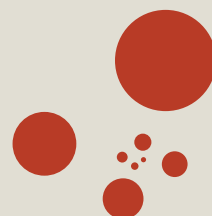




# CSR REPORT 2014



BAVARIAN NORDIC



# CONTENTS

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## Introduction

A Word from the CEO	4
Bavarian Nordic in Brief	4
Bavarian Nordic and CSR	5
Non-financial Key Figures	5
CSR Policies	6

## Our CSR Focus Areas

Our Products	7
Our Environmental Work	8
Our Employees	10
Our Suppliers	12
Our Business Ethics	13

## Statements

Independent Auditor's Report on Key Performance Indicators	14
Statement on Social Performance	15
Statement on Environmental Performance – Global	16
Statement on Environmental Performance – Production	18
GRI Indicators	20

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## About the report

This Statutory Report on Corporate Social Responsibility (CSR), cf. sections 99a and 99b of the Danish Financial Statements Act, is part of the management's review in the 2014 Annual Report and covers the financial period January 1 – December 31, 2014.



# A WORD FROM THE CEO

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2014 was a strong year for Bavarian Nordic where a number of significant achievements have helped build a strong strategic foundation for the future. We met our financial and operational targets and even exceeded our own expectations, as new opportunities surfaced during the year. Looking ahead, the road is full of new and exciting events for Bavarian Nordic in both the short and mid-term.

Our CSR efforts are mainly focused on business relevant, cost saving initiatives in our operations as well as our commit-

ment to contribute positively to environment and society. In 2014 we expanded our production facility to accommodate multiple products, and manufacturing activities were significantly increased. Nevertheless, we successfully managed to reduce our relative climate impact by more than 20%, which is a combined result of implementation of energy saving solutions and better utilization of resources.

We are also focused on health and employee well-being and were pleased

to report a drop in absence rate, number of work related accidents as well as employee turnover.

I would like to thank all Bavarian Nordic employees involved in all CSR initiatives in order to continuously improve different aspects of our operations allowing us to expand our value adding pipeline possibilities.

**Paul Chaplin**  
President & CEO



## Bavarian Nordic in brief

Bavarian Nordic is a global company that develops and manufactures innovative vaccines and immunotherapies for the prevention and treatment of life-threatening diseases with unmet medical needs. The Company's clinical pipeline focuses on cancer and infectious diseases.

The primary source of revenue is generated from sales of IMVANEX®/IMVAMUNE®, a smallpox vaccine approved in EU and Canada and supplied to various government stockpiles, predominantly the U.S. Strategic National Stockpile.

The Company's early-stage program for an Ebola vaccine was fast-tracked during 2014 as the outbreak in Western Africa continued to rage. The vaccine was licensed to Janssen (a Johnson & Johnson company) who made a huge commitment to fight the disease. As part of this commitment, Bavarian Nordic was contracted to manufacture up to 2 million doses of its Ebola vaccine, which also will generate significant revenue.

PROSTVAC® is the Company's lead immunotherapy candidate in Phase 3 development for the treatment of prostate cancer.

In March 2015, a global option and license agreement for PROSTVAC was entered with Bristol-Myers Squibb.

Listed on the Nasdaq Copenhagen exchange, the Company has roughly 23 thousand shareholders.

For more information, visit  
[www.bavarian-nordic.com](http://www.bavarian-nordic.com)



## BAVARIAN NORDIC AND CSR

In addition to our annual environmental reporting, we began working systematically with other aspects of CSR in 2009. This work is concentrated on five focus areas: *our products, our environment, our employees, our suppliers and business ethics.*

To ensure that our CSR initiatives are carried out timely and efficiently and to improve transparency on the activities, we have established a CSR steering committee comprised of senior representatives from core functions in the Company, in addition to a CSR working group comprised of representatives from human resources, communications and our environmental, health and safety specialist.

