business ethics, as well as staff involved in sales and marketing and regulatory and public affairs. Beginning in 2010, Novo Nordisk required that all employees should be trained in business ethics annually. See pp 10 and 98.

### Attraction, retention and development of our people

In our knowledge-intensive business, recruiting, mentoring and retaining talented people throughout the world is critical to sustaining our growth. To attract the type of people we need, we have developed a global employer branding programme, Life-changing careers, and have strengthened our leadership development.

During 2010, about 1,000 new leaders were appointed throughout the company. Training and development of leadership competences remains a focus area, and new training programmes to develop personal leadership skills and employees identified as having senior management potential will be introduced in 2011. We are also building our leaders' capacity to implement and demonstrate the Novo Nordisk Way, our values-based management system.

### Diversity

We believe that diversity is a prerequisite for staying competitive in the global marketplace and attracting the best talent. During

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## Our business

2010, we made progress towards our diversity target, with diversity by gender and nationality increasing in senior management teams. See p 10.

There are, however, significant challenges. It is clear that the continued growth of Novo Nordisk requires the recruitment of highly talented employees in many large markets. We are accelerating the development of corporate hubs throughout the world to provide career and development opportunities for highly talented employees outside Denmark.

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**We are improving our ability to manage innovation, the globalisation of our business and supply chain, and the pursuit of production efficiencies.**

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### Supporting new products and therapy areas

As we pursue the strategic focus areas outlined on pp 17-19, we must also ensure that we have the organisational competences to support the research and development, production and sales and marketing capabilities needed for new products and new therapy areas.

Because development of oral insulin and oral GLP-1 requires specific knowledge of the gastrointestinal tract, our development efforts have involved partnerships which build on our internal capabilities. We have developed tablet production facilities for these clinical trials, but large-scale production will require additional facilities and capabilities.

To support our ambitions in obesity, general haemophilia and in inflammation, we are continuing to expand capabilities, competences and resources in line with progress in our business plans. Our success in these areas will depend on our ability to ensure sufficient leadership and commercialisation capabilities in these new therapy areas.

### Innovation

We undertook an innovation culture review in 2009 in an attempt to enhance the organisation's ability to deliver on process innovation and respond to broader challenges in the business environment. In 2010, five innovation projects were selected from 20 proposed by senior vice presidents. The selected projects are intended to broaden the company's

### Globalisation

Globalisation continues to be an organisational growth driver for our company, providing access to new markets, expansion of existing markets and improved access to talented people and innovation potential. Since the opening of our first office in China in 1994, we have steadily increased our commitment to the country, establishing it as a separate region as of the beginning of 2011.

This organisational change was made to further develop the significant business potential in China and improve oversight of this part of our business. The business challenges in China are significant, with a competitive business environment, a highly competitive labour market and increasingly complex legislation. However, Novo Nordisk is generally well positioned in the Chinese diabetes market, with a market share by volume of approximately 60%.

North America, particularly the US market, is another important growth area for our business. As our market share in the US has increased substantially in recent years, we have increased our efforts to attract talent and build organisational support structures for this market.

As Novo Nordisk continues to grow and expand, we must focus resources on organisational coordination and foster innovation and collaboration across borders. Developing virtual workplaces and processes which support virtual working is also critical to our future success.

innovation culture across the value chain and were initiated with Executive Management sponsorship.

Projects launched include: the New Sales Model project aimed at exploring sales channel options to address changing customer needs and behaviour; the Future Workplace project to identify and address key challenges in attracting, retaining and developing talented people; and the Base of the Pyramid project to develop a business model addresses that the needs of patients in the poorest countries.

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 Our business

## Creating long-term value

Interview with Lise Kingo,  
Novo Nordisk's chief of staffs

*Why does Novo Nordisk put so much emphasis on the Triple Bottom Line?*

We want to be a sustainable business, and this implies being profitable to secure future growth and to make our contribution to social and economic development. We have chosen to translate our commitment to sustainable development as the Triple Bottom Line principle: balancing financial, social and environmental considerations in a responsible way.

In practice, this means that we manage and account for our social and environmental performance in the same way as we do for our financial performance.

A fundamental aspect of the Triple Bottom Line principle is that we acknowledge our role as a corporate citizen and consider the societal impacts, both positive and potentially negative of our business. When we make decisions and priorities to secure business success for the future, we must always take into account the concerns and interest of all stakeholders.

*What role should companies play in addressing global challenges?*

Business and society are not separate actors, but closely interconnected. That is why sustainability challenges must be high on board agendas: poverty and poor health, urbanisation and migration, demographics and pandemics, climate change and water scarcity – all of these issues need to be factored into business strategies and risk assessments.

Our priorities are aligned with the Millennium Development Goals. As a global leader in diabetes care we see a role for ourselves in highlighting how some of the current global challenges are connected and therefore need to be addressed at their roots. Climate change and the diabetes pandemic are examples of how unsustainable lifestyles threaten to undermine the future for generations to come. Working in partnerships we can leverage our core competencies to contribute to economic prosperity, public health and low-carbon growth.

As a company with global reach, we have a key role in contributing to more balanced, sustainable growth. There is a growing recognition that capitalism as we have known it is unsustainable, but that market mechanisms, when effective, are the best way to create shared value. What we will need is therefore to shift towards what some have termed sustainable capitalism.

All economic activity is based on the use of natural and human resources. Natural resources are scarce. Human resources are abundant. None of them are equitably distributed, nor is their real value reflected in the current market economy. This needs to change. We engage in several ways, including through partnerships and alliances with other leading companies under

the auspices of the Global Compact LEAD initiative, to demonstrate how you can balance profits and non-financial benefits for society in responsible and sustainable ways.

*How can you determine whether this approach creates business value?*

Our purpose extends beyond short-term profits. We provide long-term value by serving the needs of people whose lives and quality of life depend on the treatments and services that we can provide. When we do business in a responsible way, we create value in several ways: we strengthen our company reputation, earn stakeholder trust, build employee engagement and customer satisfaction and through these assets a stronger foundation for remaining a profitable business, which ultimately benefits our

shareholders.

We are seeing increasing evidence of a clear correlation of actions as a responsible and sustainability-driven business and our performance, measured by conventional yardsticks such as operational profits and return on invested capital.

*In what ways can you assess the benefits to society?*

Together with experts and with inputs from stakeholders we have developed a methodology that enables us to value the contribution of our Triple Bottom Line approach in a profit and loss perspective. We have called this initiative our Blueprint for Change programme, and we have conducted Triple Bottom Line reviews looking at our climate action strategy and our business approach in China.

The China case takes its point of departure in the fact that diabetes now affects more than 40 million people and their families, and the number is projected to double over the next 15 years, posing a growing social, educational and economic challenge. Our long-term business strategy, which includes significant investments in strengthening the healthcare system in partnership with the Ministry of Health and establishing a strong local presence, is having a real and lasting impact. Looking at the value created from 2005 to 2010 the study demonstrates how we are changing diabetes in China and at the same time building a profitable business.

Providing training for physicians and offering education and support for people with diabetes has saved 140,000 life years, and this number is projected to increase by 30% annually because the benefits of effective diabetes care will be seen over a longer time span. Our business activities have created jobs in research and development, production and sales as well as indirectly through our supplier base and employees' local spending, totalling 14,600 jobs. And energy efficient local production reduces emissions related to production by 20%, transportation emissions have fallen by a factor of six, and unit costs have been reduced by 40%.

