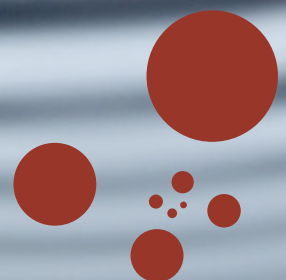




CSR-REPORT  
**2012**



BAVARIAN NORDIC

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# KEY FIGURES

|   | 2012  | 2011  | 2010  | 2009  |
|---|-------|-------|-------|-------|
| Carbon footprint, global, tCO <sub>2</sub>                  | 3,662 | 3,813 | 3,787 | 2,705 |
| Carbon footprint, production, tCO <sub>2</sub> <sup>1</sup> | 2,319 | 2,565 | 2,587 | 2,223 |
| Carbon footprint, index per dose produced                   | 35    | 48    | 153   | 100   |
| Absence rate  | 4.3%  | 3.7%  | 4.6%  | 4.6%  |
| Accidents, number per million working hours                 | 5.1   | 4.0   | 7.6   | 15.3  |
| Number of employees   | 461   | 452   | 412   | 360   |

## Key figures - financials

| DKK million       | 2012    | 2011    | 2010    | 2009    |
|-------------------|---------|---------|---------|---------|
| Revenue           | 1,016.6 | 523.6   | 314.1   | 74.8    |
| Profit before tax | (48.7)  | (296.4) | (483.4) | (331.1) |

# BAVARIAN NORDIC – IN BRIEF

Bavarian Nordic develops and manufactures innovative vaccines for the prevention and treatment of life-threatening diseases where there are as yet unmet needs. The Company's clinical pipeline focuses on cancer and infectious diseases.

Our two leading projects are PROSTVAC<sup>®</sup>, a therapeutic prostate cancer vaccine candidate in clinical Phase 3 development, and IMVAMUNE<sup>®</sup>, a non-replicating smallpox vaccine being developed and supplied under contract with the US government.

The Company has built a manufacturing facility at Kvistgaard in Denmark solely for the production and quality control of the smallpox vaccine supplied to the US National Strategic Stockpile.

The Company is listed on the NASDAQ OMX Copenhagen exchange and has roughly 21 thousand shareholders. For more information on the Company and its ownership structure, please see our 2011 annual report or the Company's website: [www.bavarian-nordic.com](http://www.bavarian-nordic.com).

<sup>1</sup> Total emissions from the Kvistgaard facility, comprising production and associated functions, and administration.

# BAVARIAN NORDIC AND CSR

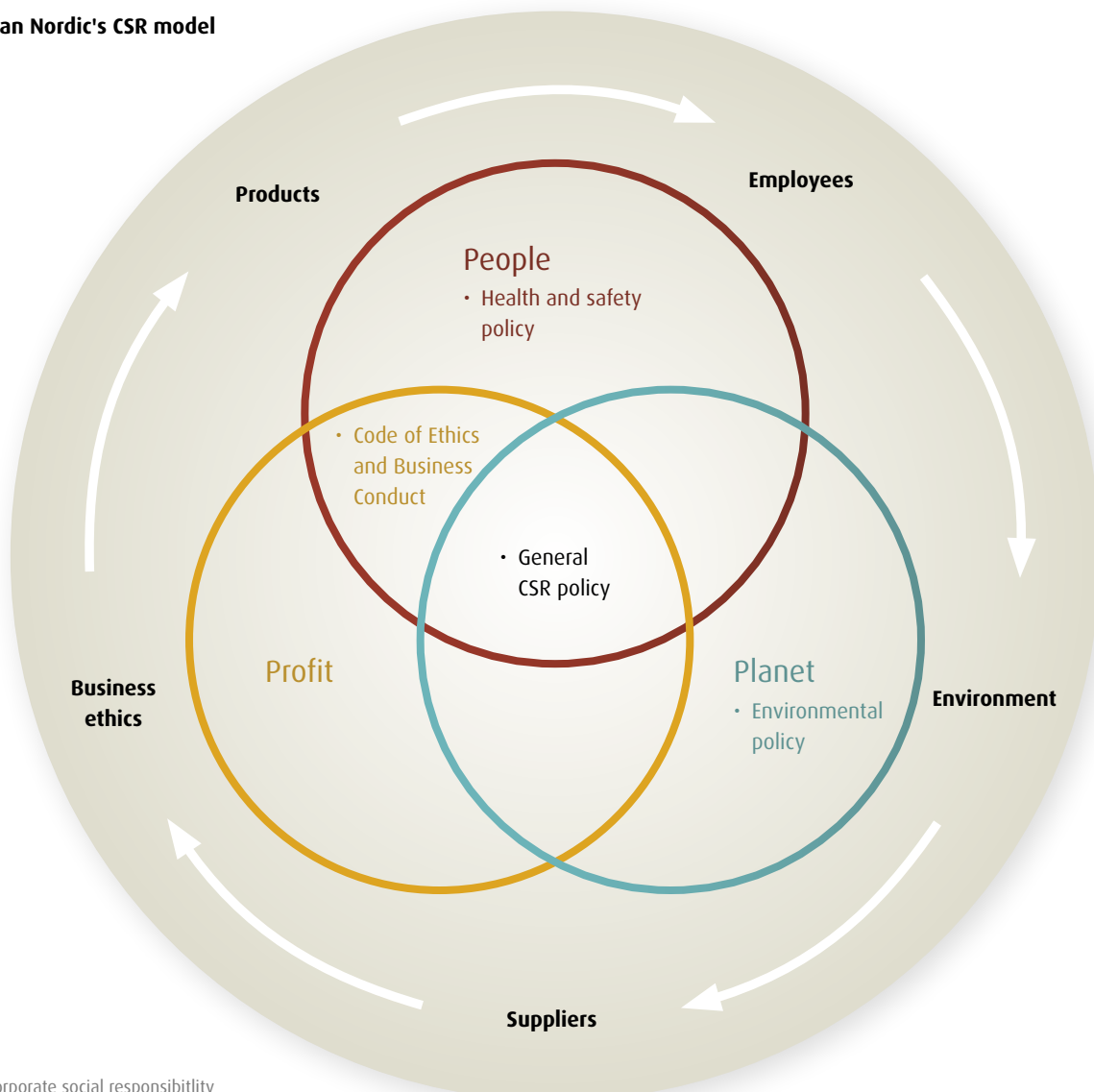
In just a few years, Bavarian Nordic has grown from a pure research company into a fully integrated company with an in-house production of vaccines. This transformation, combined with a high rate of organic growth, has required a great deal of systematic and thorough work adapting the organization to its new tasks as a production company while also taking the world around us into account in order ensure to that our operations are responsible from both a financial and a social perspective.

