# The Nordics Pharma report

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**August 2013** 



## Acknowledgements

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We would like to extend a huge thank you to all the CEOs of the private sector who granted us an interview and shared their insights with us.

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#### This report was prepared by Focus Reports

Project Coordinator: Alina Manac, Aleksandra Klassen Project Publisher: Julie Avena Editorial Coordinator: Herbert Mosmuller Contribution: Mary Carmen Luna Matuk

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n the Northern fringes of Europe, those who want to believe that there is a sustainable future for the old continent's generous healthcare systems find a beacon of hope.

At a time when the healthcare systems of most of the European Union's member states are going through their biggest existential crisis in post-war history, the Nordics (Denmark, Finland, Iceland, Norway, and Sweden) maintain sustainable yet technologically advanced healthcare systems.

Furthermore, the region's most populous nations (and the focus of this report), Sweden and Denmark, have made impressive contributions to the world's life sciences industry.

Denmark, a country of 5.6 million, brought the world such pharmaceutical champions as Novo Nordisk, Lundbeck, Leo Pharma, and ALK. Sweden, population of 9.5 million, grooms a thriving life sciences industry while its pharmaceutical market, the largest in the region, is often considered the barometer of Europe due to its progressive nature.

Denmark and Sweden coming out on top amid fierce competition, despite their modest populations, is often ascribed to the 'Nordic model.' This slightly undefined concept refers to a consensus-based model with a focus on sustainability and high levels of trust and cooperation between government and industry. Is the 'Nordic model' really the key explanation behind the remarkable success of the Danish and Swedish life sciences industry? This sponsored supplement was produced by Focus Reports.

Project Coordinator: Alina Manac, Aleksandra Klassen Editorial Coordinator: Herbert Mosmuller Project Publisher: Julie Avena Contribution: Mary Carmen Luna Matuk

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### MAKING A VIRTUE OF NECESSITY?

"The Nordic region—the 'quiet North' as it could have been called—counterbalances the turbulence in Southern Europe," said Zinta Krumins, managing director Nordics, Boehringer Ingelheim, when asked about the relevance of the Nordics to the company. "The Nordics are a very stable region, with small but reasonable growth prospects, very good government structures and frameworks, social infrastructure and a solid economy."

Although attractive for their stable economies and governments, the Nordics do not have numbers on their side. "We cannot compete in terms of volume and economy of scale," said Stig Jørgensen, CEO of Medicon Valley Alliance, a network organization representing human life sciences in Medicon Valley, a region spanning eastern Denmark and south-western Sweden.



From left: Zinta Krumins, Managing Director Nordics, Boehringer Ingelheim; Stig Jørgensen, CEO, Medicon Valley Alliance; Dorthe Mikkelsen, Senior Vice-President Mid-Europe 2, MSD; Mary Di Marzio, General Manager Nordics, Shire Plc

Thus, the countries need to work together in order to increase their leverage. "Other countries often have an individualistic mindset and their culture revolves around competing with each other," Jørgensen continued. "Our collective culture enables us to unite doctors, engineers, and business people to work together. All these disciplines collaborating and working in the same domain is where innovation will flourish." With Sweden and Denmark taking spot one and three respectively on the European Commission's Innovation Union Scoreboard 2013, it is hard to argue against the effectiveness of the model.

For instance, both Sweden and Denmark are overrepresented in clinical trials. MSD conducts about 10 percent of all its clinical trials in the Nordic region. "The attractiveness of the Nordics is a health care system that is state of the

### Biotech as Business — the Bavarian Nordic story

If there is one thing that successful Danish companies have in common with one another, it is the clear recognition of abundant opportunities outside the motherland.

"Danish companies' strengths lie in their ability to build on what they have inherited from Denmark but to also look outward and be international," said Anders Hedegaard, CEO of Bavarian Nordic. His company was established through a partnership with the US government.

With only two years experience of producing biological products in Denmark, building up competencies in a short time has enabled Bavarian Nordic to secure USD 1 billion in contracts from the US government.

"Although we might have started as a more traditional biotech company, smallpox vaccine orders from the US government have helped us to make the leap towards an industrial scale pharmaceutical company," explained Hedegaard. After the Food and Drug Administration (FDA) approval and the clearance to provide the product in 2010, the company had to be steered into a more industrial mindset to deliver on budgets.

Bavarian Nordic also acquired the rights to develop a vaccine for prostate cancer from the National Cancer Institute (NCI) in 2008. The vaccine is in Phase 3 trials after Phase 2 results showed significant improvements in overall survival in a patient group that otherwise had no good alternatives.

In addition to getting more contracts from the US government for the smallpox vaccine, "Bavarian Nordic's strategy is to run Phase 3 of the prostate cancer vaccine until data readout and then hopefully, based on attractive data, we will seek appropriate partners, such as a global pharmaceutical company with the ability to achieve a worldwide product launch," said Hedegaard.

It was a complete focus on execution that enabled Bavarian Nordic to not only survive the typical pitfalls of biotech, but to double its turnover and significantly improve the bottom line. And now it's delivery time. Bavarian Nordic has decided to merge and consolidate their production facilities in Denmark in order to supply both the smallpox and the prostate cancer vaccines.

In spite of all of Bavarian Nordic's achievements, communicating this success to investors has been more difficult. "The government business gives a huge advantage in many ways, but the challenge is to get investors to accept it and rank it on par with a normal commercial market," said Hedegaard. Execution remains the priority to ensure a sustainable business. Bavarian Nordic has a profitable smallpox business but is still shepherding its prostate cancer vaccine candidate through Phase 3 trials and approval.

"The cash flow that comes from a business in infectious diseases gives us a strong market position," explained Hedegaard, who hopes that this will enable Bavarian Nordic "to expand further, either in infectious diseases or cancer. Having infrastructure in place and commercialized products will help us open the business in new areas." art, with strong medical professionals, a high level of scientific leaders both at the universities and at the clinics, and an overall strong infrastructure for clinical research," said Dorthe Mikkelsen, Senior Vice-President Mid-Europe 2, MSD. Furthermore, the Nordics offer a good data foundation. "Their registries are a goldmine for doing re-



From left: Pia Olsen Dyhr, Minister of Trade & Investment, Denmark; Christian Dyvig, CEO, Lundbeck Foundation; Anders Hedegaard, CEO of Bavarian Nordic

search and developing new products," Mikkelsen said.

Clinical trials are also seen as another avenue for innovation, with many companies breaking out of the traditional sales model. "We see clinical trials as a positive way to collaborate with health care professionals," Tommy Söderman, general manager Nordics, IPSEN, said. "In the Nordics we have many of our own initiatives; for example, we are running clinical trials on rehab patients recovering from strokes at 30 sites in the Nordic region."

