

COMMITTED  
TO WHAT  
*counts.*

CORPORATE  
CITIZENSHIP  
REPORT  
2014



 Biogen™

# TABLE OF CONTENTS

|    |                                                                        |
|----|------------------------------------------------------------------------|
| 3  | Letter from Leadership                                                 |
| 6  | About Biogen                                                           |
| 12 | Citizenship & Sustainability                                           |
| 16 | Improving Lives                                                        |
| 48 | Rethinking Resources                                                   |
| 61 | Acting Responsibly                                                     |
| 89 | About This Report                                                      |
| 93 | GRI G4 Index                                                           |
| 17 | Research & Development:<br>Going After the Hard Problems*              |
| 26 | Technology & Business Solutions:<br>Beyond the Traditional IT Team*    |
| 29 | A Single Mission:<br>Improving Patient Health*                         |
| 49 | Making the Leap to a Net Zero Carbon Footprint*                        |
| 62 | Access to Treatment:<br>Innovative Solutions to Real-World Challenges* |
| 69 | Funding Our Future Through Human Capital*                              |

\*Perspectives from Biogen leadership

For the fourth consecutive year, our global colleagues participated in Biogen's Care Deeply Volunteer Day, which shattered last year's record turnout with a 54-percent increase in employee participation. This worldwide project enables employees to participate in meaningful community service projects and has a beneficial impact in every location where Biogen operates around the world. More than 3,000 employees from 27 countries took part in more than 150 projects in 2014. Throughout this report we've showcased Care Deeply Volunteer Day initiatives from around the world.



Just look for the icon to find these stories.

## ON THE COVER ▶

Inspired by the new Biogen logo, the front cover graphic represents the many facets of our citizenship efforts: improving the lives of patients, protecting the environment and bettering the community through STEM education and other initiatives.



## Letter from Leadership

[About Biogen](#)

[Citizenship  
& Sustainability](#)

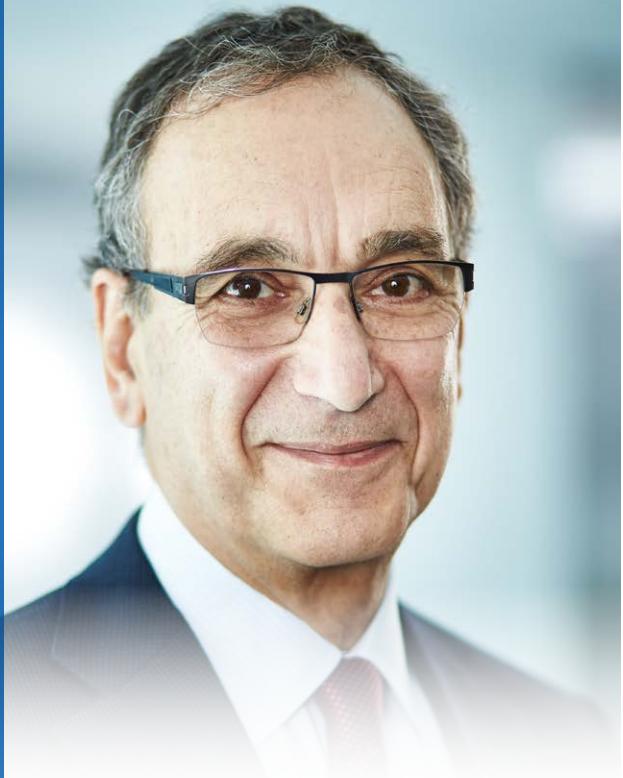
[Improving Lives](#)

[Rethinking Resources](#)

[Acting Responsibly](#)

[About This Report](#)

[GRI G4 Index](#)



## **Letter from Leadership**

**George A. Scangos, Ph.D.**

*Chief Executive Officer*

**For Biogen and the patients we serve,** 2014 was a year of great accomplishments. We expanded our leadership in multiple sclerosis, introduced the first new advances for hemophilia in nearly two decades and, in conjunction with commercial and academic partners, continued to develop one of the most robust pipelines in the industry.