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## The Novo Nordisk Way

The Novo Nordisk Way is the foundation of the values-based management system in Novo Nordisk. It describes who we are, where we want to go, and how we work. Its origins can be traced back to when the company was founded in the 1920s, and while the wording has been updated over time, the essence remains the same.

The continued relevance of the Novo Nordisk Way was reaffirmed during 2010. On the occasion of the company's 10-year anniversary as a focused healthcare company and coinciding with his own 10-year tenure as CEO, Lars Rebien Sørensen took the opportunity to revisit the document. With an open mind and no predetermined outcome, he set out on a journey to engage with employees and stakeholders to seek their inputs on what to retain and what to renew. The journey took him to seven destinations and face-to-face meetings with more than 350 employees and 100 patients, healthcare providers and other stakeholders.

The response was consistent across geographical borders, organisational boundaries and external partners: the messages and the values embedded in the Novo Nordisk Way were not to be

changed. On the contrary, there was a strong wish to reinforce the existing business principles and values. As a result, focus on patient needs and the Triple Bottom Line has been increased. The values-based management unifies a strong corporate culture and guides behaviour in all parts of the organisation.

While our values have not changed, the components of the Novo Nordisk Way have been shortened and simplified, presenting the company's ambitions and values in a format that is easier to understand and more accessible for all employees.

As the company continues to grow and onboards several thousand new employees each year, emphasis has been put on framing a list of 10 Essentials which describe how the values are put into action. As before, a follow-up methodology, called facilitations, helps us assess and manage the degree to which the Novo Nordisk Way is actively put into practice throughout our company.

In 2011, the new Novo Nordisk Way will be rolled out in the organisation, strengthening a unified culture around our revised ambitions and setting a clear direction for the next decade.

## The Novo Nordisk Way

In 1923, our Danish founders began a journey to change diabetes. Today, we number thousands of employees across the world with the passion, the skills and the commitment to continue this journey to prevent, treat and ultimately cure diabetes.

Our ambition is to strengthen our leadership in diabetes.

We aspire to change possibilities in haemophilia and other serious chronic conditions where we can make a difference.

Our key contribution is to discover and develop innovative biological medicines and make them accessible to patients throughout the world.

Growing our business and delivering competitive financial results is what allows us to help patients live better lives, offer an attractive return to our shareholders and contribute to our communities.

Our business philosophy is one of balancing financial, social and environmental considerations – we call it the Triple Bottom Line.

We are open and honest, ambitious and accountable, and treat everyone with respect.

We offer opportunities for our people to realise their potential.

We never compromise on quality and business ethics.

Every day we must make difficult choices, always keeping in mind what is best for patients, our employees and our shareholders in the long run.

It is the Novo Nordisk Way.

## The Essentials

The Essentials are 10 statements describing what the Novo Nordisk Way looks like in practice.

The Essentials are meant as a help for managers and employees in evaluating the extent to which their organisational units are acting in accordance with the Novo Nordisk Way, ie the degree to which we are walking the talk. The Essentials are helpful in identifying actions which business units can take to further align processes and procedures with the thinking and values that characterise the Novo Nordisk Way.

We create value by having a patient-centred business approach.

We set ambitious goals and strive for excellence.

We are accountable for our financial, environmental and social performance.

We provide innovation to the benefit of our stakeholders.

We build and maintain good relations with our key stakeholders.

We treat everyone with respect.

We focus on personal performance and development.

We have a healthy and engaging working environment.

We optimise the way we work and strive for simplicity.

We never compromise on quality and business ethics.

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## Pipeline overview

In 2010, significant progress was made throughout Novo Nordisk's clinical development pipeline. This overview illustrates key development activities, including entries into the pipeline and progression of development compounds.

See more at [novonordisk.com/investors/rd\\_pipeline/rd\\_pipeline.asp](http://novonordisk.com/investors/rd_pipeline/rd_pipeline.asp) and [clinicaltrials.gov](http://clinicaltrials.gov).

### Phase 1

Studies in a small group of healthy volunteers, and sometimes patients, usually between 10 and 100, to investigate how the body handles new medication and establish maximum tolerated dose.

### Phase 2

Testing a drug at various dose levels in a larger group of patients to learn about its effect on the condition and its side effects.

Therapy area	Indication	Compound	Description
<b>Diabetes care</b>			
	Type 1 and 2 diabetes	Degludec	Ultra-long-acting basal insulin. Enrolment in the phase 3a programme completed in June 2010. First phase 3a study results announced in October 2010.
	Type 1 and 2 diabetes	DegludecPlus	Ultra-long-acting basal insulin with a bolus boost. Enrolment in the phase 3a programme completed in June 2010. First phase 3a study results announced in August 2010.
	Type 2 diabetes	Semaglutide	Once-weekly GLP-1 analogue. Phase 3 initiation was postponed in June 2010 pending a long-acting portfolio development strategy decision.
Diabetes	Type 2 diabetes	NN9068	GLP-1 and basal insulin combination. Phase 1 studies are ongoing.
	Type 1 and 2 diabetes	NN1218	Ultra-fast-acting insulin analogue. First phase 1 studies initiated during the second quarter of 2010.
	Type 1 and 2 diabetes	NN1952	Fast-acting oral insulin analogue. First phase 1 study completed during the fourth quarter of 2010.
	Type 2 diabetes	NN9924	Long-acting oral GLP-1 analogue. First phase 1 study initiated in the first quarter of 2010.
Obesity	Obesity	Liraglutide	Once-daily GLP-1 analogue. First phase 3a study completed during the third quarter of 2010. The remaining phase 3a studies are expected to be initiated mid-2011.
<b>Biopharmaceuticals</b>			
	Congenital FXIII deficiency	NN1841	Recombinant coagulation factor XIII. Phase 3a study completed during the second quarter of 2010. Regulatory submission in the US and EU is expected in the first half of 2011.

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Haemophilia/ haemostasis	Haemophilia A	NN7008	Recombinant coagulation factor VIII. Phase 3 studies ongoing throughout 2010.
	Haemophilia with inhibitors	NN1731	Fast-acting recombinant coagulation factor VIIa analogue. Phase 2 studies completed during the second quarter of 2010. Phase 3 is expected to be initiated mid-2011.
	Haemophilia with inhibitors	NN7128	Long-acting recombinant coagulation factor VIIa derivative. Phase 2 trial ongoing throughout 2010.
	Cardiac surgery	NN1810	Recombinant coagulation factor XIII. Phase 2 trial ongoing throughout 2010.
	Haemophilia B	NN7999	Long-acting recombinant coagulation factor IX derivative. Phase 1 trial is ongoing.
	Haemophilia with inhibitors	NN7129	Subcutaneous long-acting recombinant coagulation factor VIIa derivative. Phase 1 study completed during the second quarter of 2010.
	Haemophilia A	NN7088	Long-acting recombinant coagulation factor VIII derivative. Phase 1 study initiated during the third quarter of 2010.
	Haemophilia	NN7415	Anti-tissue factor pathway inhibitor. Phase 1 initiated during the fourth quarter of 2010.
Inflammation	Rheumatoid arthritis	Anti-NKG2d	Humanised recombinant monoclonal antibody. Phase 2a study initiated during the third quarter of 2010.
	Rheumatoid arthritis	Anti-IL-20	Humanised recombinant monoclonal antibody. Phase 1 completed in the fourth quarter 2010. Phase 2a study is expected to be initiated during the first half of 2011.
	Rheumatoid arthritis	Anti-C5aR	Humanised recombinant monoclonal antibody. First phase 1 study completed during the second quarter of 2010.
	Rheumatoid arthritis	Anti-IL-21	Humanised recombinant monoclonal antibody. Phase 1 study initiated during the third quarter of 2010.