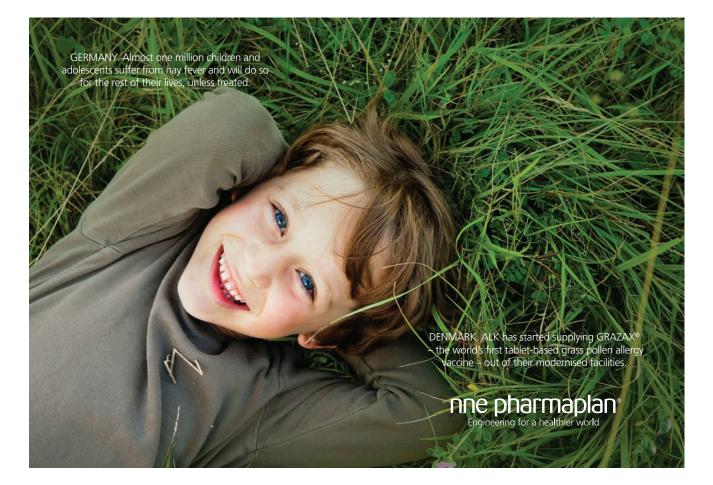
The two countries are also a goldmine for acquisitions. Shire Plc recently acquired Swedish biotech Premacure, a biotech developing a therapy for the prevention of retinopathy of prematurity, currently in Phase II.

"Before Premacure became part of Shire, the company was already surrounded by an environment that allowed them to invest, explore and discover, which we then found was a good fit for us. Sweden provides an environment in which government incentivizes companies to be innovative and rewards innovation with favorable taxation," said Mary Di Marzio, General Manager Nordics with Shire Plc. "That is at the core of what the Nordic nations are encouraged to do

and are rewarded for doing."

### DENMARK: A LAND FLOWING WITH MILK AND PHARMA

How has a nation of a modest 5.6 million been able to build a pharmaceutical industry that exported medicinal products worth USD10.1 billion (DKK58 billion) in 2011? "It is a historical success born through partnership between the industry and the Danish government,"



### 📕 Denmark VS Sweden 📕

Biogen Idec is building up a strong presence in both Sweden and Denmark. Sweden is a barometer market. Denmark is a manufacturing hub.

### Johan Ström, managing director for Biogen Idec Sweden What makes Sweden an attractive place to invest for Biogen Idec?

"Many of my international colleagues say that changes in the health care systems often happen first in Sweden. One aspect is the value-based pricing & the reimbursement system.

Another aspect is the regional health care structure in Sweden with County Councils focusing on cost-containment measures, e.g. decentralizing costs to the clinics and exploring new innovative pricing models.

There is also a strong ethical focus on the need for open and transparent collaborations between the life science industry and health care professionals. You have to add value to the healthcare system, irrespective of whether you are coming from the medical affairs department or from sales or marketing. That makes the Swedish business model very interesting for a company like Biogen Idec.

### **Birgitte Thygesen, director, administration & government** relations, **Biogen Idec Denmark**

Hillerod, Denmark is home to Biogen Idec's International Packaging Manufacturing unit, Quality Assurance and Quality Control laboratories, and a newly constructed Large Scale Manufacturing facility.

### What makes Denmark an attractive place to invest for Biogen Idec?

"For a pharmaceutical and biotech company, it's extremely important that you manufacture products in a safe and stable environment with access to a well-qualified work force. Denmark has that. The country's long track record in biotech means that there generally is a good understanding of the business conditions needed not only for research and development, but also for manufacturing activities."



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### **CEO-Talk**

The two Danish pharmaceutical companies that grew biggest under far-sighted ownership have been Lundbeck and Novo Nordisk. Focus Reports sat down with their CEOs to discuss the companies' recent successes.



#### Lars Rebien Sørensen, President & **CEO.** Novo Nordisk

Governments in many of your key markets are pushing to cut expenses. How has Novo Nordisk coped with this situation?

Ten years ago, our overall strategic aim was to introduce new products. but then we realized that because

of the financial crisis, societies were beginning to focus more on cost-effective alternatives. If we only looked at the very expensive end of the treatment then we would

be foregoing providing our other customers with generic types of medication.

This also means that we can now offer the generic versions of Insulin at very low cost; in fact the lowest cost in the world. Because of this we can also offer our products to emerging economies, and even to extremely poor countries.



**Novo Nordisk manufacturing** 

We like to say that we can offer daily insulin treatment at the same cost as a cup of coffee, anywhere in the world. Coffee is very inexpensive in Brazil, so our insulins in Brazil are also very inexpensive. Starbucks is more expensive in the US, therefore our insulins are more expensive in the United States.

In order to do this well and make a business out of it, large-scale manufacturing is required. Today, we manufacture a little over 50% of all the insulin in the world, providing approximately 20 million people with their daily requirements of insulin, without which they would die.

#### Ulf Wiinberg, President & CEO, Lundbeck



You mentioned that in the post-blockbuster era. Lundbeck aims to deliver more products to market. To what extent do you need to transform the way the company works to achieve this?

We decided to diversify the business and turn from a European company into a global one. This meant finding products that have a potential of

R&D team that they are

only allowed to develop

blockbusters stifles inno-

vation and the ability to

blockbuster model, all

R&D units were self-

contained and worked

secretly on their own. We

As part of the old

move forward.

around USD 200-300 million : such revenues still make a product a good one for us.

To use an American baseball term, a blockbuster is a "home run" product. We decided to go for base hits, hoping that some would turn into home runs. Telling your



Lundbeck Headquarters

are trying to open up much more to partnerships in order to go with the best science, which has led to a number of collaborations and partnerships with academia and small companies.

For instance, we have fantastic partnerships with Takeda and Otsuka. Historically we have had a fantastic partnership with Forrest. It is in this area that you can have a more ambitious agenda, and at the same time get the best knowledge, all while sharing the risk.

said Minister of Trade & Investment Pia Olsen Dyhr.

"Novo Nordisk, for example, benefits from the government's decision to give all patients with diabetes access to free medication. The company has hence been able to build on the domestic market before going global. In the same way, Lundbeck and Leo Pharma benefitted from Public-Private Partnerships to build an export business."

Another shared characteristic of Denmark's top pharmaceutical companies is that they are controlled by foundations. As majority owner, the foundation usually decides who sits on the board, monitors corporate activities, and helps whenever the companies need support, including financial backing for acquisitions. "This model has a lot of potential for innovation and the development of new drugs, something we couldn't do to the same extent if we were just focused on what the stock market wanted us to do," said Lundbeck Foundation CEO Christian Dyvig. The Lundbeck Foundation owns 70 percent of Lundbeck's shares and is majority owner of ALK, a supplier of allergy immunotherapy products with a global market share of approximately 33%.

Can the absence of the stock market as a reality check lead subsidiaries to get too comfortable where they are?