In addition to a general CSR policy, we have policies in the areas we believe are essential to our work. Due to the size of the Company, we do not as yet have an actual suppliers policy, but have instead incorporated these elements into our general CSR policy. Neither do we have a

policy for human rights, but we are aware of and respect the UN Guiding Principles on Business and Human Rights, which we will investigate further in relation to our business.

Our CSR goals are driven by rational operational measures that support the Company's general strategy of creating a profitable business. We are constantly working to identify areas that are crucial to the Company's business and are expected to have a positive impact on performance in working towards the CSR targets set.

### 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. Reference to GRI indicators included in this report is made on page 20.

### Scope of our reporting

In order to focus on business relevance, 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 either a direct or an indirect impact on the world around it. Our manufacturing facility in Kvistgaard, Denmark, where also our headquarters are located, is one of the chief sources of our environmental impact, and we seek to provide a high degree of transparency by calculating our carbon footprint and reporting environmental data. In addition, we have included our facilities in Martinsried, Germany (research and development) and Mountain View, California, USA (research and development). Taken together, these facilities employ more than 99% of the Group's staff and are responsible for the greatest share by far of the energy and raw materials consumed by the Company.

### Non-financial key figures

	2014	2013	2012	2011	2010
Carbon footprint, global, tCO <sub>2</sub>	3,543	3,345	3,662	3,813	3,787
Carbon footprint, production, tCO <sub>2</sub>	2,417	2,102	2,319	2,565	2,587
Carbon footprint, index per batch <sup>(1)</sup>	85	109	53	53	108
Absence rate	3.1%	3.9%	4.3%	3.7%	4.6%
Accidents, number per million working hours <sup>(2)</sup>	1.4	2.6	3.8	4.0	7.6
Employee turnover, percent	13.8	19.6	13.7	14.1	6.3
Number of employees	437	440	461	452	412

<sup>(1)</sup> 2009: Index 100

<sup>(2)</sup> Accident rates for 2010-2012 have been calculated on a different basis than accident rates for 2013-2014. See reporting practice for occupational accidents on page 15



## CSR 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 through new investments in research and development of new therapies that 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 and systematically 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.
- conducting business according to highest ethical standards

### Environmental and climate policy

At Bavarian Nordic, we design our vaccine production facilities and procedures so that viruses do not escape into the indoor or outdoor environment through the air or in our wastewater. We continually work 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 with 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 focus on systematically mapping both the physical and mental working environment so that the necessary preventive steps can be taken, for the benefit of both individual employees and the Company as a whole.

The aims of our general health and safety policy are

- to regular train and educate our health and safety employee representatives, so they are updated on the relevant topics and legislation.
- to secure well-functioning and well informed workers and safety committees on all relevant sites.
- 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 an environmental health and safety management system to support this proactive safety work.



## OUR PRODUCTS

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Product safety is crucial in our business, and quality and responsibility are important elements of our corporate culture. Drug development is a highly regulated area, in which a strong regulatory regime of inspections and approvals sets a high standard for all areas of our disciplines.

The pharmaceutical industry works according to GMP<sup>(1)</sup>. 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 rules are laid down by the Danish, European and U.S. health authorities.

Bavarian Nordic supplies these markets and thus complies with these quality requirements.

### Vaccines for infectious diseases

The backbone of Bavarian Nordics business over the past many years has been the development, production and supply of a new smallpox vaccine for government stockpiles around the world, for use in emergency situations. The vaccine is non-replicating, thus suitable for persons

who are not recommended vaccination with traditional smallpox vaccines.

The vaccine, known as IMVANEX or IMVAMUNE, has been approved in EU and Canada and the Company has to-date delivered 28 million doses of the vaccine to our primary customer, the U.S. Government, who also funded the development of the vaccine.

Leveraging on the smallpox vaccine success, we began working with the U.S. Government in 2010 on the development of an Ebola vaccine based on our proprietary technology platform, MVA-BN.