In extension of our annual environmental report, which we began publishing in 2005 when we started up production at our production facility, we began working systematically with several aspects of CSR<sup>2</sup> in 2009, initially concentrating on our key stakeholders: our employees and suppliers.

The environment, our employees and our suppliers continue to constitute the core of our CSR activities, but we also include other areas of significance to our

business. In our report, we have defined an additional two areas of focus: business ethics and products. As a result, we now have five focus areas, all wholly or partly related to the three main elements of our CSR work: people (social relationships), planet (the environment) and profit (finances), as shown in the figure below. The figure below also shows how our policies and other specific initiatives cover the three main elements; this is explained in greater detail in the section "CSR elements" of the report.

## Bavarian Nordic's CSR model



<sup>2</sup> CSR: Corporate social responsibility

In addition to a general CSR policy, we have policies within the areas we believe are essential to our work. These policies are a natural extension of the various objectives we work towards as a company, and their purpose is to create commercial value for the Company. We do not as yet have an actual suppliers policy, but we have instead incorporated these elements into our general CSR policy.

We also have a number of other elements to support the Company's CSR work. A general overview over the most important of these elements appears below, at the end of this report in the section "CSR elements".

#### **About the report**

This CSR report was prepared in accordance with Danish Financial Statements Act requirements with respect to CSR reporting. The report covers the financial year 1 January to 31 December 2012 and forms part of the management's review in the annual report as signed and approved by the Board of Directors and Corporate Management on 12 March 2013.

#### **Reporting principles**

This CSR report was prepared with inspiration from the Global Reporting Initiative (GRI), a recognized framework for sustainability reporting. The GRI structure includes principles and indicators we use to measure and explain the Company's financial, environmental and social performance. We selected the areas to be reported on based on a principle of materiality: we endeavored to include the most important ways in which the Company has an either direct or indirect impact upon the world around it. Our manufacturing facilities are one of the chief sources of our impact on the environment, and we seek to provide a high degree of transparency through our carbon footprint and reported environmental data.

#### **The scope of the report**

In our CSR report, we focus on our largest facilities: i.e. Kvistgaard (industrial production, quality control laboratories, technical services department and administration), Martinsried (research and development), Berlin (production of clinical trial materials) and Mountain View, California (re-

search and development). Taken together, these facilities employ more than 99% of the Group's staff and are responsible for most by far of the energy and raw materials consumed. The other facilities – in Washington, DC, and Singapore – are office facilities only and thus of minor importance in this respect.

As part of the optimization of our production competencies, we are closing our Berlin facility in 2013 and transferring its activities to Kvistgaard, so data for Berlin will not be included in the report going forward.

The scope of this report has not been expanded from the 2011 report, in which we included additional data on our employees and considerably more environmental data that was previously included in our green accounts.

This year, the report includes more comparative figures from 2009, when we started our CSR activities, and to date in order to give a more complete, true and fair view of how we have changed and developed in recent years.

# POLICIES

Bavarian Nordic develops and manufactures vaccines for the prevention and treatment of life-threatening diseases where there are as yet unmet needs. In doing so, we seek to create a continuing business that will ensure the Company's growth and investment in research and development and thus continue to contribute to a healthier and safer society.

At the same time, we focus on working and acting responsibly with respect to the world we live in. We aim to do this by

- manufacturing high-quality vaccines
- working actively to minimize our impact on the environment and climate
- maintaining an active dialog with our stakeholders – on a local, national and global level
- actively supporting and respecting human rights and labor standards
- providing a safe and healthy working environment for our staff that includes opportunities for professional and personal development.
- communicating our CSR policy to external collaboration partners, including our suppliers.

## Environmental and climate policy

At Bavarian Nordic, we design our vaccine production facilities and procedures so that there is no risk of viruses escaping into the indoor or outdoor environment through the air, our waste or our wastewater. We at Bavarian Nordic work continually to improve our environmental and climate performance. Our aims are

- to encourage environmentally aware behavior and prevent contamination and pollution throughout the Company
- to reduce our environmental and climate impact by
  - developing and using processes that have a minimum of environmental impact
  - optimizing our utilization of materials and energy
  - reducing emissions and waste
- to comply with environmental protection regulations and relevant requirements
- to gradually build an environmental management system based on the principles in the ISO 14001 standard.

## Health and safety policy

A safe and healthy working environment is vital to employee safety and satisfaction at the workplace. We always comply with applicable rules and regulations in this field and focus on systematically mapping both the physical and mental working environment so that the necessary preventive steps can be taken, for the benefit of individual employees as well as the Company as a whole.

The aims of our general health and safety policy are

- to promote awareness of health- and safety-related behavior in all employees as part of their day-to-day work and to produce proactive solutions to potential problems
- to gradually develop a management system to facilitate this proactive safety work.

# PRODUCTS

Bavarian Nordic helps make the world healthier, safer and more secure through our development and production of innovative vaccines for the prevention and treatment of life-threatening diseases. Research into and development of new vaccines requires substantial investment, so before we can do this, we must have a lasting and profitable business.

Through contracts with the US government, we have successfully developed a new smallpox vaccine that we manufacture and supply to the US National Strategic Stockpile, and this has laid the necessary foundation for the further development of our business and of new products to benefit patients in the future.

## **IMVAMUNE® smallpox vaccine**

Our most advanced infectious disease project is the IMVAMUNE® smallpox vaccine, which is already being manufactured at our Kvistgaard facility. The vaccine is not yet fully developed, but its favorable safety profile has led to certain governments prioritizing a stockpile of the vaccine for potential use in persons who do not tolerate the traditional smallpox vaccines well. Our primary customer is the US government, which ordered 20 million doses in 2007 for delivery in 2010-2013. Afterwards, we expect to receive new orders regularly from the US government.

The IMVAMUNE® vaccine is based on a live attenuated virus, so it cannot be heat sterilized, as that would destroy the active ingredient of the vaccine. For this reason, a scrupulous quality control and cleanliness assurance has been built into the entire process. The pharmaceutical industry works according to GMP. GMP includes strict requirements with respect to a product's traceability, strength, quality and purity, which means that quality management is built into each step of the manufacturing process. GMP<sup>3</sup> rules are laid down by the Danish, European and American health authorities; Bavarian Nordic supplies these markets and thus complies with these quality requirements. Product safety is crucial in our business, and quality and responsibility have been

built into our systems and our entire corporate culture.

## **PROSTVAC® - prostate cancer immunotherapy**

Our leading project in cancer is PROSTVAC®, which is in final Phase 3 development.

PROSTVAC® belongs to a new class of treatment: immunotherapy, where the idea is to train the patient's own immune system to fight cancer. The treatment is administered as a vaccine (seven injections over five months) and is not associated with the serious side effects otherwise seen with conventional cancer therapy. In an earlier large-scale Phase 2 clinical study, the vaccine demonstrated an increased median survival of 8.5 months for patients with advanced prostate cancer. These results are among the best ever demonstrated in this patient group, and they have led to the start-up of a Phase 3 clinical study.