### NO CONSENSUS ON CONSENSUS

An essential part of the Nordic model is strong cooperation between industry and government. How do those at the frontlines of the battle, the heads of the industry associations representing innovative companies, judge the strength of the cooperation in their respective countries?



#### Ida Sofie Jensen, director, Lif Denmark

I think we are good at having a dialogue with one another. Our politicians are sensible; they are not setting up walls against the industry. They are in dialogue with us and are ready to make Danish solutions.



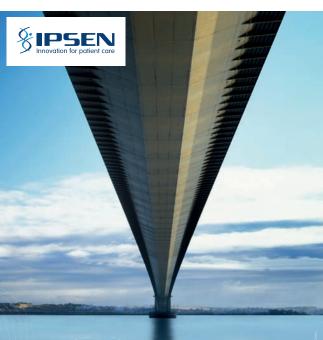
Anders Blanck, director-general, Lif Sweden It is very good. And it has to be, and that is the problem. We have no conflict in Sweden. We hardly have any political conflict at all; people do not like conflict. Even if you disagree, you still make it sound as if you agree. Because the system is consensusbased, there is no political discussion on where the healthcare system is going. "That is a risk," Dyvig said. "Academic articles on foundations describe the notion of the dead hand. An owner with a dead hand loses dynamism in the business. That's one of the reasons that we like our companies to be stock listed. The duality between the long-term nature of the foundation and the short-term nature of the stock market brings a lot of benefit. It is in that friction that you end up having the best results."

### **PUSHING AND PULLING**

Most stakeholders in the Danish and Swedish lifesciences industry praise the outcome of concerted efforts to set up the right pull-factors for innovation the framework to enable pharmaceutical research to flourish. Finding consensus over the push-factors government's willingness to pay for new innovative products to be used by the healthcare system—is much more challenging.

In Sweden Government spending on academic research has increased significantly even throughout the economic crisis, and in October 2012, the government put forward its Research and Innovation





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### Stepping out of the shadow, technically speaking

NNE Pharmaplan traces its roots to a technical department within Novo Nordisk. Spun off as an independent entity in 1990 with its parent company retaining 100% ownership, this pharmaceutical engineering and consulting house has enjoyed great success. But as CEO Morten Nielsen, explained the company never forgot its roots and has always championed the strong ethics and uniquely Danish management style of its parent company. This is NNE Pharmaplan's growth story:

**On winning business outside of Novo Nordisk:** "Novo's growth phase between 2000 and 2003 precipitated high growth in our own business. However, at the end of 2003, when the project pipeline dried, we were faced with a harsh wakeup call. We had to consolidate our business and significantly reduce our headcount. At that point in time, we realized we needed to build a sustainable business model that was not dependent on Novo Nordisk. In 2006, we celebrated a milestone: for the first time, our quarterly sales to external companies exceeded those to our parent."

**On accelerating growth:** "In 2007, we bolstered our growth by acquiring Pharmaplan. In that sense, you might say that our company—in its current form—is six years old. Pharmaplan was interesting for us because they had a simi-

lar story to our own: they were once a technical department within Fresenius, a German medical care company. Through the Pharmaplan acquisition, we integrated 350 fantastically talented people into our organization, we entered highly attracted geographies such as India and Russia, and we reinforced our presence in markets like France and the U.S."

**On differentiating from the competition:** "One reason for our success is the fact that both of the entities that combined to form our organization came from within the industry. That heritage gives us a great deal of credibility among our customers. We are not a diversified engineering company. Many of our competitors are engineers that developed expertise in pharma, while we come from the other direction: by heritage, we are a pharma and biotech company, which by coincidence has an interest in engineering and consulting."

**On the future:** "We want to become the market leader in pharma and biotech engineering. You might say that we are already there—and yes, we are in the top three today, and likely the number one focused company in the industry. But globally, the market is absolutely huge, and our share of it is only approximately six percent. There is still much more of the pie that we can capture."

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### One for All, All for One

In the search for market share in Europe, the Nordics pose an interesting opportunity for multinationals looking to gain access to additional mature markets outside of the traditional big five in Europe. "The countries of the Nordic region combined form the 12th largest economy in the world," said Anders Löfgren, CEO of Nordic Drugs, one of the biggest homegrown market access companies in the Nordic region. "There are many companies that struggle to deal with the practicalities of having a region that seems to share so many similarities on the surface, but that on a deeper level have significant differences," he said.

"The investments needed to enter each individual country in the region are very high, and the process of setting up local representation has to commence years before the first product can be brought to market," explained Löfgren.

It is this particular challenge that Nordic Drugs has turned to its advantage: since its foundation in 1996, the company has developed the expertise to take a product through each development stage in each Nordic market, as it is currently doing with Teysuno, an oncology product from Japanese company Taiho Pharmaceutical Co. bill, under which USD 600 million will be spent between 2013-2016 to boost Swedish research capabilities. One of the bill's six focus areas is the life sciences industry.

At the same time, Sweden may soon link its existing value-based pricing system with international reference pricing to cut drug expenditures. The pharmaceutical industry warns this change would have an adverse effect on both the attractiveness of Sweden as a market and as a location for R&D activities.

"The focus is solely on the push-part of the business," said Anders Blanck, director-general of Swedish pharma industry association LiF. "The government wants to build the infrastructure for a well-functioning life-science sector in Sweden, but does not want to talk about markets, about using new products and paying for them."

This is especially surprising for a country with GDP far exceeding EU average. "Even though the Nordic region is better off than the south of Europe," IPSEN's Tommy Söderman, said, "it has still been tough for the pharmaceutical industry, especially in terms of pricing for products that have been around for a number of years."

In some respects the Nordics even lag behind European peers. "In terms of market uptake and penetration, it takes



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### Vaccines of the future Bavarian Nordic is a global biopharmaceutical company developing and producing vaccines for infectious diseases and targeted cancer immunotherapies. www.bavarian-nordic.com







From left: Tommy Söderman, General Manager Nordics, IPSEN; Tom Rönnlund, General Manager Nordic & Baltic Region, IMS

a lot longer compared to other European countries to get market acceptance for innovative products," Krumins of Boehringer Ingelheim said, speaking of Sweden. "It is much tougher now than it used to be, because of the many stakeholders at national but also regional and local levels. Whilst we can have products authorized and reimbursed, they might not be used by the healthcare system at the regional level or local level."

Tom Rönnlund, General Manager Nordic & Baltic Region for IMS, agrees that the industry faces serious challenges. "Austerity measures and efforts to reign in expenditures on pharmaceuticals are coupled to a longer-term trend of changing rules for the way in which pharmaceutical companies are expected to interact with the healthcare system. This concerns rules for meeting and interacting with care providers, how companies are able to arrange different kinds of activities for GPs, etc in the Nordics."