The rapidly developing Ebola outbreak in Western Africa in 2014 forced the summoning of authorities and the industry to assess the ongoing developments of therapeutics to fight the disease, and Bavarian Nordic's Ebola vaccine program (MVA-BN Filo) was fast-tracked in partnership with Janssen due to promising results from animal studies with a combined vaccine regimen of both companies' vaccines, that had shown complete protection against the Ebola Zaire strain, which is responsible for the current outbreak.

These promising results led to a license and supply agreement with Janssen, under which Bavarian Nordic will manufacture and supply approximately 2 million doses of the vaccine during 2015.

### Active cancer immunotherapies help the body to fight cancer

Immunotherapies belong to a new class of treatment, aimed at training the patient's own immune system to fight cancer. We have multiple projects in our pipeline, targeted at various cancers. PROSTVAC, our leading project, is in final Phase 3 development. In an earlier Phase 2 clinical study, PROSTVAC demonstrated an increased median survival time 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 global clinical Phase 3 study in 1200 patients with metastatic castration-resistant prostate cancer. The study completed enrollment in December 2014 and is now awaiting data that could potentially support a marketing authorization for PROSTVAC.

<sup>(1)</sup> Good Manufacturing Practice



# OUR ENVIRONMENTAL WORK

Our primary impact on the environment and climate is derived from our production, and we endeavor to improve our manufacturing efficiency and processes in order to optimize energy consumption and to minimize emissions and waste.

We wish to be at the forefront of environmental work and we seek to be so by maintaining a high degree of compliance and systematization in our organization, driven by our environment, health and safety specialist who proactively works to ensure that we comply with our own as well as external guidelines as required by the authorities.

We are also actively working with environmental, health and safety planning in new building projects. This has particularly characterized our work in 2014, where our manufacturing was transitioned into a multi-product facility in order to accommodate the production of Ebola vaccine, PROSTVAC and other future commercial products, in addition to our smallpox vaccine, which has been produced at the site for several years.

## 2014 developments

### Lower relative climate impact despite increased activities

Our total CO<sub>2</sub> emissions were only slightly higher by 6% compared to 2013, despite significantly increased manufacturing activities as result of transitioning to multiple product manufacturing. For the production alone, the increase was 11%, which are being partly offset by reductions in other areas.

Our relative climate impact from production dropped by impressive 22% in 2014 and is result of better utilization of the resources.

### Air recirculation helps reduce energy consumption

A new building of more than 900 m<sup>2</sup> was constructed at the Kvistgaard facility as part of the expansion that allows for multiple product manufacturing. Although this has expanded the total floor area at the site by 11%, the overall energy consumption

at the Kvistgaard facility dropped by 7% in 2014, to a level below our targets. This is primarily due to new energy saving measures implemented in the new building, including heat pump and recirculation of air.

### Tracking energy consumption helps defining reduction targets

The energy monitoring system that was installed at our Kvistgaard facility a few years ago allows us to identify inappropriate consumption of energy and water and thus make improvements. In 2014 we reduced the water consumption by 4% in the production, despite increased activities.

### Waste

The amount of waste was lower than compared to 2013, which is largely attributed to improved manufacturing efficiency and lower scrap rates.

A mapping of waste at the Kvistgaard facility was conducted in 2014. This aims



to increase the amount of waste for recycling, but also helps to improve processes for handling of waste, where potential savings can be made.

#### **Energy screening**

An energy screening of our water cooling systems at the Kvistgaard facility was conducted in 2014. Further energy screenings are planned for 2015.

#### **Key performance indicators established for energy, chemicals and production waste**

In line with our goals for 2014, we have established key performance indicators (KPIs) for energy consumption, waste recycling and for use of chemicals in the production. The KPIs are outlined in our goals for the coming years.