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**Phase 2a**

Pilot clinical trials to evaluate efficacy (and safety) in selected populations of patients.

**Phase 2b**

Well controlled trials to evaluate efficacy (and safety) in patients with the disease. Sometimes referred to as pivotal trials.

**Phase 3**

Studies in large groups of patients worldwide comparing the new medication with a commonly used drug or placebo for both safety and efficacy in order to establish its risk benefit relationship.

**Phase 3a**

Trials conducted after efficacy of the medicine is demonstrated, but prior to regulatory submission.

**Phase 3b**

Clinical trials conducted after regulatory submission, but prior to the medicine s approval and launch.

**Filed/regulatory approval**

A New Drug Application is submitted for review by various government regulatory agencies.

Intended clinical benefit	Phase 1	Phase 2	Phase 3	Filed/regulatory approval
Long-acting basal insulin with duration of action of 24 hours and an improved safety profile.				
A soluble fixed combination of fast-acting and long-acting insulin combining 24-hour basal insulin coverage with a distinct meal peak.				
Provide the pharmacological actions of a GLP-1 analogue with fewer injections.				
Combination of a basal insulin and a GLP-1 analogue intended to combine the benefits of the two hormones in a single preparation.				
Fast-acting insulin for improvement of glycaemic control during a meal.				
Insulin delivered as a tablet.				
A GLP-1 analogue delivered as a tablet.				
Sustainable weight loss for people with obesity, including those at risk of developing diabetes.				
Prophylactic treatment of people with FXIII congenital deficiency.				

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Prevention and treatment of bleeds in people with haemophilia A.

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Effective and sustained resolution of bleeds in people with haemophilia and inhibitors, reducing the need for treatment and the time to pain relief.

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Prophylactic treatment of people with haemophilia and inhibitors.

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Intended to avoid allogenic blood transfusions in low- to medium-risk patients undergoing cardiac surgery using cardiopulmonary bypass.

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Routine prophylaxis and treatment of bleeds for people with haemophilia B.

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Subcutaneous administration of long-acting treatment for haemophilia patients with inhibitors to other factor replacements.

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Routine prophylaxis and treatment of bleeds for people with haemophilia A.

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Novel mechanism of action intended to improve treatment outcomes in patients who do not respond adequately to existing treatments.

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Novel mechanism of action intended to improve treatment outcomes in patients who do not respond adequately to existing treatments.

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Novel mechanism of action intended to improve treatment outcomes in patients who do not respond adequately to existing treatments.

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Novel mechanism of action intended to improve treatment outcomes in patients who do not respond adequately to existing treatments.

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Novel mechanism of action intended to improve treatment outcomes in patients who do not respond adequately to existing treatments.

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Our business

## Novo Nordisk at a glance

Novo Nordisk is a world leader in diabetes care and has a leading position in haemophilia treatment. We also provide growth hormone therapy and hormone replacement therapy and have development projects targeting inflammation, obesity and the full spectrum of rare bleeding disorders. Our more than 30,000 employees work in 74 countries.

### *Headquarters and corporate hubs*

Bangalore, India  
Beijing, China  
Copenhagen, Denmark  
Princeton, New Jersey, US  
Tokyo, Japan  
Zürich, Switzerland

### *Regional and business area offices*

### *Research and development facilities*

Bagsværd, Denmark  
Beijing, China  
Gentofte, Denmark  
Hillerød, Denmark  
Måløv, Denmark  
Princeton, New Jersey, US  
Seattle, Washington, US

### *Regional clinical, medical and regulatory affairs centres*

Beijing, China  
Princeton, New Jersey, US  
Tokyo, Japan  
Zürich, Switzerland

### *Production sites*

Ain-Allah, Dely Brahim, Algeria  
Bagsværd, Denmark  
Chartres, France  
Clayton, North Carolina, US  
Gentofte, Denmark  
Hillerød, Denmark  
Hjørring, Denmark  
Kalundborg, Denmark  
Koriyama, Japan  
Køge, Denmark  
Montes Claros, Brazil  
Måløv, Denmark  
Tianjin, China  
Værløse, Denmark

### *Affiliates*

### *Representative offices*

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North America

Employees:  
4,457

Sales:  
39% of total sales

Insulin volume share:  
42% of the total market

Modern insulin volume share:  
37% of the segment

Europe

Employees:  
17,752

Sales:  
31% of total sales

Insulin volume share:  
53% of the total market

Modern insulin volume share:  
51% of the segment



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 Our business

International Operations	<i>Hereof Region China*</i>	Japan & Korea
Employees: 7,279	<i>Employees: 3,511</i>	Employees: 995
Sales: 21% of total sales	<i>Sales: 7% of total sales</i>	Sales: 9% of total sales
Insulin volume share: 57% of the total market	<i>Insulin volume share: 63% of the total Chinese market</i>	Insulin volume share: 63% of the total market
Modern insulin volume share: 54% of the segment	<i>Modern insulin volume share: 70% of the segment in China</i>	Modern insulin volume share: 56% of the segment

\* China was part of International Operations in 2010 but became a separate region on 1 January 2011.

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Diabetes care

## Diabetes care

Novo Nordisk has pioneered many therapeutic breakthroughs in diabetes care and today diabetes remains our primary focus. The company is the diabetes care market leader with 51% of the total insulin market and 46% of the modern insulin (insulin analogue) market, based on volume, at year-end.

Diabetes is a metabolic disorder affecting the way our bodies use digested food for growth and energy. Diabetes causes as many deaths as HIV/AIDS, disables millions and negatively affects the global economy. The International Diabetes Federation estimates that the number of people with diabetes will increase from 285 million today to 438 million in 2030.

Even in countries with strong healthcare systems, the challenge of keeping diabetes under control is significant. A survey conducted in eight countries with 3,000 respondents during 2010 found that a third of those surveyed miss injections of prescribed insulin doses and that nine out of 10 wish that insulin could be dosed less than once a day to effectively manage their diabetes.<sup>1</sup>

We are dedicated to Changing Diabetes® and improving quality of life for people with diabetes. We do this by developing innovative treatments intended to serve individual needs and covering all stages of diabetes. In addition, we work with governments, health-care providers, patient organisations and people with diabetes to improve standards of care throughout the world.

## Modern insulin portfolio

By engineering proteins we have created a portfolio of modern insulins that offer options for individual treatment needs to achieve and maintain improved blood glucose control safely.

Treatment guidelines for diabetes call for different approaches at different stages.<sup>2</sup> For type 2 diabetes, insulin may be introduced following lifestyle changes and initiation of tablet or GLP-1 therapy. As a third step, treatment guidelines recommend transition to intensive insulin therapy to maintain glucose targets.