But this increased scrutiny also offers an opportunity to the international industry. "The change process, especially regarding the evolving business models, has been going on in the Nordics for a little bit longer than in other markets," Rönnlund said. "That allows the industry to be slightly ahead

TOP 10 COMPANIES IN THE NORDICS BY REVENUE
NOVARTIS
PFIZER
JOHNSON & JOHNSON
ORIFARM
GLAXOSMITHKLINE
ROCHE
MERCK & CO
ASTRAZENECA
SANOFI
ORION
Source: IMS MIDAS Quantum

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of the game. Many companies have also used the Nordic markets for piloting innovative approaches to act in the best possible way in this environment."

Part of the key to success is realizing that traditional sales models no longer work. "The times are over that you have a detailed aid and sell something—that



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does not fly anymore," said Markku Santonen, general manager Nordic & Baltic, Amgen. "You need to understand the medicine and the value the medicine can add to a certain group of patients."

Amgen adapted its organization and tactics in the region to meet the new environment. "It used to be more about demand generation; this is no longer the case in Scandinavia. We need to combine the market access, health economics, and the commercial part. It is not easy, but it is the way in which the Nordics as a group are moving," Santonen concluded.

Is the 'Nordic model' really the key explanation behind the remarkable success of the Danish and Swedish life sciences industry? In Denmark, cooperation between government and industry is praised by both sides, and it is safe to say that it supported the industry's



From left: Markku Santonen, General Manager Nordic & Baltic, Amgen; Morten Nielsen, CEO, NNE Pharmaplan

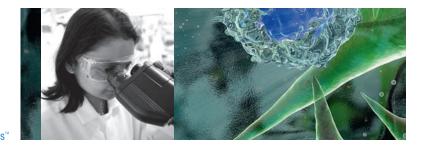
focus on the long-term and on niche areas such as diabetes, CNS or allergy.

In Sweden, the situation is more complex. Although the government has set up a solid framework for innovation to thrive and to support the life sciences industry, satisfactory cooperation often seems to be lacking.

"There are good initiatives in Sweden," said Rönnlund. "But they sometimes feel a little bit like a late wake-up call. Only when AstraZeneca shut down a big chuck of its research operations in Sweden the government hurried to drum up plans and policies around innovation. The Danish government and their ambitions, working together with the pharmaceutical industry association and other players, are slightly more concrete."

But the Nordic model is first and foremost cross-country partnerships like the Medicon Valley Alliance which facilitate the convergence of technologies, clever networking and the consolidation of niches in which the Nordics display a strong heritage. "That is the process we are in now—building up beacons, or areas with one shared headline in which we combine different strongholds and disciplines," Jørgensen concludes. As the Swedish band ABBA would probably say, take a chance on the Nordics. *O* 

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# Lars Rebien, CEO - Novo Nordisk



Focus Reports: One of the biggest challenges the innovative pharmaceutical industry faces today are spending cuts of governments in developed markets. How has Novo Nordisk coped with this situation?

We have made a strategic decision within the last three to five years to offer a full portfolio of our products; meaning that we are not only today's biggest generic manufacturer of Insulin, but we're also the biggest manufacturer of proprietor patent protected insulin, which gives us an opportunity to offer cost-effective alternatives to all societies. Ten years ago our strategic aim was to introduce new products. But we realized that, because of the financial crisis, societies were focusing more on cost-effective alternatives. If we were only looking at the expensive end of the treatment then we would be foregoing servicing our other customers with the more generic types of medication.

This also has the advantage that we can offer the generic versions of Insulin at very low cost, in fact the lowest cost in the world. Because of this we can also offer our products to emerging economies; even extremely poor countries. So we aim to offer daily insulin treatment at the same cost as a cup of coffee, anywhere in the world. Coffee is very inexpensive in Brazil, so our insulins in Brazil are also very inexpensive. Starbucks is more expensive in the US; therefore our insulins are more expensive in the United States.

In order to do this well and make a business out of it, large-scale manufacturing is required. Today, we manufacture a little over 50% of all the insulin in the world, providing approximately 20 million people with their daily requirements of Insulin, without which they would die.

### *FR:* Up to what point do you think a company can change the mindset of the people?

Building awareness and education is a public obligation. However, in the area of diabetes we feel that we can help. In our case it's speaking to the ministry of health and the other politicians about what we believe is the best and most appropriate way of protecting yourself against diabetes—to avoid getting diabetes in the first place, by exercising, keeping a healthy diet, and living a more frugal life. Whether the public at large will accept this is another matter.

There are big unhealthy global trends of urbanization, of modern diets, burgers, etc. So we cannot say that we can change the general trends but we can try to, in a way, add the perspective that not only can you protect your own health but you can also combine that with living a life that is sustainable from an environmental perspective. If you for instance, as I do, ride my bicycle to work then you don't use gasoline and you don't produce CO2 while staying healthy at the same time. Essentially, we can kill more birds with one stone.

We try to relay this message, but it's primed towards decision makers, politicians and the press. In some cases we do

We aim to offer daily insulin treatment at the same cost as a cup of coffee, anywhere in the world.



school programs and other awareness building programs, but we have to admit that amongst the general noise in the media world, we have little that we can hope to get across. Everybody in Denmark knows Novo Nordisk and knows about diabetes for that reason. This is different than in most other countries, not only because of our size but because outside of Denmark, few know who we are.

### FR: In addition to creating awareness to build a stronger industry, how important is it to have a more holistic approach to healthcare?

We have of course adopted the philosophy that it is important to take a holistic approach. Pharmaceutical companies should be seen as part of the solution and not part of the problem. So it is complex in the sense that it is costly and risky to do research on new products, and therefore new products are very expensive. By adopting a full-line approach like we are doing, we do not run into the ethical issue of only servicing the rich and the wealthy.

We can service the European countries; most of the health systems are socialistic systems, where there's only one system. I am expecting that this may change in the future because the demands on the public health sector in Europe will be growing and for that reason there will be growing demand for resources and growing demand for new medication to solve problems. And if we cannot raise taxes and tax the population, where should the money then come from?

The only way I can see that we can provide more funds for the healthcare system is through building either insurance systems where individuals can make insurance and thereby get access to better levels Today, we manufacture a little over 50% of all the insulin in the world, and provide approximately 20 million people with their daily requirements of Insulin – without which they would die.

of care, or through increased co-payment (which is not the case today, at least in this country). Eventually the demographics and the economic dynamism with lead in that direction.

## FR: Novo Nordisk did very well last year, growing 12%. Looking to the future, what are your expectations for 2013?

Our expectation for this year is that we will be growing around 10%. There has been health care reform enacted in America and in several European countries that have been reducing prices, which is negatively affecting us. Nevertheless, we are introducing new products that give us a positive impact on the pricing of our products. We are also currently introducing a new group of products in Europe, Japan, and the emerging markets, which unfortunately has not yet been approved in the United States.