#### **Renewed environmental permit**

Based upon the environmental technical description for our facility, which we updated in late 2013, the Danish environmental authorities conducted a

reassessment during 2014, successfully resulting in a renewal of our environmental permit. The permit also covers the new production building which was established as part of transitioning to multiple products.

#### **Locals invited for meeting on Ebola vaccine production**

The Company hosted an information meeting on its recent initiation of production of an Ebola vaccine. Neighbors, local authorities and media attended the meeting and were well informed about the implications for production of this new vaccine, which is harmless to the surroundings like all other vaccines produced by the Company.



## GOALS

#### **Energy consumption**

We will work to maintain our annual relative energy consumption (KWh per m<sup>2</sup>) at the Danish facility below our target.

#### **Recycling**

We will work to increase recycling of waste from our production.

#### **Chemicals**

We will work to reduce the relative consumption of chemicals used in our production.



# OUR EMPLOYEES

Our employees are our most valuable asset and as an innovative, knowledge-based company, it is important for us to attract and retain highly qualified workers. Also for this reason, we want to offer our staff a good and inspiring working environment that also provides them with development opportunities.

At Bavarian Nordic, we strive to maintain a good, healthy work-life balance, and we focus on employee health, safety and job satisfaction. We do so in a close dialogue between management and employees through a number of established committees, including a works council and a health and safety committee on which both management and employees are represented and regularly discuss matters that may have an impact on the well-being and jobs of our employees.

Being a global organization, we support a diverse, accommodating and non-discriminatory working environment where, regardless of gender, age, ethnicity, physical impairment, religion or sexual orientation, we all aspire to the same objectives. Likewise, we share the same corporate values: Excellence, Agility and Dedication that have become an important foundation of how we work to achieve both our corporate as well as individual goals.

## 2014 developments

### Employee turnover

The rate of employee turnover was 13.8% (2013: 19.6%) and compares well to the previous years, except for 2013, where there was a significant outflow of employees due to closure of the Berlin facility, whose activities were transferred to Denmark as part of consolidation of manufacturing activities. In 2014, we set a goal for our employee turnover.

### Lower absence rate

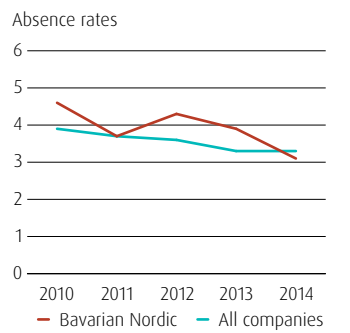
The absence rate was 3.1% in 2014 (2013: 3.9%) which was lower than that of other companies (see figure 1). Absence was generally lower at both sites where the absence is recorded

(Denmark and Germany), compared to 2013. Thus our target to maintain the absence rate below 4% was met.

### Decline in occupational accidents

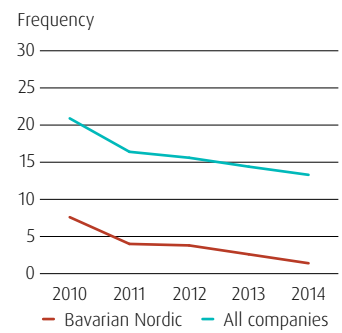
In 2014, there was only one minor occupational accident, the lowest number reported thus far. The accident rate remains below that of other companies (see figure 2). We recently began reporting of near-misses that could have led to an accident, thus strengthening the preventative work performed by our health and safety committee. In 2014, we set a goal for occupational accidents.

### Sickness absence



Comparison with DI (Confederation of Danish Industry) statistics for sickness absence (all companies).

### Occupational accidents



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

**Gender diversity at management levels**

We maintained an equal distribution of men and women in managerial positions with 47% and 53 % respectively. Managers and executives are selected exclusively on the basis of their qualifications and not on gender. This ensures that we can provide equal opportunities to both sexes if candidates for the positions have the required professional background.