The Phase 3 clinical study will be conducted globally and include a total of 1,200 patients with metastatic castration-resistant prostate cancer.

We intend to apply for a marketing authorization for PROSTVAC® once positive data from the study are available. We have already begun preliminary activities with a view to market launch, including preparations for manufacturing the vaccine at our Kvistgaard facility.

An approved vaccine for treating prostate cancer is expected to considerably improve therapeutic options for patients with late-stage prostate cancer.

<sup>3</sup> Good Manufacturing Practice.

# ENVIRONMENT AND CLIMATE

Most of Bavarian Nordic's impact on the environment and climate comes from our production, so we pay particular attention to improving efficiency and our manufacturing processes in order to optimize our use of natural resources.

When we built our factory in the Danish town of Kvistgaard in 2005, we had a great deal of focus on the factory's environmental impact. Since then, we have continually worked to minimize our environmental impact, and we continue to work actively with environmental, health and safety planning in new building projects as well. In connection with recent years' expansion of the facility and its production, we have also paid particular attention to our impact on the community and make an effort to remain in communication with our neighbors, especially with respect to noise, which is what affects them most directly.

In 2012, we exceeded the noise limits on a single reference point in connection with the installation of new cooling containers. However, we received no complaints from our neighbors or others, so, as permitted by Danish law, we have applied for these restrictions to be eased.

A wastewater test measurement in December 2012 showed that it exceeded permitted pH and chloride content levels. An investigation has been initiated to identify the cause of this.

The environmental protection authorities have categorized Bavarian Nordic

as a Level 1 company, i.e. they deem the Company to be at the forefront of environmental work within the categories of law-abiding conduct, systematization and information. Bavarian Nordic was categorized at this level in 2007 and most recently again in 2012 following an environmental inspection. The Company intends to remain at this level.

In 2012, we further reduced our relative climate impact due to a far more efficient utilization of our production facilities: although production has doubled, there has been no substantial increase in our use of water and energy. We will continue to focus on opportunities to reduce our relative climate impact.

In late 2012, we installed a new energy monitoring system at our facility at Kvistgaard to collect data and track our use of energy and water. The new system allows us to identify inappropriate consumption and thus make improvements.

Moreover, we will be conducting an energy screening of our entire Kvistgaard facility to find out how and where we can optimize our energy consumption. We expect to select an external service provider to conduct the screening in the first half of 2013.



# EMPLOYEES

Bavarian Nordic has in recent years moved from being a purely research-based business to also encompassing in-house production and quality control.

These are areas in which many different staff groups work together, and the rapid growth we have seen has made it essential for us to establish a shared identity and culture for the Company and its employees.

After a process involving employees from all levels and areas of the organization, we defined a set of corporate values in 2011 that describe who we are and how we work at Bavarian Nordic.

In 2012, we worked actively to implement these values throughout the organization. Some of the work was at a general level – communicating the values and making them visible in the organization – and some was more concrete with employees working to implement the values at the local and department level. These values have also become an integral part of the annual

employee performance interviews, and we have started up a management development course also based on the values.

We also established an HR Forum in 2012, with representatives from the HR functions of both of our divisions. Its purpose is to ensure overall coordination of management initiatives and to establish a best practice for the area.

### Personal and organizational development

We are an innovative, knowledge-based company, and it is important for us to attract and retain highly qualified workers. Also for this reason, we want to offer our staff a good working environment that provides them with development opportunities as well. There are good opportunities at Bavarian Nordic, both for development within a field of work by rotation between production, laboratory and office jobs or for development vertically within the management hierarchy. As a result, we are happy to recruit internally, and we focus on staff development potential in our annual employee performance reviews.

It is crucial that our employees have the necessary tools and techniques to perform well in their jobs now and in future. Our goal is, as a minimum, for our workers and managers to always have the skills to look for and find their own job. For this reason, we focus on continuing training and education and on upgrading qualifications, also those of the many employees who work in the GMP areas. Furthermore, we allocated additional funds for training in 2012, and more employees took external courses. A few have begun taking classes in training or educational programs while continuing to work at Bavarian Nordic.

In 2012, we also began offering a management development course for all employees with management responsibility.

### Employee health and job satisfaction

At Bavarian Nordic, we strive towards a good, healthy work-life balance, and at work we focus on employee health and job satisfaction. All staff at Kvistgaard are included in our corporate health insurance plan, which ensures fast and professional help and treatment at private hospitals and from psychologists, chiropractors, physical therapists, etc., should the need arise.

## Our values

|  |  |   |
|--|--|---|
| <p><b>Excellence</b></p> <ul style="list-style-type: none"> <li>• We show ambition and openness to novel approaches</li> <li>• We are goal oriented and deliver on our promises</li> <li>• We show determination to succeed and perform above expectations and market standards</li> </ul> | <p><b>Agility</b></p> <ul style="list-style-type: none"> <li>• We adapt with speed and flexibility to business challenges and opportunities</li> <li>• We are accountable and willing to make decisions</li> </ul> | <p><b>Dedication</b></p> <ul style="list-style-type: none"> <li>• We show commitment and motivation to the development of the business</li> <li>• We show initiative and persistence in what we do</li> <li>• We are enthusiastic in how we work and show a deep felt interest in what we are here for</li> </ul> |
|--|--|---|

We work actively to counteract stress. We have a focus on stress indicators in daily work life and offer help in handling stress as needed.

In 2012, we established a work group which is to prepare a catalogue of suggestions for improving employee well-being at work and job satisfaction. We have taken up some of the suggestions and begun implementing all or parts of them. The work group is a supplement to procedures already established in the organization such as works council meetings at which both labor and management are represented and regularly discuss issues that can have an impact on employee job satisfaction and employment conditions.

**A good, safe working environment**

The Company's occupational health and safety work at our different sites varies to comply with different countries' regulatory requirements. At Kvistgaard, workplace assessments are used regularly to chart health and safety factors, and relevant improvement initiatives based on these assessments are put forward, prioritized and translated into an action plan. In compliance with Danish regulations, a number of health and safety groups plus one health and safety committee have been appointed that have both management and worker representatives. Regular committee meetings are held over the course of the year at which members follow up on action plans in order to improve working conditions and safety.

Although there was a marginal increase in the accident rate in 2012, the rate has been falling in recent years and is still considerably lower than the average accident rate at Danish companies .

Not a single work-related accident was reported at Kvistgaard in 2012, and that is where most of the Company's employees work. In order to counter the risk of ac-

cidents, we have in recent years focused especially on the induction and training of new staff, especially in production facilities and laboratories with many new employees. This has helped reduce the number of accidents.