Maintaining tight glucose control is associated with fewer serious complications and better treatment outcomes. For insulin initiation, treatment guidelines call for including either a long-acting basal insulin or, in parts of the world, a modern premix insulin with dual release to cover both mealtime and basal requirements. Insulin treatment can be intensified in two ways, either with a modern premix insulin or by adding a rapid-acting modern insulin to the long-acting basal insulin at mealtimes.

Our modern insulin portfolio is unique in providing a full range of individualised treatment options for people with diabetes, accommodating different treatment norms and capabilities worldwide. Treatment may also vary because people are different. In some Asian groups, for instance, pancreatic beta cells have been found to be more fragile, and the need for insulin in people with these characteristics may therefore be different.

Novo Nordisk's modern insulin portfolio includes:

Levemir®, a soluble, long-acting modern insulin for once-daily use for type 2 diabetes. When it is time to begin insulin, Levemir® provides glucose control with a positive weight profile. Weight maintenance is important because insulin has long been associated with weight gain, a barrier to beginning insulin treatment according to diabetes experts.

NovoRapid® (NovoLog® in the US), the world's most widely used rapid-acting insulin for use at mealtimes. For people with type 2 diabetes who have uncontrolled blood glucose levels while on a basal insulin, intensification with NovoRapid®/ NovoLog® to a basal-bolus regimen helps attain and maintain treatment goals.

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NovoMix® 70/50/30 (NovoLog® Mix 70/30 in the US) is a dual-release modern insulin that covers both mealtime and basal requirements.

During 2010, Novo Nordisk's long-acting insulin Levemir® joined NovoRapid® and NovoMix® in achieving blockbuster status, with sales exceeding 1 billion US dollars for the preceding 12-month period. NovoRapid® achieved sales of 2 billion dollars in a one-year period, becoming a double blockbuster.

NovoRapid® is the world's most prescribed rapid-acting insulin, used by people with both type 1 and type 2 diabetes. It is also approved for women who are pregnant or breastfeeding.

All Novo Nordisk's modern insulins on the market have been investigated in many randomised, controlled trials and in observational studies, and they are also monitored for any safety signals through rigorous post-marketing safety surveillance.

### Key events in diabetes 2010

Novo Nordisk acknowledged as having the Best Diabetes Care Pipeline .3

Levemir® achieves blockbuster status.

NovoRapid®/NovoLog® achieves double blockbuster status.

Victoza® gains GLP-1 leadership and expands GLP-1 market in key markets.

Phase 3 results for first of three obesity trials for liraglutide.

Phase 3 results for Degludec and DegludecPlus.

First human dose results for oral insulin and oral GLP-1.

Changing Diabetes® Leadership Forums facilitate change in sub-Saharan Africa, and the Middle East and North Africa.

NovoDose , the first ever mobile dosing application, launched for iPhone and iPad in the US.

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 Diabetes care

### Continuous innovation for improved blood glucose control

We are developing two new-generation insulins, Degludec and DegludecPlus, designed to have an ultra-long action to improve blood glucose control while reducing the risk of hypoglycaemia. These insulins also provide greater dosing flexibility compared to currently used insulins.

In January 2011, we completed the phase 3a programme for Degludec and DegludecPlus. The data generated from 17 randomised, controlled treat-to-target trials in more than 10,000 type 1 and type 2 diabetes patients from more than 40 countries, consistently revealed benefits related to efficacy, safety and convenience of both Degludec and DegludecPlus. The trials mostly used insulin analogues as comparator products and the key results are provided in this section. We expect to submit applications for regulatory approval of Degludec and DegludecPlus in the US and Europe in the second half of 2011.

In a 52-week trial comparing Degludec versus insulin glargine in type 2 diabetes, 1,030 insulin naive people with type 2 diabetes were randomised 3 to 1 to either Degludec or insulin glargine once daily in addition to metformin with or without a DPP-IV inhibitor. Degludec effectively improved long-term glycaemic control, substantially decreasing blood glucose from a baseline of 8.2% to around 7% in both patient groups. For Degludec, the fasting plasma glucose level was statistically significantly lower than observed in the comparator group. Degludec also showed a significantly lower risk of hypoglycaemia compared to insulin glargine. Specifically, the rate of confirmed night-time hypoglycaemic events was statistically significantly lower in the group treated with Degludec, with a reduction of more than 35% compared to the insulin glargine group. Degludec demonstrated a good safety and tolerability profile and there were no apparent differences between the treatment groups with respect to adverse events and standard safety parameters.

In two 52-week studies comparing Degludec to insulin glargine in basal-bolus treatment of type 1 and type 2 diabetes, significant advantages were demonstrated with Degludec. In the study in type 2 diabetes, both treatment arms effectively lowered blood

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glucose levels to approximately 7.1%. Degludec showed a lower risk of overall hypoglycaemia compared to insulin glargine and an even greater reduction in night-time hypoglycaemia. In the study with type 1 diabetes, Degludec and insulin glargine produced a similar reduction in blood glucose levels. Again, a significant reduction in night-time hypoglycemia was observed with Degludec.

In a 26-week basal-bolus trial comparing Degludec with insulin glargine in type 1 diabetes, a regimen with dosing intervals alternating between eight and 40 hours for the administration of Degludec was compared to either Degludec at the evening meal, or insulin glargine. All patients used NovoRapid® as bolus insulin with meals. The flexible dosing arm of Degludec demonstrated statistically significant reduction in night-time hypoglycaemia of around 40% when compared to the insulin glargine group.

The clinical programme also included two studies in type 2 diabetes exploring three-times-weekly administration of Degludec compared to a daily dose of insulin glargine. Three-times-weekly administration of Degludec effectively lowered blood glucose in both studies, however, it did not meet pre-specified regulatory requirements. These studies did confirm the ultra-long action profile of Degludec.

DegludecPlus, the first prandial basal insulin combination containing ultra-long-acting Degludec and insulin aspart (NovoRapid®), was also tested in phase 3a studies. In one six month study, twice-daily DegludecPlus was compared to twice-daily NovoMix® 30 in people with late-stage type 2 diabetes. DegludecPlus effectively improved long-term glycaemic control by reducing blood glucose to just above 7%. Despite similar blood glucose reductions to NovoMix® 30, the DegludecPlus treated group demonstrated a significantly lower risk of hypoglycaemia including a more than 70% reduction in night-time hypoglycaemia. The DegludecPlus patients also had a significant reduction in fasting blood glucose, achieved target control faster and required a lower total insulin dose.

### Innovative devices and tools for physicians

During 2010, we launched the first ever mobile insulin dosing guide for physicians, NovoDose , in the US. NovoDose , an application available on iTunes or as a free download at [novodose.com/app](http://novodose.com/app), lets physicians look up dosing guidelines and blood glucose goals for people with diabetes from an iPhone, iPad or iPod touch. The application, only available to those who identify themselves as healthcare professionals, also provides important safety information on Novo Nordisk products.

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This new technology is part of a trend of physicians using hand-held devices when administering treatment. NovoDose will be introduced in other markets in 2011.