**Employee development and training**

We continued our focus on training and education and on upgrading our employee's qualifications. Some of our production operators have received in-house training from other departments as part of the transition to multi-product manufacturing, some have been trained for work in cross-organizational projects, and others have completed external training as plant operators. These initiatives help to increase quality of work as well as job satisfaction, thereby retaining good employees.

In California, a presentation skill workshop was held in order for employees achieve a higher, more polished level of presentation skills, whether in a meeting or a large-group presentation.

**Leadership training**

We continued our leadership development with a program for managers in California that focused on priority management, objective setting and planning, productive-

ness, delegation, coaching and more. Similar initiatives are planned for 2015 for new managers in Germany and Denmark.

**Strengthened internal communications**

We have focused on strengthening our internal communications throughout the organization. Apart from the day-to-day information of all employees on relevant issues, we have introduced monthly meetings where management representatives present and discuss strategy, developments and timely topics with all employees. These meetings not only help to improve the information level, but also allows for employees to meet with management as well as for the management to better feel the pulse of the organization.

In addition, scientific workshops, meetings and webinars are also held regularly to increase the internal knowledge and improve relations across the organization.

**Anti-harassment policy introduced**

An anti-harassment policy was introduced, followed up by training of managers, which included an introduction of tools to prevent harassment



## GOALS

**Occupational accidents**

In 2016, the annual number of occupational accidents should be equivalent or less than the average of the previous three years.

**Absence**

We will work to maintain the annual absence due to sickness below 4%.

**Employee turnover**

In 2016, the annual employee turnover rate should be below the average of the previous three years.

**Gender diversity at management levels**

We will work to maintain an equal gender distribution among the managers of the Group.



## OUR SUPPLIERS

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Our suppliers of raw materials are mainly located in North America and the EU, which are areas with a high level of regulation of social and environmental parameters in place.

In accordance with both Good Manufacturing Practice (GMP) and our own supplier

management system, all new raw materials suppliers are audited. 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 structured audit process helps us to gauge the quality and CSR mindset of our suppliers. Through this

close collaboration with our key suppliers, we are gaining a deep insight into their business processes and capabilities, which provides important learnings for optimizing our own processes.

### 2014 developments

#### Flexible suppliers

As part of our recently entered partnership with Janssen, we had to switch to a high production volume of bulk drug substance for our Ebola vaccine with very short notice. This was successfully achieved due to a high internal flexibility, but also the flexibility of our suppliers who understood the importance of helping in a very special situation.

#### Minimized environmental impact from raw materials

The close collaboration with our key suppliers revealed the possibility to transition to a similar raw-material, but one with a better shelf-life (less waste) and the ability to store the material at higher temperatures (lower emissions). In general, we have optimized the consumption of raw materials and additives in the production, thereby reducing the relative consumption on largely all parameters compared to 2013.

#### Optimized ordering process

The transition of the manufacturing facility from one to multiple products has required a review of existing ordering processes. Through closer planning with our key suppliers, we have achieved a more optimal ordering process that helps to ensure timely availability of raw materials for different production campaigns.



## OUR BUSINESS ETHICS

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Bavarian Nordic prioritizes business ethics as a natural part of its underlying business concept. We want to be seen as credible and reliable by all our stakeholders.

Our Code of Business Conduct and Ethics (“the Code”) describes the ethical requirements for all employees’ and the Board of

Directors’ behavior in relation to customers, employees, shareholders, society, suppliers and partners. The Code 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 United States.

The observation of the Code rests upon all employees and all employees are encouraged to report issues, concerns and any breach of the Code. For this purpose, the Company has established a whistleblower system (“Ethics Hotline”).

### 2014 developments

#### Updated Code of Conduct

The Code of Conduct was updated, providing more detail and better guidelines for the employees. The Code was presented throughout the organization and by January 2015, all employees had acknowledged their acquaintance with the code. New employees will receive training in the Code as part of their introduction program at employment.