**Absence**

We have been working actively for several years on dialog-based sickness absence management, ahead of legislative trends. We generally achieve a quicker return to work by handling each case individually, also including an option to return to work part-time or be assigned other tasks at first.

After pilot testing in the spring of 2012, we introduced electronic systems for tracking absence at our Kvistgaard facility in the second half of 2012. Our absence tracking system was not automated before, so it was a time-consuming task both for employees and the administrative staff handling payroll- and personnel-related functions. With the new systems in place, we expect to reduce administrative work in tracking and following up on absence while also achieving greater accuracy of records.

**Our culture**

At Bavarian Nordic, we offer a challenging international working environment in which job satisfaction and personal development have a high priority. We are committed to making it a great place to work by empowering our employees to perform their tasks to their own satisfaction, while aiming for the success of the company

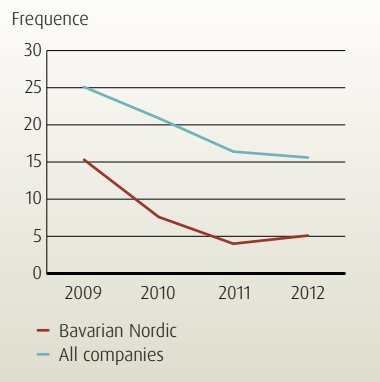
We encourage innovative thinking that promotes beneficial change for both the individual and the company

We believe that flexibility and a willingness to adapt are key characteristics for success - as a company and as employees

We respect different personalities and cultures and believe that the diversity of our employees creates value for the company. We strive for an integrated business culture driven by teamwork and mutual respect, while at the same time recognizing the individual effort

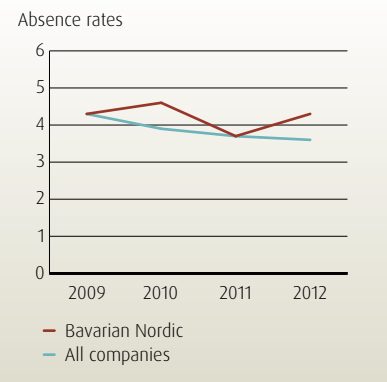
We expect our employees to be accountable in all aspects of their working life.

**Work-related accidents**



Number of accidents per million working hours compared with DI (Confederation of Danish Industry) statistics for work-related accidents (all occupational groups).

**Sickness absence**



Absence rate compared with DI (Confederation of Danish Industry) statistics for sickness absence (all companies).

# SUPPLIERS

As an integral part of Bavarian Nordic's CSR policy, we wish to maintain an active dialog with our suppliers about social responsibility and environmental initiatives

In 2010, we mapped out the geographical locations of our raw materials suppliers and found that they are mainly located in North America and the EU, in countries that already have a high level of regulation of social and environmental parameters.

New potential suppliers will also be evaluated with respect to their geographical location and thus the risk they represent, and an assessment will be made as to whether any action is necessary.

A large number of our suppliers communicate openly and honestly about their CSR work, just as we, in our interaction with them, inform them of our CSR policies and activities.

More specifically, we decided to implement social and environmental conditions as part of the purchasing process in 2012 by including in our contracts information on the Company's business ethics and our expectations that our suppliers comply with basic ethical, social and environmental guidelines. A potential effect of this new initiative is yet to be recorded. However, the Company hopes that it

will contribute to an increased positive dialogue with its suppliers as well as transparency on social and environmental issues.

In accordance with Good Manufacturing Practice (GMP) and our own supplier management system currently in place, all our new raw materials suppliers are subject to audit. Following the initial audit, suppliers are evaluated every third year as a minimum, either by way of a visit or a questionnaire, depending on the situation.

The audits do not include CSR-related issues, but they provide a very good opportunity to talk with the suppliers about their attitudes and practices in the area and also to comment on any problematic issues. In 2012, we performed 22 audits, and none of them caused us to comment on or point to any such issues. We have implemented social and environmental conditions as part of the purchasing process by including in our contracts information on the Company's business ethics and our expectations that our suppliers comply with basic ethical, social and environmental guidelines.

# BUSINESS ETHICS

Bavarian Nordic prioritizes business ethics as a natural part of its underlying business concept. We want to be seen as credible and reliable in the eyes of our collaboration partners and the rest of the world around us.

We have developed a Code of Ethics and Business Conduct that must be observed by everyone in the Company. Management is obliged to take violations of the code seriously.

The Code of Ethics and Business Conduct contains rules within a large number of areas, including:

- Compliance with laws and regulations
- Conflicts of interest
- Gifts, free services and entertainment
- Corrupt practices

The Code also includes the rules and regulations in the Foreign Corrupt Practices Act (FCPA) and the Truth in Negotiations Act (TINA) that are relevant in connection with the Company's business transactions and negotiations in the USA.

The Company otherwise commits itself to cooperating in connection with investiga-

tions organized by authorized individuals working on behalf of authorities with legitimate rights.

## **Ethical hotline to be introduced in 2013**

Management has decided to introduce an ethical hotline to give employees the opportunity to report possible violations of the Code. A special work group under management worked in 2012 to investigate the practical aspects of setting up such a hotline, which will be established in collaboration with a third-party service provider, partly to protect the employees who raise concerns, and partly to ensure that the necessary investigations are conducted when a concern has been raised, and that corrective action is taken if necessary.

As the ethical hotline may involve reporting of personally sensitive data, it must be pre-approved by the Danish Data Protection Agency. We have filed an application with the Agency and expect to put the ethical hotline into operation sometime in the first half of 2013.

# INDEPENDENT AUDITOR'S REPORT ON KEY PERFORMANCE INDICATORS

## To the Executive Board of Bavarian Nordic A/S

We have reviewed the key performance indicators for 2012 in table 1 to 7 as disclosed in Bavarian Nordic A/S' 2012 CSR report for the purpose of issuing an auditor's report in this respect.

The Company's Management is responsible for the CSR report. Our responsibility is to express a conclusion on the review of the key performance indicators in the CSR report based on our review.

## Scope of work

We conducted our work in accordance with International Standards on Auditing governing Other Assurance Engagements and additional requirements under

Danish audit regulation to obtain limited assurance about our conclusion. We have obtained limited assurance because, compared to a reasonable assurance engagement, our work has been limited primarily to inquiries of company personnel and analytical procedures.

The purpose has been to obtain limited assurance that the data presented in the CSR report are in accordance with the reporting practice described and the information reported by the reporting units included.

Our work is based on an assessment of risk of material misstatements. The work consists primarily of inquiries of company personnel and of applying analytical procedures.

We believe that the work conducted provides a reasonable basis for our conclusion.