The same intellectual discipline and rigor that drives our science is reflected in our corporate citizenship. Our efforts include improving patient access and health outcomes while strengthening our commitment to environmental sustainability, philanthropy, employee development and community improvement.

**“We have effectively neutralized all the carbon emissions associated with our business, demonstrating continued leadership in protecting the environment.”**

We made significant progress in all of these areas – but perhaps most notably, Biogen this year achieved carbon neutrality. That means we have effectively neutralized all the carbon emissions associated with our business, demonstrating continued leadership in protecting the environment.

We were able to reach this milestone by continuing to invest in the sustainable innovations that have allowed us to reduce our operational carbon emissions intensity by 70 percent since 2006. We also funded renewable energy and carbon offset projects to cover the remaining emissions sources, which included internal operations, purchased electricity, employee commuting and business travel, and suppliers of products and services.

About Biogen

Citizenship  
& Sustainability

Improving Lives

Rethinking Resources

Acting Responsibly

About This Report

GRI G4 Index

We carefully chose these offset efforts, which include wind, solar and low-impact hydroelectric projects throughout the United States and Denmark, and low-impact hydroelectric power in Switzerland – as well as landfill gas projects to provide energy in Massachusetts, New York and Utah – places where many of our employees live and work.

***“Inside our own walls we strive to make Biogen an inclusive place to work and thrive.”***

Beyond our environmental focus, Biogen is also working to make a difference in the lives of patients, thinking beyond the therapies that we pioneer and produce to consider the whole person. We support patients and their caregivers with a range of best-in-class services and programs to help with the informational, emotional and logistical considerations that are part of living with disease.

We also help patients and their families address the financial impact of treatment. In 2014, we provided financial assistance valued at more than \$1 billion in the form of free drug and insurance copayment support, infusion assistance and charitable contributions.

Sometimes, ensuring access requires bold initiatives. In many developing countries, the lack of access to

hemophilia treatments is a serious public health and humanitarian issue. To address this challenge, we pledged, along with collaborator Swedish Orphan Biovitrum AB (Sobi), to donate up to 1 billion international units of clotting factor over the next 10 years to humanitarian aid programs in the developing world.

Inside our own walls we strive to make Biogen an inclusive place to work and thrive. In 2014, we launched a global initiative to elevate our company's commitment to diversity and inclusion. We developed new programs to prepare more women for leadership roles and expanded our Employee Resource Networks that celebrate the many backgrounds that make up our Biogen community. We listened to employees who expressed the need for greater work-life balance and, in response, introduced a year-end shutdown of the company and an employee sabbatical program.

Philanthropy also continues to serve as a centerpiece for our global corporate social responsibility efforts. The Biogen Foundation made strides in building a global network to expand our commitment to science, technology, engineering and mathematics (STEM) education programming worldwide with new and ongoing signature partnerships, while we also expanded our grants programs globally and increased investment in our pioneering Community Lab program.

About Biogen

Citizenship  
& Sustainability

Improving Lives

Rethinking Resources

Acting Responsibly

About This Report

GRI G4 Index

A portion of our investment in carbon neutrality also supports Solar 4R Schools, an organization which uses solar technology as a hands-on, interactive education tool to cultivate a new generation of clean energy leaders.

***“We topped the Newsweek list of  
Top Green Companies in the World 2015.”***

We are increasingly recognized by respected entities. In the past year:

- Biogen was named biotech industry leader on the prestigious Dow Jones Sustainability World Index, and we made the Dow Jones North America Index for the fifth consecutive year.
- In June, we topped the *Newsweek* list of “Top Green Companies in the World 2015.”
- In early 2015, based on our 2014 performance, we were named the world’s most sustainable company by sustainability research firm, Corporate Knights.
- We were recognized by *CR Magazine* on its 100 Best Corporate Citizens List.