#### Ethics hotline launched

The Company launched an ethics hotline to give employees the opportunity to report suspected violations of the Code. The hotline has been set up 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.



## GOALS

#### Human rights

We will conduct a screening of the UN guiding principles on business and human rights (2015)



# 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 2014 in Tables 1 to 6 in Bavarian Nordic A/S' 2014 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 key performance indicators in the CSR report based on our review.

## Scope of work

We conducted our work in accordance with International Standard on Assurance Engagements (ISAE 3000DK) Other than Audits or Review of Historical Financial information and additional requirements under Danish audit regulation to obtain reasonable assurance that the key performance indicators in table 1 to 6 in the CSR Report for 2014 in all material respects are calculated in accordance with the reporting practice described. Our work has been limited primarily to inquiries of company personnel and 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 Tables 1 to 6 in the CSR report for 2014 are not calculated in accordance with the reporting practice described.

Copenhagen, 11 March 2015

## Deloitte

Statsautoriseret Revisionspartnerselskab

## Jørgen Holm Andersen

State Authorised Public Accountant

## Martin Faarborg

State Authorised Public Accountant



# STATEMENT ON SOCIAL PERFORMANCE

## Employees

### Reporting practice

#### Absence

Absence data includes recorded staff sick days and child sick days for employees in Denmark and Germany only. Absence is not recorded among our employees in USA and thus does not contribute to the statistics. Leave – also maternity and paternity leave – is not included in these figures. The absence rate was calculated by dividing the total number of days of absence by the product of the average number of full-time employees for the year and the number of work days in the calendar year.

#### Employee turnover rate

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

#### Occupational accidents

Occupational accident data relates to accidents resulting in at least one day of absence, in addition to the day of injury. Absence rates for 2010-2012 presented in the non-financial key figures on page 5 were based on accidents resulting in at least one day of absence inclusive of the day of injury. The accident rate is the number of occupational accidents per one million working hours; vacation days are not included.

Table 1

	2014	2013
<b>Employees, total (year-end)</b>	<b>437</b>	<b>440</b>
<b>Employees, FTE average over the year</b>	<b>421</b>	<b>441</b>
Distribution:		
Denmark	239	238
Germany	109	126
USA	72	76
Other	1	1
<b>Absence</b>	<b>3.1%</b>	<b>3.9%</b>
<b>Employee turnover</b>	<b>13.8%</b>	<b>19.6%</b>
<b>Employee groups</b>		
Ratio of men to women in management and executive positions	47% / 53%	54% / 46%
Employees under collective agreement	52	52
Other employees (white-collar workers with or without management responsibility)	385	388
<b>Occupational accidents</b>		
Occupational accident frequency (number/million working hours)	1.4	2.6 <sup>(1)</sup>
Occupational accidents in numbers	1	2 <sup>(1)</sup>
Average absence per occupational accident in days	3.0	2.5 <sup>(1)</sup>

<sup>(1)</sup> The comparative figures for 2013 have been restated due to a change in reporting principle to ensure comparability with annual statistics from DI (Confederation of Danish Industry) for work-related accidents.



# STATEMENT ON ENVIRONMENTAL PERFORMANCE – GLOBAL

## Carbon footprint

### Reporting practice

Carbon footprint calculations are based on the standard from and recommendations of the Greenhouse Gas Protocol Initiative<sup>(1)</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). Our reporting covers Scope 1 and Scope 2, thus fulfilling the minimum recommendations.

We have calculated the total carbon emissions from our locations in Kvistgaard, Martinsried and Mountain View. From 2013, power and heating consumption at our leased laboratories in Hørsholm, Denmark are also included.

For other sites, the calculations include 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 is based on oil purchased. Greenhouse gas emissions from the com-

bustion 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 consump-

tion is based on specific emission factors provided by the power company and an average emission factor for generation of power in Germany.

#### Mileage (in km)

This figure is calculated on the basis of receipts from gasoline 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.