## Conclusion

Based on our work, nothing has come to our attention that causes us to believe that the key performance indicators in table 1 to 7 in the CSR report for 2012 is not in accordance with the reporting practice described and the information reported by the production sites.

Copenhagen, 12 March 2013

## Deloitte

Statsautoriseret Revisionspartnerselskab

Carsten Vaarby  
State Authorised Public Accountant

# KEY FIGURES

The key figures in Table 1 (carbon footprint) and Table 2 (employees) relate to our overall global activities to the greatest possible extent, whereas the key figures in Tables 3-7 only cover environmental conditions relating to our manufacturing facility in Kvistgaard, Denmark, which must be reported and published under Danish environmental legislation and the EU PRTR regulation<sup>5</sup>.

## GLOBAL

### 1. Carbon footprint

Our total CO<sub>2</sub> emissions were down by 4% in spite of increased production at Kvistgaard and increased activities in our cancer vaccine division in connection with the start-up of the PROSTVAC<sup>®</sup> Phase 3 study, which included, among other things, an expansion of our Mountain View facility and an increase in headcount.

At Kvistgaard, CO<sub>2</sub> emissions were down by almost 10% year on year in spite of a substantial increase in the number of vaccine doses produced. Total production output has almost doubled as a result of a continuing focus on process efficiencies and utilization of resources. Combined with a reduction in energy consumption, this led to an improvement in relative emissions per dose produced, which were down by 27% on 2011 and 65% on 2010.

Kvistgaard, where our industrial production and a large share of our laboratory activities take place, is also the facility that contributes most to our total carbon footprint. The largest source of CO<sub>2</sub> emissions is the use of electrical power, followed by the use of natural gas for heating. The power is used to run ventilation systems, a refrigeration compressor, process equipment, refrigerators, freezers, air compressors, office equipment and lighting; the natural gas is used for heating and steam production.

| Table 1   | Unit              | 2012         | 2011   | 2010  | 2009  |
|---|-------------------|--------------|--------|-------|-------|
| <b>Carbon footprint, global</b>                         | t CO <sub>2</sub> | <b>3,662</b> | 3,813* | 3,787 | 2,705 |
| <b>Direct emissions (Scope 1)</b>                       |                   |              |        |       |       |
| Heating   | t CO <sub>2</sub> | <b>1,367</b> | 1,225  | 1,356 | 956   |
| Power generation  | t CO <sub>2</sub> | <b>6</b>     | 3      | 3     | 1     |
| Fugitive emissions                                      | t CO <sub>2</sub> | <b>14</b>    | 8      | 4     | 6     |
| Transport of employees (motor vehicles)                 | t CO <sub>2</sub> | <b>83</b>    | 79*    | 72    | 68    |
| Transport of raw materials (internal)                   | t CO <sub>2</sub> | <b>1</b>     | 1      | 0     | 0     |
| <b>Indirect emissions (Scope 2)</b>                     |                   |              |        |       |       |
| Electrical power, purchased                             | t CO <sub>2</sub> | <b>1,939</b> | 2,110  | 2,010 | 1,494 |
| Heating, purchased                                      | t CO <sub>2</sub> | <b>252</b>   | 388*   | 342   | 180   |
| Cooling, purchased                                      | t CO <sub>2</sub> | -            | -      | -     | -     |
| Carbon footprint, Kvistgaard                            | t CO <sub>2</sub> | <b>2,319</b> | 2,565  | 2,587 | 2,223 |
| Carbon footprint, Kvistgaard, Index per dose produced** |                   | <b>35</b>    | 48     | 153   | 100   |

\* The comparative figure for 2011 has been restated as a result of mistakes in earlier statements.

\*\* In recent years, Bavarian Nordic has focused on production optimization, which has resulted in substantial improvements in the use of resources and energy per dose produced. For this reason, we elected to present our climate impact as an index figure reflecting the relative energy consumption per dose produced.

<sup>5</sup> PRTR: Pollutant Release and Transfer Register: [http://europa.eu/legislation\\_summaries/environment/general\\_provisions/l28149\\_en.htm](http://europa.eu/legislation_summaries/environment/general_provisions/l28149_en.htm)

## 2. Employees

Headcount rose by 4% in 2012. The increase was mainly attributable to the Phase 3 PROSTVAC® study, which has led to hirings in the cancer division, primarily in the R&D Department at Mountain View.

There was a minor reduction in production staff at Kvistgaard in 2012 as a result of resource and process optimization over a longer period of time, which has helped increase profitability.

As part of this optimization process, the Kvistgaard facility will take over the activities previously handled in Berlin, and the Berlin facility will be closed sometime in 2013, which will result in a minor headcount reduction.

The absence rate rose in 2012 but was below 2009 and 2010 levels. The absence rate includes employees at Kvistgaard, Martinsried and Berlin. The absence rate for Kvistgaard was 3.5%, while the combined rate for Martinsried and Berlin was 5.7%. About 80% of the absence at Martinsried and Berlin was due to long-term sick leaves.

The rate of employee turnover dropped marginally in 2012 in spite of the production staff cuts resulting from the production improvements implemented over the year.

In 2012, There were only four minor work-related accidents involving sickness absence (more than one day), so our accident rate remains low. In the four years reported, our accident rate has been substantially below the rate of other companies. We will continue to strive to maintain this low rate.

| Table 2  | Unit   | 2012 | 2011 | 2010 | 2009 |
|--|--------|------|------|------|------|
| <b>Employees, total (year-end)</b>   | Number | 461  | 452  | 412  | 360  |
| <b>Employees, total (converted to full-time equivalents, average over the year)</b>          | Number | 448  | 429  | 377  | 337  |
| Distribution:  |        |      |      |      |      |
| Kvistgaard   | Number | 246  | 245  | 206  | 176  |
| Martinsried and Berlin   | Number | 138  | 131  | 128  | 126  |
| Mountain View  | Number | 60   | 49   | 37   | 28   |
| Washington, DC   | Number | 3    | 3    | 4    | 4    |
| Singapore  | Number | 1    | 1    | 2    | 2    |
| <b>Absence</b>   | %      | 4.3  | 3.7  | 4.6  | 4.6  |
| <b>Employee turnover</b>   | %      | 13.7 | 14.1 |      |      |
| <b>Employee groups</b>   |        |      |      |      |      |
| Under collective agreement   | Number | 57   | 71   |      |      |
| Other employees (white-collar workers with or without management responsibility, executives) | Number | 404  | 381  | -    |      |
| <b>Accidents, total</b>  |        |      |      |      |      |
| Kvistgaard   | Number | 4    | 3    | 5    | 9    |
| Martinsried and Berlin   | Number | 0    | 3    | 4    | 8    |
| Mountain View  | Number | 4    | 0    | 1    | 1    |
| Washington, DC   | Number | 0    | 0    | 0    | 0    |
| Singapore  | Number | 0    | 0    | 0    | 0    |
| Accident rate  | -      | 5.1  | 4.0  | 7.6  | 15.2 |

## DENMARK

## 3. Raw materials and ancillary materials

Chicken eggs are used as a raw material in production and inoculated with MVA-BN® to produce the active ingredient of the vaccine. Ready-mixed media (nutrients) are used to culture the biological agents, and ready-made saline solutions to purify the active ingredient. Disinfectants are used, along with acids and bases to clean systems and equipment and to adjust the pH of the wastewater before discharging it into the municipal sewer system. Disinfectants are also used to disinfect the eggs before further processing. Glycol is used in the cooling/refrigeration systems, along with small amounts of corrosion inhibitors for the production of steam and CFC coolants for refilling.