FlexPen®, the world's most widely used prefilled insulin pen, is available for Levemir®, NovoRapid®/NovoLog® and NovoMix®/NovoLog® Mix. It eliminates the need to manually load insulin into a delivery device or use a separate vial and syringe. Once in use, the prefilled pen may be stored at room temperature for 14 days or more, which can suit flexible lifestyles. FlexPen® is made of a recyclable plastic, which has the potential to reduce environmental impact.

Our newest durable device, NovoPen Echo®, has been designed with children in mind. It comes in two colours and features dosing with half-unit increments, suitable for children requiring small insulin doses. It features a simple memory function that allows the user to see the size of the last dose and the time since injection.

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Diabetes care

NovoPen Echo® was preferred by 80% of the participants in a usability study that included children with diabetes, their parents and healthcare professionals when compared to other insulin pens for children. NovoPen Echo® was launched in Canada, Denmark, Finland, Israel and Sweden in 2010 and will be launched in additional markets in 2011.

We continue to focus on making the most preferred treatment devices even better. Next-generation devices in our pipeline aim to further enhance the competitiveness of our products.

## Victoza®: innovative early treatment

Victoza®, or liraglutide, is the first and only human Glucagon-Like Peptide (GLP-1) analogue with 97% similarity to the natural gut hormone. Like natural GLP-1, once-daily Victoza® works by stimulating the beta cells in the pancreas to release insulin only when blood sugar levels are high.

Until recently, most available treatments for diabetes involved tradeoffs for people with diabetes and physicians. While effective at lowering blood glucose, they carried the risk of inducing low blood sugar episodes (hypoglycaemia) and weight gain.

New GLP-1 therapies are a major innovation in the treatment of type 2 diabetes because they lower glucose while having a low risk of triggering hypoglycaemia, and in most people with diabetes they also support weight loss. In type 2 diabetes, the ability of the pancreas to release insulin in response to glucose is impaired. GLP-1 therapies help address this defect by directly acting on the pancreas.

Victoza®, the only once-daily GLP-1, can be used by adults with type 2 diabetes who are unable to achieve blood glucose goals with lifestyle changes and metformin. Treatment guidelines now call for the use of GLP-1 as an option for early treatment of diabetes. GLP-1 is a hormone from the human gut involved in glucose regulation. First available in Europe in 2009, Victoza® was launched in the US and Japan during 2010 and is now available in 24 markets. Victoza® is steadily capturing and expanding the market for GLP-1 treatment.<sup>6</sup>

## Changing Diabetes®

For millions of people living with diabetes today innovative treatments are a privilege they cannot enjoy because healthcare and treatment options are either insufficient or not available. With the epidemic growth in diabetes, happening particularly fast in low-income and emerging economies and hitting vulnerable groups all over the world the hardest, this presents a huge social challenge.

As a world leader in diabetes care, we have a responsibility to reach out beyond those people who already benefit from our products and the support we offer to them, and to do everything we can to ultimately defeat diabetes. This implies extending the scope of our efforts to people who do not have access to proper diabetes care as well as to people at risk of getting diabetes. Changing Diabetes® is our promise to improve health and quality of life and to actively contribute to a society that provides equal and non-discriminatory support for people with chronic conditions.

Our Changing Diabetes® ambitions are to:

provide better treatment and care for all people with diabetes

raise public awareness of the need to take action on diabetes

secure more resources to prevent and detect diabetes.

[Better treatment and care for all](#)

We believe that by finding better methods of prevention, detection and treatment we will be able to defeat diabetes. To do so, we

must begin by gaining a better understanding of people with diabetes and their needs.

The second Diabetes Attitudes, Wishes and Needs (DAWN ) study represents one of the most significant new initiatives from Novo Nordisk to learn from people with diabetes. A follow-up to our landmark study in 2001, this study will be conducted over the next few years to assess the needs of people with diabetes globally with an aim to improve health literacy and support effective selfmanagement. The largest study of its kind, the new DAWN study will establish a new global understanding and awareness of the needs of people with diabetes and those who care for them. The initiative will build on the lessons learned and the international networks developed in our initial, ongoing DAWN programme.

## Expanding access to care

Every person has a fundamental right to health. This is stated in the Universal Declaration of Human Rights and is the underlying premise of our efforts to improve availability, accessibility, affordability and quality of care. We also seek to contribute to the UN Millennium Development Goals, which set specific targets to overcome by 2015 some of the major challenges facing the world, including reducing child mortality, improving maternal health and combating diseases threatening social and economic development.

In addition to providing medicines to serve individual needs, we work to improve accessibility and affordability for patients. We do this through sustainable partnerships with governments and NGOs to strengthen healthcare system capacity and to reverse the diabetes pandemic, which is imposing a double burden on fragile economies in low-income and emerging economies.

### Addressing affordability barriers

The cost of therapy still constitutes a significant barrier for better healthcare in low-income countries. Through our long-standing differential pricing policy we offer insulin to all the least developed countries (LDCs), as defined by the United Nations, at a price at or below 20% of the average prices for insulin in the western world. Novo Nordisk has operations in 34 of the LDCs, and in 2010 either governments or non-profit organisations in 33 of these countries chose to purchase through this offer. See p 96. Since 2006 the total volume of insulin sold in the LDCs has increased steadily, and in 2010 the volume increased by 30% compared to 2009.

One challenge is that governments procurement is subject to budget fluctuations. However, offering treatment at reduced prices does not always ensure that end users benefit as intended. To improve the impact of our differential pricing policy, we have conducted pilot projects in eight LDCs. In 2010 we recruited sales re-



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 Diabetes care

representatives dedicated to addressing barriers throughout the supply chain. We also carried out independent quality audits in Ghana, Nigeria, Tanzania and Uganda to improve stock management and distribution and facilitate access to insulin in rural areas.

#### Providing treatment for children in poor countries

In most developing countries there are no existing facilities for treating children with diabetes. Children with type 1 diabetes have high mortality rates, with life expectancies of less than one year in some countries in sub-Saharan Africa. Our Changing Diabetes® in Children programme provides the necessary medical and laboratory equipment, organises training of healthcare professionals, puts in place patient education and creates systems for adequate monitoring and follow-up. In addition, insulin and diabetes supplies are being provided free of charge for the duration of the programme.

With an ambition to reach 10,000 children with diabetes within five years, we made a 25-million US dollar commitment in 2008. In 2010, we enrolled about 800 children and established 13 new clinics under the Changing Diabetes® in Children programme, which now provides treatment for more than 1,300 children.

To help improve diagnosis and treatment of diabetes in children, we have developed a basic training manual for healthcare professionals. This work has been informed by consultations with key stakeholders from African countries and in collaboration with the International Society for Pediatric and Adolescent Diabetes (ISPAD). The manual is available free of charge at [changingdiabetesaccess.com](http://changingdiabetesaccess.com).

#### Improving healthcare system capacity

We contribute to strengthening the capacity of healthcare systems by training healthcare providers to diagnose and treat diabetes and its complications. Since 2002, Novo Nordisk has either trained or sponsored training for 1.2 million healthcare providers.