Table 2

	2014	2013
<i>Units in t CO<sub>2</sub></i>		
<b>Carbon footprint, global</b>	<b>3,543</b>	<b>3,345</b>
<b>Direct emissions (Scope 1)</b>		
Heating	981	1,324
Power generation	0	12
Fugitive emissions	88	14
Transport of employees (motor vehicles)	46	67
Transport of raw materials (internal)	1	1
<b>Indirect emissions (Scope 2)</b>		
Electrical power, purchased	2,280	1,734
Heating, purchased	147	193
Cooling, purchased		-
Carbon footprint, Production	2,417	2,102
Carbon footprint, Production, Index per batch produced	85	109

<sup>(1)</sup> [www.ghgprotocol.org](http://www.ghgprotocol.org)

<sup>(2)</sup> [http://www.ens.dk/da-DK/KlimaOgCO2/CO2Kvoter/produktionsenheder/co2\\_rapportering/Documents/standardfaktor%202011.pdf](http://www.ens.dk/da-DK/KlimaOgCO2/CO2Kvoter/produktionsenheder/co2_rapportering/Documents/standardfaktor%202011.pdf),

<sup>(3)</sup> <http://www.pge.com/myhome/environment/calculator/assumptions.shtml>

<sup>(4)</sup> Energinet, an independent government owned 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>(5)</sup> IEA, the International Energy Agency, is an independent organization working to ensure reliable, cheap and clean energy for its 28 member countries.

<sup>(6)</sup> AGFW, "Der Energieeffizienzverband für Wärme, Kälte und KWK e. V."



*Emission factors*

In calculating CO<sub>2</sub> emissions, specific emission factors based on emissions type and geographic location were used. CO<sub>2</sub> emissions from the combustion of natural gas, oil, gasoline, 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>(2)</sup>

However, natural gas emission factors for Mountain View are based on figures from

The Pacific Gas and Electric Company<sup>(3)</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>(4)</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>(5)</sup>; emission calculations for district heating purchased in Germany are based on emission factors published by local district heating companies.<sup>(6)</sup>

*Indexed CO<sub>2</sub> emissions per batch produced.*

CO<sub>2</sub> emissions per manufactured batch are indexed to 2009 and calculated on the basis of the number of batches manufactured during the calendar year.



## STATEMENT ON ENVIRONMENTAL PERFORMANCE – PRODUCTION

The following tables only cover environmental conditions relating to our production facility in Kvistgaard, Denmark, and

contain data that must be reported and published under Danish environmental legislation and the EU PRTR<sup>(1)</sup> regulation.

### Raw and ancillary materials

#### Reporting practice

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.

Chicken eggs are used in the production process, inoculated with MVA-BN<sup>®</sup> to produce the active ingredient of the vaccine. Ready-mixed media (nutrients) are used to culture the biological agents, along with ready-made saline solutions to purify the active ingredient. To maintain a sterile production environment, plastic disposables (e.g. bags, tubes) are used widely in the production. As part of the manufacturing expansion in 2014, a new production method was implemented where plastic roller bottles are used for virus growth.

**Table 3**

	2014	2013
Eggs (pcs.)	515,920	565,500
Various ready-mix media, etc. (liters)	78,408	111,217
Acids/bases (liters)	5,579	10,644
Salt (NaCl)	9,000	6,000
Cleaning agents, disinfectants (liters)	17,988	16,127
Plastic disposables (pcs.)	15,408	9,914
Refrigerants, propylene glycol, etc. (liters)	90	326
CO <sub>2</sub> (Nm <sup>3</sup> )	44,915	45,319
N <sub>2</sub> (Nm <sup>3</sup> )	993	1,784
Propane (kg)	264	264
Agar plates (pcs.)	75,540	75,670
Media for process simulation (liters)	8,760	7,402

Disinfectants are used together with acidic and alkaline solutions to clean systems and equipment and 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 in the production of steam.