For most parameters, raw materials consumption was below the 2011 level, which was due to fewer batches being produced in 2012 than in 2011. We have optimized our production processes significantly in recent years, and one of the effects has been a significant increase in raw materials per batch, which explains the increase in consumption of eggs.

| Table 3                                | Unit            | 2012    | 2011    | 2010    | 2009    |
|--|-----------------|---------|---------|---------|---------|
| Eggs                                   | Pcs.            | 916,650 | 790,090 | 285,948 | 266,496 |
| Various ready-mix media, etc.          | Liters          | 144,380 | 184,560 | 100,643 | 85,371  |
| Acids/bases                            | Liters          | 10,142  | 10,962  | 5,065   | 4,333   |
| Salt (NaCl)                            | Metric tons     | 9       | 9       | 9       | 6       |
| Cleaning agents, disinfectants         | Liters          | 25,401  | 27,830  | 9,112   | 4,454   |
| Plastic bags                           | Pcs.            | 13,177  | 15,314  | 6,675   | 8,288   |
| Cooling agents, propylene glycol, etc. | Liters          | 300     | 610     | 500     | 1,208   |
| CO <sub>2</sub>                        | m <sup>3</sup>  | 4,917   | 3,116   | 2,385   | 3,357   |
| N <sub>2</sub>                         | Nm <sup>3</sup> | 773     | 777     | 649     | 899     |
| Propane                                | kg              | 264     | 385     | 605     | 374     |
| Agar plates                            | Pcs.            | 99,880  | 128,165 | 97,980  | 78,210  |
| Media for process simulation           | Liters          | 11,164  | 8,717   | 6,636   | 4,922   |



## 4. Water and wastewater

| Table 4.1 | Unit           | 2012   | 2011    | 2010   | 2009   |
|-----------|----------------|--------|---------|--------|--------|
| Water     | m <sup>3</sup> | 12,389 | 12,606* | 16,029 | 10,412 |

\* The comparative figure for 2011 has been restated as a result of missing data related to a water meter, that was not originally included in the statement.

Process wastewater is heat-inactivated, cooled and pH adjusted before being discharged into the public sewer system. Inactivation is a procedure that ensures that all virus remnants are rendered 100% harmless, and the system is checked for operational problems before discharge. This treatment ensures that the discharged wastewater complies with the requirements in the Company's permit to use the municipal sewer system, which was issued in October 2004.

| Table 4.2                  | Unit           | 2012  | 2011  | 2010   | 2009  |
|----------------------------|----------------|-------|-------|--------|-------|
| Process wastewater         | m <sup>3</sup> | 6,829 | 6,917 | 12,871 | 7,740 |
| Phosphorus                 | kg             | 22    | 20    | 41     | 5     |
| Nitrogen                   | kg             | 191   | 161   | 223    | 29    |
| Total organic carbon (TOC) | kg             | 481   | 530   | 1,115  | 110   |
| Chlorides                  | kg             | 4,234 | 2,628 | 1,416  | 389   |

## 5. Waste

| Table 5.1                  | Unit        | 2012 | 2011 | 2010 | 2009 |
|----------------------------|-------------|------|------|------|------|
| Total waste                | Metric tons | 162  | 162* | 100  | 76   |
| - of which hazardous waste | Metric tons | 23   | 24   | 8    | 4    |

\* The comparative figure for 2011 has been restated as a result of missing data related to waste that was disposed of by a previous waste carrier, used in the first quarter of 2012.

Waste consists primarily of disposable process equipment and egg waste. Disposable process equipment includes production bags, tubing and other disposable equipment. The bags are autoclaved and sent to incineration. The egg waste is also sent to incineration. Hazardous waste includes organic solvents, acids, bases, hazardous clinical waste, etc.

Breakdown of waste disposed of:

| Table 5.2         | 2012 | 2011 | 2010 | 2009 |
|-------------------|------|------|------|------|
| Incineration      | 79%  | 76%  | 80%  | 83%  |
| Recycling         | 7%   | 8%   | 11%  | 11%  |
| Special treatment | 14%  | 15%  | 8%   | 6%   |

## 6. Air emissions

In accordance with the Company's environmental permit, measurements of air emissions have not been made since 2011, where measurements were performed after the installation of two new boilers to replace the old one.

| Table 6                          | Unit | 2011 |
|----------------------------------|------|------|
| NO <sub>x</sub> /NO <sub>2</sub> | kg   | 272  |
| CO                               | kg   | 77   |

## 7. Incidents of non-compliance with environmental protection legislation

Bavarian Nordic received a request from the environmental protection authorities for compliance with section 8 of the Danish environmental permits act because we built a concrete facing wall without having given the authorities advance notice first. The environmental authorities also issued an enforcement notice to secure compliance with a condition in connection with a way to prevent spillover into the storm drain system. Both matters have been resolved, and there are no longer any outstanding issues with the environment authorities.

We have received no complaints from next-door neighbors or others. We are aware of the importance of maintaining a good dialog with our neighbors. When Bavarian Nordic established a the facility in Kvistgaard, we invited our neighbors to an information meeting, just as our neighbors and the public in general were involved through two consultation exercises held in connection with the environmental assessment process. We have also carried out several projects based on suggestions from our neighbors. In our daily work, we are occasionally in contact with our neighbors, especially in matters to do with noise, which is what affects them most directly. Also because of this contact, we are aware of the impact we can have in connection with both our production and our construction projects.

| Table 7  | Unit   | 2012 | 2011 |
|--|--------|------|------|
| Violations of terms, etc. and accidental discharge | Number | 2    | 2    |
| Complaints   | Number | 0    | 0    |