We're struggling a bit with getting acceptance from the FDA for this new line of products. We hope to have clarified this year what types of data we need to provide to the FDA to get approval. I anticipate that we will be able to grow approximately 10% per year in the near term. If we succeed in getting this new line of products into the US, then there's a chance we could grow some more.

# Ulf Wiinberg, CEO - Lundbeck



Focus Reports: As the blockbuster sales model begins to fade, the rush is on for a new formula for growth characterized by niche, and sustained growth that is more patient friendly than patent-centric.

ULF WIINBERG: What you are saying is perfectly right. But to put some color to it, historically companies only wanted to discover and develop blockbuster products. But when you look at the industry's productivity you don't really know if it has blockbuster potential until you have an improved label. So you have to define if there is a medical need and, if it is early in development, whether the biology suggests that the product can meet the need in a different way than other drugs.

Then you take it forward. If you say that a difficult blockbuster has to generate more than \$1 billion in sales, then you perhaps lower that threshold and say that it is still worth developing for a couple hundred million dollars in sales if it can help a large number of people. Then you can still get lucky and get a blockbuster out of it.

Lundbeck is trying to develop and bring several products to market now whose potential we estimate to be a couple hundred million dollars in sales, but we don't quite know yet whether a blockbuster will come out of them. That has been the script that we have followed. We have launched 5-6 products in the last few years whereas historically we would only launch a product once every 4-5 years.

We launch a number of products, we see how they come in, develop, and come through. In very difficult fields such as CNS, where no good biomarkers are available, the outcome of the phase trials become very important. Hence only developing blockbusters becomes a difficult model to sustain. That said, we still have products that we are hoping to launch that may very well become blockbusters. But the decision may come about to still develop them even if they will not turn into blockbusters.

FR: To what extent do you need to transform the way the company works to adapt to this? ULF WIINBERG: I started in 2008 and we were mainly a European company with some good businesses outside. We were very reliant on Lexapro in the US, which Forest did an excellent job of making a big success. Having lost Lexapro to patent expiry in 2012, finding a new one is not something you can do on demand.

So we decided to diversify the business and turn from a European company into a global one. This for us meant finding many products that have that \$200-300 million potential, possibly more depending on how we develop them. But those revenues still make for a good product for us. To use an American baseball term, a blockbuster is a "home run" product.

But what we decided to do is go for base hits and maybe some of them will turn into home runs. We bought Ovation in the US, and we launched several products of that size. Now we are launching Anilify Maintena and Selincro, which we think will be bigger products. And we expect to launch our new anti-depressant towards the beginning of next year, which we hope will be another blockbuster.

We also have a stroke drug in develop-





ment and if that works it is likely to be a blockbuster. But regarding the innovation approach, if you say to your R&D team that they are only allowed to develop blockbusters, then it will stifle innovation and the ability to move forward.

As part of the old blockbuster model, all R&D units were self-contained and worked secretly on their own. What we are trying to do is open up much more to partnerships in order to go with the best sciences. So we have number of academic and small company collaborations. We also invite partners.

For instance we have fantastic partnerships with Takeda and Otsuka Historically we have had a fantastic partnership with Forrest. So that's where you can have a more ambitious agenda, and at the same time get the best knowledge and share the risk.

### FR: How far is Lundbeck today from being that global company that you wish Lundbeck to be looking at the deals that the company is able to conduct?

ULF WIINBERG: The deal with Ovation was an

absolutely crucial step in our development. We can now do business development deals on a bigger scale with global models and be much more competitive when there is competition for assets. In the Otsuka agreement we are paying up to \$1.8 billion for the rights to two products in exchange for the rights to up to three products from us – which they already exercised on one drug.

That may have been the largest deal in the CNS space. We could never have done a deal like that if we were not in the US market. We would never have been able to be competitive without being able to include the US market in our innovations to justify development costs.

Prior to buying Ovation we could license products in Europe, but now we can do global deals. It doesn't mean that we will only do global deals. After Ovation we did a deal with Cephalon where we got their products for Canada and Latin America. We did a couple of other deals that were not global or big. But had we not established in the US we would not have been able to go to for the big deals.

### INTERVIEW WITH:

## Pia Olsen Dyhr, Minister for Trade Investment Denmark

UDENRIGSMINISTERIET Ministry of Foreign Affairs of Denmark Focus Reports: Denmark's growth strategy is one of consolidation around sectors where Danish companies already have a strong foothold. One of these sectors is without a doubt the life sciences industry, as Denmark is home to some international industry champions, and a dynamic life sciences cluster. How do you explain Denmark's historical success in life sciences? PIA OLSEN DYHR: It is indeed a historical success born through partnership between the industry and the Danish government. Novo Nordisk, for example, benefits from the government's decision to give all patients with diabetes access to free medication, so Novo Nordisk has been able to build on the domestic market before going global. In the same way, Lundbeck and Leo Pharma benefitted from Public Private Partnerships to build an export business. Besides PPPs, Denmark offers very easy access to high quality clinical trials and highly competent people. In that way, the local life sciences companies had a solid base from which to grow.

Today, it's thanks to these same assets that we are able to attract FDI. Firstly, many companies develops products and services in collaboration with the public and together they constantly deliver new and better solutions. Secondly, thanks to our social security number system and our tradition of patient and population registration, we have access to data: a child born in Denmark will enter our registration system and will be followed through their life. This means that companies can follow a disease pattern and cross-check data to see if there is a relation between the disease and where the patient was born, where he went to school, if he lived close to a factory, etc. Provided they fulfil certain criteria and are specific in their research, companies can have access to this data. This is what makes us attractive.

FR: Denmark's positioning is based on its tradition for innovation. However, in a global economy, most countries in Europe, but also beyond, in Singapore, Korea, China, are building knowledge-based economies, with life sciences as a pillar for future growth. Why will Denmark succeed where others might fail?

**PIA OLSEN DYHR**: I cannot predict the future, but the Danes have innovation in their DNA. From a very early age in our public schools (and most schools are public in Denmark), you learn that you have to ask questions, challenge the status quo, and find solutions by yourself. And this is what our Danish researchers and Danish companies bring to the table: they accept there is no standard solution, and know how to look beyond. This spirit is what gives us an edge.

Our research pointed to the fact that investment from multinational companies in the country was limited. Some executives explained this by the fact that they saw little connection between investment and commercial success. What is missing to attract more FDI in one of the industries where the country is very strong, and



how are you addressing the situation?

Most MNCs are already investing in Denmark, but I of course would like them to invest more. The government is currently tackling this issue, and our strategy has just been launched to improve the framework conditions for the companies in Denmark. Also we have organised a growth team for the health- and welfare technology area where were have invited the government, the industry, and various stakeholders to the table. All were welcome to come with suggestions, and share the specificities of the sector, and what we could do to help. Taking outset in the recommendations given by the growth team, the government is currently working on a growth plan for the health- and welfare technology area.