In 2010, we commissioned an external evaluation of the World Partner Project (WPP) activities in Bangladesh and Tanzania during 2001–2009. The report shows how the WPP has resulted in active and productive partnerships with other major organisations involved in diabetes care. For example, in Bangladesh the development and deployment of a distance learning programme for doctors has resulted in a significant expansion of capacity, with 3,600 healthcare professionals trained in diabetology. Today the programme continues as a self-sustainable cooperation with a local faculty and the development of an accredited physician programme with the

## Public awareness and action

To change the course of the diabetes pandemic and improve quality of life for those with diabetes, we are working to put diabetes on public health agendas by building partnerships around a shared vision of Changing Diabetes® and implementing the UN Resolution on diabetes. Through 39 Diabetes Leadership Forums and regional or national round-tables in 77 countries since 2005, we have engaged more than 7,500 key stakeholders to date, helping to reach consensus about what it will take to address the current challenges and change diabetes.

In 2010, we turned our focus to two regions where the diabetes pandemic is increasing rapidly: sub-Saharan Africa and the Middle East and Northern Africa (MENA).

A Diabetes Leadership Forum Africa 2010 focused on the social and economic challenges related to the growing burden of diabetes in sub-Saharan Africa. Once a rare disease, diabetes impacts more than 12 million people in the region today and its prevalence is expected to double during the next 20 years. The meeting in Johannesburg, attended by more than 260 government representatives, international organisations, patient associations, non-governmental organisations, private sector, academic institutions and healthcare professionals from 32 countries across sub-Saharan Africa, was hosted by the Department of Health of the Republic of South Africa and the World Diabetes Foundation, and supported by the International Diabetes Federation. Health ministers and senior ministerial representatives adopted a joint statement calling for concrete actions to strengthen health systems and address non-communicable diseases, including diabetes, in sub-Saharan African countries. We sponsored and co-organised the Forum.

In the MENA region diabetes is today estimated to affect more than 26 million people, and this number is set to double by 2030. At the MENA Diabetes Leadership Forum in Dubai, more than 400 decision-makers gathered to find solutions to the growing burden of diabetes. Delegates represented international and regional organisations, media, experts and members of the diabetes community from 22 countries in the region. The Forum resulted in the adoption of the Dubai Declaration on Diabetes and Chronic Non-Communicable Diseases in the Middle East and Northern Africa Region. The Forum was hosted by the UAE Ministry of Health, the executive board of the Health Ministers

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ambition of extending care to other rural areas in the country.

Our support for healthcare capacity building includes our long-term financial commitment to the World Diabetes Foundation, including a donation of 69 million Danish kroner in 2010 (see p 87). This independent and non-profit foundation, set up by Novo Nordisk in 2001, supports the prevention and treatment of diabetes in the developing world. To date it has funded 253 projects in 96 countries. For more information about the foundation, including its annual report, see [worlddiabetesfoundation.org](http://worlddiabetesfoundation.org).

Council for Gulf Cooperation Council States, the World Diabetes Foundation and the World Bank, and was organised and sponsored by Novo Nordisk.

In conjunction with the Forum, the Changing Diabetes® World Tour arrived in the United Arab Emirates. Since 2006, it has travelled across five continents to raise awareness of diabetes. A new mobile unit was added in 2010, developed in partnership with the Steno Diabetes Center, offering high-quality screening and information about diabetes to the general public. The objective is to combine awareness, screening and research in order to drive policy change towards early detection of diabetes. Screening data will contribute to a better understanding of diabetes and inform recommendations for promoting early detection and intervention.

On World Diabetes Day, 14 November, more than 2.6 million people in 57 countries were engaged in different Novo Nordisk-sponsored activities, including screening and educational programmes to increase awareness.

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 Diabetes care

### Promoting workplace health

Through the NovoHealth workplace health programme, Novo Nordisk promotes and supports healthier lifestyles for employees. The NovoHealth programme promotes and supports healthy living as a means to prevent type 2 diabetes and other lifestyle-related conditions. It now reaches more than 80% of our employees and covers four global standards, ensuring that all employees work in a smoke-free work environment, have access to healthy food in the workplace, are supported in being physically active and are offered an individual health check every second year. In 2010, we were among the founding partners of the workplace Wellness Alliance, initiated by the World Economic Forum and launched at its annual meeting in Davos in January 2011. By making tools and better practices available, the Wellness Alliance makes it easy to offer workplace health and wellness programmes to employees.

## Prevention and early detection

As we continue to develop better methods of preventing, detecting and treating diabetes, we are also pursuing our dream and our hope of ultimately finding a cure. We make substantial investments in diabetes research, which is the foundation of our activities. The resources of our research units are complemented by a large international network, built over the last 10 years, of academic institutions, clinical research centres and technology providers. Much of this research into how diabetes could one day be controlled by regeneration or reconstitution of the vital beta cells of the pancreas is taking place today at the Hagedorn Research Institute in Denmark, which is a fully integrated part of the Diabetes Research Unit of Novo Nordisk.

### Support for best practice

Our global campaign drives awareness of the personal and societal risks of diabetes, and the importance of prevention and early diagnosis and treatment. Through our National Changing Diabetes® programmes, we promote better education of healthcare professionals and wider availability of screening for diabetes to help save lives and reduce economic costs long term.

Ask.Screen.Know is an educational programme that Novo Nordisk launched in 2009 to support diabetes screening in the US for people in the Medicare programme and at risk of

We also raise awareness about the importance of regular physical activity and healthy eating in preventing type 2 diabetes through our National Changing Diabetes® Programmes in many countries around the world. In Canada, more than 100,000 students in six provinces have participated in the Everyone Jump Kids Changing Diabetes® programme. A cross-curricular resource designed by teachers, the programme was introduced by Novo Nordisk in 2005 to support healthy living and type 2 diabetes awareness.

### Focus on healthy pregnancies

In recent years we have found substantial evidence that when women have or develop diabetes during pregnancy, their offspring will also be at significantly higher risk. This, we believe, holds a key to addressing diabetes at its roots: if we can prevent diabetes during pregnancy, we may also prevent future generations from developing this chronic condition.

The World Health Organization estimates the worldwide prevalence of gestational diabetes to be 3-15% of all pregnancies, but figures from India and the United Arab Emirates put prevalence rates as high as 18-22%. Half of the women newly diagnosed with diabetes each year have previously had gestational diabetes. Children born to women with gestational diabetes mellitus also have a substantially increased risk of developing type 2 diabetes. Many cases of gestational diabetes go undiagnosed, and most are in low- and middle-income countries, where women often have poorer nutrition and access to healthcare.

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**If we can prevent diabetes during pregnancy, we may also prevent future generations from developing this chronic condition.**

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Gestational diabetes can be controlled through proper diet and regular exercise, but some women with gestational diabetes require insulin treatment to normalise their blood glucose levels in order to avoid complications in the infant. Gestational diabetes usually goes away after the child is born, but 5-10% of women with gestational diabetes are found to have type 2 diabetes after pregnancy. In addition, women who have had gestational diabetes have a 20-50% chance of developing type 2 diabetes within 5-10 years.

Our task is to spread understanding of how diabetes in pregnancy needs to be identified, and how it can be controlled

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diabetes. Medicare began offering free diabetes screening services to those at risk of diabetes in 2005, but it is estimated that less than 10% of those eligible have been screened. We encourage physicians to have at-risk patients screened and speak with patients about their blood sugar numbers and making healthy lifestyle changes. See [AskScreenKnow.com](http://AskScreenKnow.com) and the Ask.Screen.Know page on Facebook.