# CSR ELEMENTS

|  | People | Planet | Profit |
|--|--------|--------|--------|
| Our values   | ●      | ●      | ●      |
| Quality system   | ●      |        |        |
| <b>Policies</b>  |        |        |        |
| General CSR policy                                       | ●      | ●      | ●      |
| Environmental policy                                     |        | ●      |        |
| Health and safety policy                                 | ●      |        |        |
| Suppliers policy   | ●      | ●      | ●      |
| Trade in Company shares                                  |        |        | ●      |
| Handling of inside information                           |        |        | ●      |
| <b>Code of Ethics and Business Conduct</b>               |        |        |        |
| Code of Ethics and Business Conduct                      |        |        | ●      |
| Gifts, gratuities and entertainment                      |        |        | ●      |
| Compliance with laws and regulations                     |        |        | ●      |
| Conflicts of interest                                    |        |        | ●      |
| Foreign Corrupt Practices Act (FCPA)                     |        |        | ●      |
| Truth in Negotiations Act (TINA)                         |        |        | ●      |
| Government investigations                                |        |        | ●      |
| Creating accurate records and preserving Company records |        |        | ●      |
| Timekeeping requirements                                 |        |        | ●      |
| <b>Working conditions</b>                                |        |        |        |
| Stress management and conflict management                | ●      |        |        |
| Dialog-based sickness absence management                 | ●      |        |        |
| Health insurance   | ●      |        |        |
| Staff association  | ●      |        |        |
| Phantom share scheme                                     | ●      |        | ●      |
| <b>Tools</b>   |        |        |        |
| Management development training course                   | ●      |        |        |
| Employee performance reviews                             | ●      |        |        |
| Ethics hotline for reporting violations, etc.            | ●      | ●      | ●      |
| <b>Special committees and groups</b>                     |        |        |        |
| Values work group  | ●      | ●      | ●      |
| Health and safety work group                             | ●      |        |        |
| Health and safety committee                              | ●      |        |        |
| Environment work group                                   | ●      |        |        |
| CSR group  | ●      | ●      | ●      |
| HR Forum   | ●      |        |        |

# GRI INDICATORS

This CSR report was prepared with inspiration from parts of the Global Reporting Initiative (GRI)<sup>6</sup>, a recognized framework for sustainability reporting. The GRI structure includes principles and indicators used to measure and explain financial, environmental and social performance.

| GRI ref.                               | Description   | Reference                    |
|--|---|------------------------------|
| <b>Profile disclosure</b>              |   |                              |
| 1.2                                    | Description of key impacts, risks, and opportunities  | Section 2                    |
| 2.1                                    | Name of the organization  | Section 2                    |
| 2.2                                    | Primary brands, products, and/or services   | Section 4                    |
| 2.3                                    | Operational structure of the organization, incl. main divisions, operating companies, subsidiaries and joint ventures   | Annual report                |
| 2.4                                    | Location of organization's headquarters   | Section 1                    |
| 2.5                                    | Number of countries where the organization operates   | Section 2                    |
| 2.6                                    | Nature of ownership and legal form.   | Section 1                    |
| 2.7                                    | Markets   | Section 1                    |
| 2.8                                    | Scale of the reporting organization   | Section 10 and annual report |
| 2.9                                    | Significant changes during the reporting period regarding size, structure or ownership  | Annual report                |
| 3.1                                    | Reporting period  | Section 2                    |
| 3.2                                    | Date of most recent previous report   | Section 2                    |
| 3.3                                    | Reporting cycle   | Section 2                    |
| 3.4                                    | Contact point for questions regarding report  | Back page                    |
| 3.5                                    | Process for defining report content   | Section 2                    |
| 3.6                                    | Boundary of the report  | Section 2                    |
| 3.7                                    | Specific limitations on the scope or boundary of the report   | Section 2                    |
| 3.9                                    | Data measurement techniques and the bases of calculations, including assumptions and techniques underlying estimations applied to the compilation of the indicators and other information in the report | Section 13                   |
| 3.10                                   | Explanation of the effect of any restatements of information in previous reports and the reasons for such restatements  | Section 10                   |
| 3.11                                   | Significant changes to previous reporting periods in the scope, boundary, or measurement methods applied in the report.   | Sections 2 & 13              |
| 3.12                                   | Table identifying the location of the Standard Disclosures in the report  | Section 12                   |
| 3.13                                   | Policy and current practice with regard to seeking external assurance for the report  | Section 9                    |
| 4.2                                    | Indicate whether the Chair of the highest governance body is also an executive officer  | Annual report                |
| 4.3                                    | The number of members of the highest governance body that are independent and/or non-executive members.   | Annual report                |
| 4.8                                    | Internally developed statements of mission or values, codes of conduct, and principles relevant to economic, environmental and social performance   | Sections 3 & 6               |
| <b>Economic performance indicators</b> |   |                              |
| EC1                                    | Direct economic value generated and distributed   | Annual report                |

<sup>6</sup> <http://www.globalreporting.org>

| GRI ref.                                    | Description   | Reference     |
|---|---|---------------|
| <b>Environmental performance indicators</b> |   |               |
| EN1   | Materials used by weight or volume  | Section 10    |
| EN2   | Percentage of materials used that are recycled input materials  | Section 10    |
| EN3   | Direct energy consumption by primary source   | Section 10    |
| EN4   | Indirect energy consumption by primary source   | Section 10    |
| EN5   | Energy saved due to conservation and efficiency improvements  | Section 5     |
| EN8   | Total water withdrawal by source  | Section 10    |
| EN16  | Total direct and indirect greenhouse gas emissions by weight  | Section 10    |
| EN17  | Other relevant indirect indirect greenhouse gas emissions by weight   | Section 10    |
| EN18  | Initiatives to reduce greenhouse gas emissions and reductions achieved  | Section 5     |
| EN19  | Emissions of ozone-depleting substances by weight   | Section 10    |
| EN20  | NOx, SOx and other significant air emissions by type and weight   | Section 10    |
| EN21  | Total water discharge by quality and destination  | Section 10    |
| EN22  | Total weight of waste by type and disposal method   | Section 10    |
| EN23  | Total number and volume of significant spills   | Section 10    |
| EN24  | Weight of transported, imported, exported, or treated waste deemed hazardous  | Section 10    |
| EN28  | Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations | Section 10    |
| <b>Social performance indicators</b>        |   |               |
| LA1   | Total workforce by employment type, employment contract, and region   | Section 10    |
| LA2   | Total number and rate of employee turnover by age group, gender, and region   | Section 10    |
| LA3   | Employee benefits   | Annual report |
| LA4   | Percentage of employees covered by collective bargaining agreements   | Section 10    |
| LA7   | Rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities by region                       | Section 10    |

Section 1 Bavarian Nordic – in brief

Section 2 Bavarian Nordic and CSR

Section 3 Policies

Section 4 Products

Section 5 Environment and climate

Section 6 Employees

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Section 10 Key figures

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Section 13 Reporting principles

# REPORTING PRINCIPLES

The basic data for this report covers the entities stated in the table. All data for resource and raw materials consumption of finished products comprises only the

production facility at Kvistgaard. Data has been gathered to the extent it has been accessible within the boundaries of our existing systems.

| Indicator                            | Reference  | Entities included   |
|--------------------------------------|------------|---------------------|
| Carbon Footprint (tCO <sub>2</sub> ) | Table 1    | K, M, B, C *        |
| Other environmental data             | Tables 3-7 | K                   |
| Accident rate                        | Table 2    | K, M, B, C, W, S    |
| Absence                              | Table 2    | K, M, B             |
| Number of employees                  | Table 2    | K, M, B, C, W, S    |
| Employee turnover                    | Table 2    | K, M, B, C, W, S ** |

K: Kvistgaard, M: Martinsried, B: Berlin, C: California (Mountain View), W: Washington, DC, S: Singapore

\* The comparative figure for 2009 in table 1 does not include Berlin and Mountain View.