The feedback from the industry was the following: having access to high quality public research and a cluster of educated and highly qualified people is crucial for them, and that's the reason why many companies have already established themselves in Denmark. Companies such as BGI and Biogen Idec have chosen Denmark because of the level of research at the Danish universities, the level of interactivity they can have with researchers and access to qualified labo. In the future, the two angles on which we will be working are reduced taxation on R&D, and continuing to raise education levels to further increase our competitiveness.

### *FR: In a few words, how would you like Denmark to be perceived in the world?*

**PIA OLSEN DYHR**: I would like people to see us as creative, innovative, thinking out of the box. I thought everyone knew we had one of the strongest life sciences clusters in the world but I found out that this is The Danes have innovation in their DNA. From a very early age in our public schools (and most schools are public in Denmark), you learn that you have to ask questions, challenge the status quo, and find solutions by yourself.

not the case, even though the The Worldview Report and Bio-Innovation Scorecard presents us as number one in Europe and second in the world after the US. We have all the assets; it's just a matter of telling the story.

## FR: Is there such a thing as "the Danish model," and if so, what can the world learn from it?

PIA OLSEN DYHR: Denmark's foundation is a well-established welfare state, where everyone has free and equal access to healthcare. This creates a society where people are safe. Even if we sometimes take it for granted, this safety net creates a culture where people are more willing to participate in the community as well. Also, we have free access to education from kinder garden to university, which means Denmark is a true meritocracy. We get the best brains since no potential is lost because of people couldn't afford to pay for their education. Foreign investors often think that Denmark is an expensive country with high taxes - but the truth is a lot of services are free – so in the end, the Danish model is also cost effective.

## Stig Jørgensen, CEO - Medicon Valley Alliance

### Focus Reports: Could you please explain to our readers what Medicon Valley Alliance is and what its main objectives are?

**STIG JØRGENSEN:** Medicon Valley is composed of Zealand (Danish region) and the southern part of Sweden. In the late 1990s, during the planning of the Øresund Bridge that connected Denmark and Sweden, a decision was made to take advantage of the bridge and create a cluster, which is known as Medicon Valley today.

Medicon Valley Alliance (MVA) is an alliance that aims to create the right environment to attract talent. MVA includes the major stakeholders within life sciences: the regional governments are represented in our board, as well as all the universities that offer life science education and research, major pharmaceutical companies, biotechs, medtechs, CROs, CMOs, and five science parks.

Although our main objective is attracting talent, we also intend to sustain and expand our vibrant industry. Denmark has a world-class pharmaceutical industry with companies like Novo Nordisk, Leo, and Lundbeck. Regardless of this strong positioning, our politicians should remain concerned about how to preserve the jobs that the industry generates in our country, within the context of our globalized world. We believe that we need to create and maintain jobs here. That is what continues to grow our economy.

Novo Nordisk or Leo Pharma are global companies and will analyze two main fac-

tors in order to increase their market presence: access to population and talent. Denmark is a small country, so our main competitive advantage should be access to talent. Talent is the fuel of our ecosystem.

### FR: The talent topic is all the rage today, but there are other countries that are almost trademarked for it, i.e., Singapore. How do you deal with that competition?

**STIG JØRGENSEN:** This is a challenge. However, we have top-notch universities older than Harvard or MIT. Despite our long tradition of scientific acumen, we cannot sleep in our laurels and need to move forward.

But there are many components in addition to importing talent. In order to succeed it is crucial to have the environment, the right innovative culture and an entrepreneurial spirit. Our flagship corporations play a very significant role in stimulating entrepreneurship and innovation. However, to further foster talent we need to have job opportunities and superior framework conditions.

Still, the main challenge for Denmark is to expand our appeal for talent. That is what we are trying to promote.

Having a competitive talent strategy is intricate. With all of our affiliates we are trying to make this cluster flourish.

### FR: What will it take for Medicon Valley to stay competitive and attract talent?

**STIG JØRGENSEN:** The main challenge for Denmark and Sweden is to maintain jobs.



If jobs start moving into other parts of the world, we will enter into a vicious circle with fewer taxpayers there will be less money for public investments in education and research, and less talent.

In Medicon Valley, as in all the other clusters in the world, we are competing for the same talent; therefore we have to have a distinct strategy.

Ours focuses firstly on the most complex things. We cannot compete in terms of volume and economy of scale; hence we need to work together and collaborate.

In this regard, Scandinavia has a competitive advantage. Other countries have a very individualistic mindset and their culture revolves around competing with each other. Due to our collective culture, our mindset enables us to unite doctors, engineers, and business people to work together. All this disciplines collaborating and working in the same domain is where innovation will flourish.

We also have an advantage in convergence. We have the big technologies areas: medtech, IT, biotech, and nanotech converging into different sources and products.

The third area is clever networking since we would like to collaborate with the rest of the world. Our aim is to link ourselves with the best biotech hubs around the globe and strengthen our competencies.

For this reason, we started an ambassador program, which consist of posting MVA's ambassadors around the world responsible for forging alliances. Currently we have ambassadors in Japan, South Korea, and Boston. We will soon appoint two additional ambassadors, one in San Diego and one in China.

The fourth and final point of our strat-

We have top-notch universities that are older than Harvard or MIT. But despite our long tradition of scientific acumen, we cannot sleep in our laurels and need to move forward.

egy is specializing and consolidating niches in which the region has a strong heritage. We are currently in the process of building up beacons, or areas with one shared headline in which we combine different strongholds and disciplines.

### FR: Can you elaborate further on the beacons you mention?

**STIG JØRGENSEN:** One of these beacons will be drug delivery. For this, we are setting up a center for drug delivery with universities and leading companies. The center will focus on membrane transport, specifically for biological and subsequent targeting.

We will invest significant amounts to funnel different disciplines from the public and private sector and work together in the same shared environment in order to fertilize and stimulate this area, converge technologies, and link these beacons with the best centers around the world. We want Medicon Valley to be known as a world center for drug delivery and for targeting new compounds.

While this is our first beacon, we are interested in having three to four more. Currently we are studying nine potential candidates. From those we will choose four. We will invest significant private and public resources in these areas in order to create a world-class environment. This will raise the attractiveness of Medicon Valley and step up our ability to attract the best global talent to the region.

### INTERVIEW WITH:

## Martin Olovsson, Managing Director - AstraZeneca Nordic Baltic



Focus Reports: You recently referred to AstraZeneca as the locomotive of bioscience in Sweden. Can you elaborate on what you mean by that, and the role that you see for AstraZeneca in pushing this development forward?