In 2010, Novo Nordisk began working with doctors in the US to create awareness and understanding of programmes being run by the Diabetes Prevention and Control Alliance, a national partnership that provides access to community- and evidence-based interventions to help prevent and control diabetes, pre-stages to diabetes and obesity. This initiative helps prevent people at risk getting diabetes through support for lifestyle changes, including healthy eating and increased activity, and education, including support from trained pharmacists. The programmes have been launched in six US states and will roll out nationally through 2012.

with lifestyle advice. In particular, complications to the baby can largely be avoided if the mother's blood glucose levels are controlled before delivery. In up to 90% of cases, optimum control can be obtained by diet and physical activity alone. Lifestyle education can encourage behaviour changes to prevent future disease in the mother and her child.

We have therefore begun activities to raise awareness of the impact of diabetes in pregnancy, address knowledge gaps, support community-based maternal health programmes and advocate for

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## Diabetes care

sustainable change, which ultimately will increase access to diabetes screening, treatment and lifestyle education.

We have encouraging results from on-the-ground experience. Since 2007, the Indian state of Tamil Nadu has screened all pregnant women for gestational diabetes and provided free doses of NovoRapid®, approved for use during pregnancy. Positive results have led to the inclusion of screening guidelines in state policy and the establishment of national treatment guidelines. In 2011, a long-term study will be launched, with support from Novo Nordisk, to track the women diagnosed and treated and the children born to them, with the aim of improving understanding of the long-term consequences of gestational diabetes.

Building on this experience, we are now launching partnerships to address diabetes in pregnancy in Nicaragua and Colombia.

### [UN high-level meeting on non-communicable diseases](#)

In recognition of the increasing global impact and challenge of non-communicable diseases, the United Nations General Assembly will hold a high-level meeting on the prevention and control of non-communicable diseases in September 2011.

We welcome this initiative, which reflects a recognition of the significant negative impact of unaddressed chronic conditions, and are committed to supporting the UN process to focus on driving change in healthcare systems. We do this through partnerships, our own programmes and engagement at global, regional and national levels.

In 2010, we pledged to provide the World Diabetes Foundation with an additional 25 million Danish kroner to be used for activities relating to the high-level meeting in 2011 and 2012. There have been 27 such meetings in the history of the UN, and HIV/AIDS is the only disease to have been a summit topic. The summit has the potential to mobilise action for a new type of collaboration that pursues a life-cycle approach to healthcare.

1. Global Attitudes of Patients and Physicians in Insulin Therapy (GAPP) Survey, Novo Nordisk, 2010.
2. In October 2008, a new set of treatment guidelines for type 2 diabetes was issued by a panel of experts from the American Diabetes Association and the European Association for the Study of Diabetes.
3. The January 2010 issue of *R&D Directions* magazine included Novo Nordisk in its Top 10 Pipelines list. Novo Nordisk was recognised for the Best Diabetes Care Pipeline for the second year in a row.
4. Heise T et al. Insulin degludec: Less pharmacodynamic variability than insulin glargine under steady state conditions. Poster presentation, Poster 971, presented at European Association for the Study of Diabetes, Scientific Sessions 2010, Stockholm, Sweden, 2010.
5. Mathieu C et al. Insulin degludec, a New Generation Ultra-long acting Insulin, used Once Daily or Three Times Weekly in People with Type 2 Diabetes: Comparison to Insulin Glargine. Oral presentation no. 4, presented at European Association for the Study of Diabetes (EASD), Scientific Sessions 2010, Stockholm, Sweden, September 2010.
6. IMS, weekly NPA data.

## Improvements in diabetes care

[Interview with Kåre Schultz,](#)  
[Novo Nordisk's chief operating officer](#)

### *How does Novo Nordisk's diabetes care business benefit people with diabetes?*

For decades, our company has developed insulins for people with diabetes to help them live better lives and have better control of their diabetes. Ninety years ago, diabetes was inevitably fatal. Today, diabetes can be managed and, by developing improvements to diabetes care, we can help people with diabetes live longer, healthier lives.

Because modern insulins are made with protein molecules engineered to work longer or faster than naturally occurring human insulin, they can make it easier for people with diabetes to treat their diabetes and help in managing blood glucose levels. NovoRapid®, the world's most prescribed fast-acting insulin, allows people to administer treatment with meals, reducing the need

for complicated calculations and advance planning. Our delivery devices, including NovoFine® and NovoTwist® needles, can also contribute to improved treatment by reducing pain or inconvenience.

*How is Novo Nordisk supporting patients affected by the diabetes pandemic?*

As the diabetes pandemic is increasingly affecting people in developing countries, the global reach of our diabetes care business also allows us to help more people. We estimate that our diabetes care products are used by approximately 18 million people. This means that we are not only the global market leader in insulin, selling 51% based on volume, but we believe that we are also reaching roughly half of the people with diabetes who are receiving treatment and have been introduced to insulin therapy.

It is obvious that there are more people who are either not diagnosed, not treated, or undertreated. While the International Diabetes Federation estimates that there are nearly 300 million people with diabetes globally, it also estimates that only a quarter of that number have been diagnosed and are receiving treatment. We therefore advocate for better care, train doctors and support improvements in healthcare systems. We do this both because it helps grow our business and because the need for more and better diabetes treatment is real and urgent.

*What makes Novo Nordisk the global leader in diabetes care?*

We offer a very broad product portfolio, with therapies designed for all types and stages of diabetes, and we combine this with the broadest geographical reach. Because our company was founded to address the medical needs of people with diabetes our manufacturing, distribution and sales and marketing support for diabetes care are global. This includes production facilities in countries where diabetes is increasing rapidly such as Brazil and China.

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Biopharmaceuticals

## Biopharmaceuticals

Our specialised expertise with proteins and our understanding of chronic disease are leveraged in our biopharmaceuticals business to develop innovative and improved ways to treat haemophilia and other rare bleeding disorders, growth hormone deficiency and inflammatory diseases.

### Commitment to haemophilia

Haemophilia is an inherited or acquired bleeding disorder that prevents blood from clotting. The 400,000 people worldwide living with haemophilia lack, either partially or completely, an essential clotting factor needed to form blood clots. Without treatment, uncontrolled internal bleeding can cause stiffness, pain, severe joint damage and even death.

We developed our factor VIIIa product NovoSeven® for the more than 4,000 people with haemophilia who have developed inhibitors, or antibodies, to their normal treatment. NovoSeven® provides effective treatment for rapid control of bleeding episodes and has been a major advancement in the treatment of haemophilia. It was a significant innovation when launched in 1996 and remains the only room-temperature-stable recombinant bypassing agent available for people with haemophilia with inhibitors.

NovoSeven® is also the only recombinant medication approved for the treatment of bleeding episodes in acquired factor VII deficiency and, in Europe, Glanzmann's thrombasthenia. Due to its special properties, 14 years after launch, NovoSeven® achieved sales growth of 14% in Danish kroner.

We are continuing to look for ways to make NovoSeven® more convenient and more effective. During 2010, a new 8 mg vial was approved in the US and Europe. The new size, offered in addition to the 1, 2 and 5 mg vials, offers an extra element of convenience to initiate the treatment of bleeds faster. In the event of a bleeding episode, every second counts. With the availability of the 8 mg vial, many people living with haemophilia with inhibitors will need fewer vials to stop a bleed. This will allow faster reconstitution and initiation of the treatment, possibly resulting in faster bleeding control.