<sup>(1)</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)

## Water and wastewater

### Reporting practice

Water consumption is calculated for the entire Kvistgaard facility, including laboratories and administrative functions. An analysis of wastewater is made once a year. The figures in Table 4 for phosphorous, nitrogen, carbon and chlorides are based on these measurements.

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

**Table 4**

	2014	2013
Sanitary wastewater (m <sup>3</sup> )	3,735	3,680
Process wastewater (m <sup>3</sup> )	7,856	8,218
<b>Total wastewater (m<sup>3</sup>)</b>	<b>11,591</b>	<b>11,898</b>
Phosphorus (kg)	25	29
Nitrogen (kg)	191	224
Total organic carbon (kg)	602	630
Chlorides (kg)	8,642	5,259

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.

## Waste

### Reporting practice

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

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

**Table 5**

	2014	2013
Total waste (metric tons)	117	125
- of which hazardous waste (metric tons)	13	20
<i>Breakdown of waste disposed of:</i>		
Incineration	78%	74%
Recycling	11%	10%
Special treatment	11%	16%

egg waste is also sent to incineration. Hazardous waste includes organic sol-

vents, acids, bases, hazardous clinical waste, etc.

## Incidents of non-compliance with environmental protection legislation

### Reporting practice

Violations of terms are reported to and discussed with the relevant authorities in order to assess the need for potential corrective actions.

**Table 6**

	2014	2013
Violations of terms, etc. and accidental discharge	0	1
Complaints	0	0



## GRI INDICATORS

This CSR report was prepared with inspiration from parts of the Global Reporting Initiative (GRI)<sup>(1)</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 3
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 2
2.5	Number of countries where the organization operates	Section 2
2.6	Nature of ownership and legal form	Section 2
2.7	Markets	Section 2
2.8	Scale of the reporting organization	Annual report
2.9	Significant changes during the reporting period regarding size, structure or ownership	Annual report
3.1	Reporting period	Section 1
3.3	Reporting cycle	Section 1
3.4	Contact point for questions regarding report	Back page
3.5	Process for defining report content	Section 3
3.6	Boundary of the report	Section 3
3.7	Specific limitations on the scope or boundary of the report	Section 4
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 10-12
3.10	Explanation of the effect of any restatements of information in previous reports and the reasons for such restatements	Section 10-12
3.11	Significant changes to previous reporting periods in the scope, boundary, or measurement methods applied in the report.	Sections 3 & 10-12
3.12	Table identifying the location of the Standard Disclosures in the report	Section 13
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 6 & 8

GRI ref.	Description	Reference
<b>Economic performance indicators</b>		
EC1	Direct economic value generated and distributed	Annual report
<b>Environmental performance indicators</b>		
EN1	Materials used by weight or volume	Section 12
EN2	Percentage of materials used that are recycled input materials	Section 12
EN3	Direct energy consumption by primary source	Section 13
EN4	Indirect energy consumption by primary source	Section 12
EN5	Energy saved due to conservation and efficiency improvements	Section 5
EN8	Total water withdrawal by source	Section 12
EN16	Total direct and indirect greenhouse gas emissions by weight	Section 12
EN17	Other relevant indirect indirect greenhouse gas emissions by weight	Section 12
EN18	Initiatives to reduce greenhouse gas emissions and reductions achieved	Section 5
EN19	Emissions of ozone-depleting substances by weight	Section 12
EN20	NO <sub>x</sub> , SO <sub>x</sub> and other significant air emissions by type and weight	Section 12
EN21	Total water discharge by quality and destination	Section 12
EN22	Total weight of waste by type and disposal method	Section 12
EN23	Total number and volume of significant spills	Section 12
EN24	Weight of transported, imported, exported, or treated waste deemed hazardous	Section 12
EN28	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations	Section 12
<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

<sup>(1)</sup> <http://www.globalreporting.org>



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