MARTIN OLOVSSON: AstraZeneca has a significant R&D presence in Sweden. We currently have more than 2,300 researchers at our site in Mölndal, which include 30 professors, 560 PhD's and 250 researchers from 30 different countries. The Mölndal site is responsible for 22% of the company's R&D spend, and is chosen as one of three key hubs, alongside Cambridge (UK) and Gaithersburg (US). In addition to R&D, AZ have in Sweden a major manufacturing site, responsible for over US\$6 billion in export in 2012, thereby representing a significant portion of Sweden's total trade surplus. Sweden represents ~1% of AstraZeneca's total sales turnover. but in the added value we bring to the country within R&D and manufacturing by far exceeds these 1% - that's why I feel the term the locomotive of Sweden life science industry is well grounded.



FR: This commitment to R&D investment in Sweden comes at a time when we see clinical trial numbers dropping in the country, yet rising in neighbouring Denmark. How would you rate the climate for conducting clinical trials in Sweden today? MARTIN OLOVSSON: The primary reason for us conducting clinical trials in Sweden the last few years is that our regulatory authority plays an important role in Europe. The issue is that incentives for Sweden's healthcare to contribute to research are not as strong as it needs to be. The output of clinics and hospitals are not measured at all by the amount of clinical research they produce, so unfortunately clinical research has ceased to be a high priority within the healthcare. Basically, the drive for efficiency and productivity squeezes clinical trials out of the system. In order to ensure that Sweden has stronger motivation to do clinical research in the future, the country needs to build positive incentives for the healthcare system to not only provide care, but also produce research for tomorrow's medicines and treatments.

### FR: Do you think that Sweden, a successful and developed market and a country with high quality of life, has a certain level of complacency with regard to reforming sectors such as healthcare?

MARTIN OLOVSSON: There are signs of some complacency at the political level in my view. Even when issues in today's healthcare are debated, many tend to take a position that Swedish healthcare is world class, now and forever. What is worrying is the level of implementation of new treatments; expenditures on new medicines last year were extremely low. Ten years ago, Sweden would have been considered a country where new medicines were introduced relatively quickly, but today this process is much slower compared to countries like for instance Denmark, which might see the introduction of new products as much as 2 years earlier than Sweden.

## FR: What led to Denmark developing in such a different way to Sweden in recent years?

MARTIN OLOVSSON: The attitude towards innovation is more positive in Denmark. And the debate on patient health is stronger. Attitudes towards pharmaceutical spending in Sweden have taken a very negative turn. Budgets are delegated to a very low level in the hierarchy. Fears of an ever expanding medicines bill have imposed management systems, which has gone to the extreme. This fear does not match the reality of the situation; last years, there have been more funds left in the budget than anticipated. This is not commonly known.

### FR: Do you think that as a part Swedish company, AstraZeneca has a special responsibility to change that attitude towards innovation?

MARTIN OLOVSSON: It is in my view our responsibility to voice concerns if we see things that are blocking adequate implementation of innovative medicines that improve patient health. At the end of the day we should put the health of patients first. Our mission is to provide great medicines that improve patients' health. If that becomes difficult due to choices made over healthcare policy, then it is our job to voice our concerns. We do that mainly through discussion and collaboration. People in Sweden and the Nordics tend to be collaborative, so we try to discuss our way around potential difference of views, but we don't shy away from taking a stronger stands when needed.

There are signs of some complacency at the political level in my view. Even when issues in today's healthcare are debated, many tend to take a position that Swedish healthcare is world class, now and forever.

### FR: You were appointed 3 years ago to lead the Nordic and recently the Baltic countries. What are your key ambitions with regards to growing the operations in the coming years?

MARTIN OLOVSSON: There are some areas where we have very high aspirations, such as making Brilique a leading treatment in ACS; it has the evidence to support it and it makes a big difference to patients. AstraZeneca also have an important collaboration with BMS in the area of diabetes. We aspire to be leaders in this disease area, knowing that competition is fierce and specialised companies such as Novo Nordisk are there. Together with BMS, we are the first to offer a great medicine in each of the innovative classes of diabetes treatment. Moreover, AstraZeneca has a very strong respiratory and inflammation pipeline; we have novel treatments in gout and collaboration with Amgen in inflammatory diseases. We are also accelerating assets in our oncology pipeline; oncology is an area where we have a great heritage but also a few disappointments a few years back. But what we see from for example ASCO this year, illustrates clear ambitions to accelerate exciting medicines in our oncology pipeline. We also have an exciting infection portfolio, but in my opinion it requires a go-to market or collaborative model that is different, not naturally existing today.

### INTERVIEW WITH:

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## Dorthe Mikkelsen, Senior Vice President Mid-Europe 2 - MSD



Focus Reports: The global sales of MSD in 2012 were USD 47.3 billion, an increase of 2%. What was the performance of the market and which were the countries that were the most important to the growth of the region here? DORTHE MIKKELSEN: MSD's Mid Europe 2 region consists of 10 countries, most of them clustered around the Nordics, which include the Nordics, the Baltics, Switzerland and Austria. There is a difference in size across the countries; the largest markets are Switzerland and Sweden, followed by Austria and Finland, and then Norway and Denmark. The countries are in a market that's flat, so growing is a bit of a challenge.

However the region has a number of strongholds. The MER2 countries are on the forefront when it comes to innovation. According to the 2013 innovation ranking form the European Commission there are four MER2 countries among the five most innovative countries in Europe! This is important because the ability to utilize new technology and translate innovation into practical solutions for patients and society are essential to creating sustainable future healthcare systems.

### FR: Given that these mature markets have a flat growth, what is still the appeal of the markets like these versus those of emerging markets?

DORTHE MIKKELSEN: As we look at health care expenses, Health care expenses are growing, and pharmaceutical expenses would also be growing, except that now we see more and more measures being put in place that are straining the pharmaceutical industry. As an industry and as a company we understand very well that there are difficult times in Europe, there is a financial crisis, there is a challenge to government's healthcare budgets, as well as other factors, such as the trend of aging populations that are also putting pressure on the healthcare sector.

We are prepared to take our role in this, however it must be proportionate with what medicines represent in overall healthcare expenditures. The fact is that pharmaceutical expenditures are only a small part of the total healthcare budget. According to OECD, healthcare related costs represents 10% of the total GDP, 15% of this comes from pharmaceuticals and only half comes from new, innovative products.

The pharmaceutical industry is the largest contributor to the trade balance in Europe and the number of patent applications last year reached an all-time high. We need to convince governments that the pharmaceutical industry is not part of the short-term economic problem, but part of the long-term economic solution.

### FR: Every executive talks about innovation and access to medicines. Without using the word innovation, how does MSD differentiate itself?

**DORTHE MIKKELSEN:** It's very difficult to answer that question without the word innovation. Our reason to exist is the discovery and development of drugs. That will not change. What we can do to compete well in the environment is to bring those prod-



ucts into the market well, complement products with services and solutions and document how the products are going to work in real life.