### Changing Possibilities

#### in Haemophilia®

##### Commitment to science

In support of our ambition to help people with haemophilia lead the lives they desire, we have the broadest pipeline of research and development projects in our industry. In addition to improving current treatment for people with inhibitors, we are developing the next generation of activated recombinant factor VII products and expanding our research in haemophilia and other rare bleeding disorders.

We are developing compounds targeting faster and more efficient treatment of episodic bleedings, long-acting compounds to allow less frequent prophylactic infusions and products administered by the more convenient subcutaneous route.

## Edgar Filing: NOVO NORDISK A S - Form 6-K

To offer new therapeutic approaches to the prevention and treatment of bleeding based on the established efficacy of recombinant factor VIIa, we are developing:

a new recombinant factor VIIa, analogue with a faster onset of action and the ability to form even stronger clots in a shorter time

a long-acting derivative of recombinant factor VIIa

The same long-acting molecule is also being investigated for subcutaneous use. The phase 2 trial for the fast-acting analogue was completed in 2010, while the phase 2 trials for the long-acting derivative of factor VIIa are ongoing.

During 2010, we also made progress in the development of solutions for the broad range of haemophilia and other rare bleeding disorders.

### Key events in biopharmaceuticals in 2010

Phase 3 trial results for the first recombinant factor XIII analogue to treat congenital factor XIII deficiency.

Phase 2 trial results for our fast-acting next-generation factor VIIa analogue.

Phase 1 trial completed for our long-acting recombinant treatment for people with haemophilia B intended for prophylactic use.

Launch of HERO (Haemophilia Experiences, Results and Opportunities), an international initiative exploring psychological and social issues in haemophilia.

New prefilled Norditropin® FlexPro® for growth hormone deficiency with audible click to confirm dosing launched in Europe, Japan and the US.

New Vagifem® 10µg, the lowest effective dose available for the treatment of vaginal atrophy, was launched in Canada, Portugal, Scandinavia, the UK and the US.

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## Biopharmaceuticals

For haemophilia A: In order to improve upon existing treatments using factor VIII we had to first produce a third-generation factor VIII compound. We expect to launch this new recombinant treatment within the next few years while we seek to develop a longer-acting formulation.

For haemophilia B: During 2010, we completed a phase 1, proof-of-concept trial for a long-acting recombinant factor IX compound intended for once-weekly use.

For congenital factor XIII deficiency: The only existing treatment option for the 600 people diagnosed with congenital factor XIII deficiency is made from human plasma, which may involve risk of bloodborne viruses. Our phase 3 clinical trial for a recombinant factor XIII treatment was completed in 2010 and we expect to file for regulatory approval in 2011.

### Commitment to community

Through our Changing Possibilities in Haemophilia® initiatives we seek to partner with physicians, healthcare policy-makers and the wider haemophilia community to help build a better tomorrow for people with haemophilia. We want to increase understanding of haemophilia and improve access to diagnosis, care and treatment.

To strengthen our understanding of life with haemophilia, we initiated a psychosocial study to determine how to best support the needs of people with haemophilia. We presented the preliminary findings of HERO (Haemophilia Experiences, Results and Opportunities), an international survey into the psychological and social effects of haemophilia, at the World Federation of Haemophilia Congress in Buenos Aires, Argentina, in July 2010.

The first phase of the study includes interviews with 150 people with haemophilia, caregivers and healthcare professionals in seven countries. The initial findings underline the importance of psychosocial issues in haemophilia, which include family tensions, problems of integration at school, fear of stigmatisation, and concerns about integration at work, forming relationships and starting a family.

When completed in 2011, the full inquiry will include responses from over 1,200 people from 12 countries and will be the largest international study into the social and psychological aspects of life with haemophilia. More information about HERO is available at [changingpossibilities.com](http://changingpossibilities.com).

Another Novo Nordisk initiative to better understand the needs of people with haemophilia and support caregivers in providing education about haemophilia and treatment optimisation early treatment to reduce joint damage is BRUNO (Being Receptive, Understanding the Needs of Others). Activities in 2010 included the launch of a children's book with all royalties donated to the Haemophilia Society and the Novo Nordisk Haemophilia Foundation, and educational materials developed in conjunction with an advisory board of nurses.

Through the Novo Nordisk Haemophilia Access to Insight programme we offer support to encourage doctors and scientists to enhance their understanding of haemophilia and share best practices to improve care. We also sponsor an accredited training programme, the Haemophilia Academy, as well as scientific sessions at major congresses.

Novo Nordisk was an official sponsor of World Haemophilia Day, 17 April, in 2010. The designated day, the 21st annual event, promoted awareness and understanding of haemophilia. Novo Nordisk-sponsored activities were carried out in more than 25 countries, reaching thousands of people.

People with haemophilia with inhibitors from around the world met in Buenos Aires in June 2010 to inaugurate the Novo Nordisk Global Haemophilia with Inhibitors Patient Council. By establishing a platform for ongoing communication with people with haemophilia and their representatives, we hope to better understand the unmet needs of people with haemophilia and how Novo Nordisk may be able to help. The group generated ideas about information and support that would benefit people with inhibitors. In the US we have also established the Consumer Council to offer better services to people with haemophilia. Their activities have helped develop the Uninhibited Achievement award, the Inhibitor Education Summits and the *Voices Uninhibited* newsletter. The

US Changing Possibilities Coalition also has a Facebook site with several hundred fans.

During 2010, we launched a number of programmes in Turkey to create awareness and build public support for haemophilia. To create positive awareness of haemophilia, particularly among healthcare providers, we were the main sponsor of the National Patient Summit and symposium. More than 300 people with haemophilia, healthcare professionals, associations and Ministry of Health officials participated in the April event.

## Expanding access to care

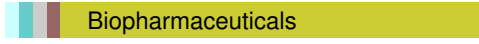
Our ambition is to improve access to diagnosis, care and treatment for people with haemophilia. We are working with the haemophilia community to support the next generation of haemophilia physicians, improve access to care today and increase treatment options in the future.

To give surgical teams the expertise to perform needed surgeries for people with haemophilia, we launched an ongoing training programme in 2009. People with haemophilia may suffer joint damage from repeated bleeds. Joint replacement may end chronic pain, but there are special challenges in performing surgery on people with haemophilia with inhibitors. Four-day Excellence Training Programmes are being held at haemophilia centres worldwide and each session accommodates up to four surgical teams.

As our focus on haemophilia has expanded, so has our commitment to the global haemophilia community. We established the Novo Nordisk Haemophilia Foundation (NNHF) in 2005 to address the significant need for improving haemophilia care and treatment in developing countries, where haemophilia is not a healthcare priority and many people with haemophilia go undiagnosed or are inadequately treated.

Our donations to the NNHF, including 15 million Danish kroner in 2010, support projects and fellowships in 25 developing and emerging countries. By working with partners across all areas of the haemophilia community with local ownership of projects, the NNHF aims to ensure the sustainability of development programmes. See [nnhf.org](http://nnhf.org) for more information.

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## Other therapy areas

In determining which business areas our company