\*\* The comparative figure for 2011 does not include Mountain View

## Changes in reporting practice

This year's report states indexed CO<sub>2</sub> emissions per dose produced of our IMVAMUNE® smallpox vaccine; the figure is indexed to the year 2009. Previously, the report stated CO<sub>2</sub> emissions per batch produced, but the optimization of our production process leads us to believe that the figure per dose produced gives a more true and faithful view.

## Carbon footprint

Our carbon footprint calculations are based on the standard and recommendations of the Greenhouse Gas Protocol Initiative<sup>7</sup> for calculating an organization's total carbon emissions, which include the six greenhouse gasses addressed by the Kyoto Protocol – CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, HFCs, PFCs and SF<sub>6</sub> – calculated in metric tons of CO<sub>2</sub>

equivalents. Emissions sources are divided into three scopes: direct emissions from activities under the Company's control (Scope 1), emissions from the consumption of electrical power (Scope 2) and indirect emissions from products and services (Scope 3). According to the recommendations, organizations should report on Scope 1 and Scope 2 as a minimum, and this is what we have decided to do in our carbon footprint statement.

We calculated the total carbon emissions from our locations at Kvistgaard, Martinsried, Berlin and Mountain View with a view to establishing a starting point for the following four different types of emissions:

### Natural gas and oil

This figure is based primarily on current consumption as measured by monthly

meter readings. Oil used for emergency generators, however, is estimated on the basis of oil consumption over a five-year period. Greenhouse gas emissions from the combustion of fossil fuels are calculated on the basis of an average emission factor.

### Fugitive emissions

Fugitive emissions include CO<sub>2</sub> from the use of dry ice and CO<sub>2</sub> gas plus emissions of greenhouse gasses from cooling and refrigeration systems.

### Electricity

Electrical power consumption is based on meter readings recorded at the end of the year. The calculation of greenhouse gas emissions from electrical power consumption is based on specific emission factors provided by the power company and an

<sup>7</sup> www.ghgprotocol.org

average emission factor for the generation of power in Germany.

#### **Mileage (km)**

This figure is calculated on the basis of receipts from petrol companies and includes motor vehicles owned or leased by the Company. Greenhouse gas emissions are calculated on the basis of an average fuel-specific emission factor for ordinary cars in Denmark and Germany.

#### **Emission factors**

In calculating CO<sub>2</sub> emissions, specific emission factors based on emission type and geographic location were used. CO<sub>2</sub> emissions from the combustion of natural gas, oil, petrol, diesel fuel and LPG and from fugitive emissions were deemed to have a general global effect with minor local differences. Emission factors from these sources are based on data provided by the Danish Energy Agency<sup>8</sup>, except for natural gas emission factors for Mountain View, which are based on figures from The Pacific Gas and Electric Company<sup>9</sup>, a provider of natural gas and electricity in California.

Emissions for locally purchased electricity were determined on the basis of local conditions. Emission factors for Kvistgaard are based on factors for Denmark as a whole<sup>10</sup>. Emission calculations for electrical power at Mountain View are based on emission factors provided by The Pacific Gas and Electric Company. Emission calculations for electrical power purchased in Germany are based on general German emission factors<sup>11</sup>; emission calculations for district heating purchased in Germany

are based on emission factors published by the German confederation of energy efficiency improvement within heating, cooling, and combined heat and power generation<sup>12</sup>.

#### **Indexed CO<sub>2</sub> emissions per dose produced**

CO<sub>2</sub> emissions per dose produced are indexed to 2009 and calculated on the basis of the number of batches initiated and the average yield (number of doses) per batch.

### Employees

#### **Absence**

Absence data includes registration of staff sick days and child sick days. Leave – also maternity and paternity leave – is not included in these figures. The absence rate was calculated by dividing the number of days of absence by the average number of full-time employees for the year, times the number of work days in the calendar year.

#### **Employee turnover**

Staff turnover is calculated as the number of employees that left their jobs divided by the average number of employees over the course of the year.

#### **Accidents**

Work-related accident data relates to accidents resulting in more than one day of absence. The definition of 'work-related accident' in Danish law is the definition applicable in this document. The accident rate is calculated using the total annual

number of working hours in the Group based on the average annual number of full-time employees, times the number of annual working hours. Holidays are not included.

### Raw and ancillary materials

Raw materials for production are calculated based on the Company's inventory system (ERP system), and figures refer to consumption for the year. Ancillary materials (acids/bases, salt and refrigerants) are materials sourced during the year, and figures are based on invoiced purchases.

### Water

Water consumption is calculated for the entire Kvistgaard facility, including laboratories and administrative functions. Process wastewater is collected and measured, and wastewater is measured and analyzed once or twice a year. The volumes stated are based on the averages of these measurements.

### Waste

Waste volumes are calculated based on annual statements from approved waste carriers handling ordinary and hazardous waste.

<sup>8</sup> [http://www.ens.dk/da-DK/KlimaOgCO2/CO2Kvoter/produktionsenheder/co2\\_rapportering/Documents/standardfaktorer%202011.pdf](http://www.ens.dk/da-DK/KlimaOgCO2/CO2Kvoter/produktionsenheder/co2_rapportering/Documents/standardfaktorer%202011.pdf)

<sup>9</sup> <http://www.pge.com/myhome/environment/calculator/assumptions.shtml>

<sup>10</sup> "Energinet", an independent public enterprise under the Ministry of Climate, Energy and Building, <http://www.energinet.dk/DA/KLIMA-OG-MILJOE/Miljoedeklarationer/Sider/Miljoedeklarering-af-1-kWh-el.aspx>

<sup>11</sup> IEA, The International Energy Agency, an independent organization working to ensure reliable, cheap and clean energy for its 28 member countries

<sup>12</sup> AGFW, "Der Energieeffizienzverband für Wärme, Kälte und KWK e. V."

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