In Sweden, MSD has just established a support program for type-2 diabetes patients, who have been prescribed one of our diabetes treatments. The aim of the program is to improve treatment outcome and patient health by lifestyle changes and improved adherence to medication by empowering and supporting patient to selfcare. This is an excellent example of an initiative that provides better life quality for patients and better economy for society.

### FR: While the pharmaceutical industry is a business, you are also committed to help curing society. In this dichotomy, what is a first solution?

DORTHE MIKKELSEN: There are a lot of synergies here. Instead of seeing opposites, conflicting priorities, or conflicting objectives, I see this as common objectives to a larger extent. If we can look at what innovative products bring to the health care systems, in many cases improving productivity and effectiveness in the health care system is coming from introducing new technology and new medicines that will help improve the effectiveness of the health care systems.

In this perspective, the patient will benefit and governments will be able to deliver on the health targets that they have set up in their countries. The second thing for this industry is the innovation and research that it brings, which are subsequently translated into products. Research and innovation is a long, ongoing process that also takes place in collaboration with different stakeholders: researchers, academia, universities, top scientific leaders and health care professionals. This interaction in and of itself adds a lot of value to any society that welcomes innovation.

Linked to this is a third element: the industrial and trade perspective. That is important in those countries where you either have a domestic industry or attract FDI from pharmaceutical and biotech industries.

FR: Speaking about this third element, how do you grade Denmark and the Nordics in general in terms of attracting investments? DORTHE MIKKELSEN: Several criteria determine where to place investment, one of them is the market conditions. Market size and opportunity are very important.

Another dimension worth looking at is specific capabilities or competencies. Here I would highlight that MSD is on a large scale investing in clinical trials in the Nordics; about 10% of all of MSD's trials are being conducted in the Nordic region, which is obviously due to the attractive environment.

Attractiveness relies on a health care system which has to be state of the art, with strong medical professionals, a high level of scientific leaders, both at the universities and at the clinics, and an infrastructure where you can conduct clinical research.

Furthermore, the Nordics have a good data foundation in the registries that is potentially a goldmine for doing research and developing new products. If you deliver on those criteria then both retaining and attracting investment is possible.

There is competition in a global world, so it's not simple. The message that we keep sending is that we should not become complacent by just delivering on the criteria mentioned. If we do that in a globalized world, investment may go elsewhere.

### INTERVIEW WITH:

## Mary di Marzio, Senior Director, General Manager Nordics - Shire

## **Shire**

Focus Reports: In terms of revenue growth, Shire's new CEO Flemming Ornskov emphasized his focus on Asia and Latin America. Where does that leave the Nordics?

MARY DI MARZIO: The Nordics came to be by looking at the products that we already had, but also by looking down the line. Products for ADHD are a huge part of our business and identity and the ADHD market in the Nordics is very well developed in terms of the diagnosis and treatment of patients.

There are guidelines, and competitive products are doing very well. Because ADHD is such a big part of what we do, we wanted a clear strategy for launching our products, particularly Elvanse, one of our top products.

We were generating important revenues with our internal medicine products and the rare diseases had already been doing extremely well here, and these products had given us the opportunity to learn a lot about the regulatory processes and the environment, and it gave us an opportunity to get an insight at the potential of the ADHD-market.

### FR: It quickly became clear that now was the time for Shire to enter the Nordic market.

MARY DI MARZIO: This is a well developed market in ADHD. What is the value that Shire adds for the Nordics?

Our competitors have been doing great work. Shire comes with a package of a different type of product though. We like to say that, if you have seen one ADHD patient, then you indeed have seen only one ADHD patient. Everyone is different and needs to be treated as an individual.

Shire a pipeline of products and experiences garnered through many years of experience in the US and other markets. We bring the first long-acting amphetamine stimulant to this market. We also took over a Equasym from UCB, a product that fits very well with the menu of medications that ADHD patients need for better treatment.

For optimal treatment, the patient needs methylphenidate, an amphetamine, and a non-stimulant. Shire has all three types of products. In the Nordics they are either already on the market or soon to be launched.

Equasym is on the market throughout Europe, and we are currently introducing Elvanse in most European markets, following launches in the UK and Denmark earlier this year. Denmark was the second market in all of Europe to have Elvanse launched, and we are now preparing to launch in Sweden.

The company has put a lot of emphasis and priority on responding to ADHD patients in the Nordic countries. We also have in our pipeline, which is available in the US, Intuniv, a non-stimulant.

We offer a full menu of products as well as experience and services that we can continue to bring to physicians and patients in the Nordics. This is one area where we can continue to support ADHD patients through innovation and collaboration.



FR: One topic that has divided the industry is how innovation is rewarded in the Nordics. One pool says that the focus is too much on price and not enough on innovation. Others say that the Nordics is the best place to launch a product because it is where you get very fast market access for innovation. What is your opinion?

MARY DI MARZIO: I am very familiar with the challenges of obtaining reimbursement. And a product can't get accepted into a market unless it has a significant level of reimbursement.

In Denmark you post the price that you want to be reimbursed at – and then a decision is made on the level of reimbursement you achieve.

That is too extreme. A company needs to be able to show value for their product. We put together an extensive value dossier for Elvanse which we are using for our pricing and reimbursement negotiations in the Nordics.

We worked with local consultants to build this dossier to make sure it's appropriate for Nordic markets, and many say that the data is incredible. That is what a company needs to do, of course while being cost-conscious along the way.

Ultimately you and I are consumers as well. We are selling products, but on the other end our families are also consuming products. It's incumbent upon pharmaceutical companies to be able to provide the studies to show why their product should be able to achieve a certain price and level of reimbursement.

FR: What makes home grown innovation in the Nordics so successful compared to a country such as France, for example, which has not had much innovation in recent years? MARY DI MARZIO: Before Premacure became part of Shire, the company was already surrounded by an environment that allowed them to invest, explore and discover, which we then found was a good fit for us. Sweden provides an environment in which government incentivizes companies to be innovative and reward innovation with favorable taxation. That is at the core of what the Nordic nations are encouraged to do and are rewarded for doing."

### *FR:* Where do you want to have taken Shire's operations five years from now?

MARY DI MARZIO: I would like to see us establishing ourselves as a credible partner with a long-term vision of how we continue to work to improve the quality of life of patients in the Nordics.

I'm usually known as the trouble shooter. I come in, face the problems, fix it all, walk away and allow the next person to claim that all is good and well. I'd like to be back and watch the revenues grow and track the continued growth of what we started to build here, as well as the enthusiasm that the Shire Nordic team has.

This team has already won awards within Shire for innovative ideas and ways to approach the customers and physicians. I want to continue to see the Nordics stand out as the team who did and succeeded at X, Y, and Z things for the first time.

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