- We received multiple accolades for being a great place to work, earning a perfect score of 100 on the Human Rights Campaign Corporate Equality Index and inclusion on “best places to work” lists around the globe, including Germany, Italy, Portugal, Switzerland, United Kingdom and the United States.

Our dedicated approach to global corporate citizenship is a source of pride for all Biogen employees. Together we work to meet the best interests of society and our communities and improve outcomes for people living with serious diseases.

At Biogen, we are truly committed to what counts.

- George A. Scangos, Ph.D.  
Chief Executive Officer

Letter from Leadership

About Biogen

Citizenship  
& Sustainability

Improving Lives

Rethinking Resources

Acting Responsibly

About This Report

GRI G4 Index

# *About* BIOPHARMACEUTICALS

At Biogen, we measure success by our impact on the patients we serve. Each day we ask ourselves one simple question: Have we truly made a difference in the lives of patients?

## BIOGEN AT A GLANCE

### About Biogen

Citizenship  
& Sustainability

Improving Lives

Rethinking Resources

Acting Responsibly

About This Report

GRI G4 Index



\*This number includes free drug assistance, calculated as the Wholesale Acquisition Cost (WAC), which is in line with current industry reporting standards.

**About Biogen**

Citizenship  
& Sustainability

Improving Lives

Rethinking Resources

Acting Responsibly

About This Report

GRI G4 Index

## GOALS AND PERFORMANCE

### ENVIRONMENT\* (See Pages 48-60 for details)



(Achieved  
2014)



Water  
Intensity  
(potable water)

**Goal:**  
80% reduction  
by 2020  
  
**Progress:**  
72% reduction



Greenhouse Gas  
Emissions Intensity  
(Scopes 1 and 2)

**Goal:**  
80% reduction  
by 2020  
  
**Progress:**  
70% reduction



Solid Waste  
to Landfill

**Goal:** 0  
**Progress:**  
99%+  
reduction

### RESEARCH AND DEVELOPMENT (See Pages 17-20 for details)

**Goal:** Actively engage in at least one collaborative research initiative with a leading academic institution on an ongoing basis, year over year.  
**Progress:** Achieved for 2014 (seven active partnerships)

### HEALTH OUTCOMES (See Pages 29-32 for details)

**Goal:** Increase the percentage of U.S. multiple sclerosis (MS) patients who go through our Patient Services program year over year  
**Progress:** Increase of 17 percentage points from 2013 to 2014

\*Biogen has neutralized the carbon footprint associated with our business throughout our value chain through greenhouse gas emissions reductions and offsets. Intensity measures and goals are based on the amount of resources used or greenhouse gas emissions per dollar of revenue from our 2006 baseline. Additionally, Biogen achieved and has maintained virtually zero waste to landfill for our manufacturing waste from our owned and operated facilities since early 2012.

## ABOUT OUR COMPANY

Biogen is one of the world's leading biotechnology companies, with a focus on developing therapies for neurodegenerative, autoimmune and hematologic disorders. Founded in 1978, our work in biologics and small-molecule drug discovery has led to the world's most extensive portfolio of MS therapies and innovative new treatments for hemophilia patients. Our experience, capabilities and passion for innovation have enabled us to build a pipeline and develop advanced research programs that include exploration of potential candidates for serious and difficult-to-treat neurodegenerative diseases and fibrotic and non-malignant blood disorders.

We are committed to research that uncovers the underlying biology of complex diseases. Our focus is on illnesses with few, if any, treatment options.

Biogen is listed on the Global Select Market of the NASDAQ Stock Market under the symbol BIIB. In 2014, we changed our legal name from Biogen Idec to Biogen. Our global headquarters in Cambridge, Mass., is also home to our research operations and small scale manufacturing facility, with an international headquarters in Zug, Switzerland, and world-class manufacturing facilities in Research Triangle Park (RTP), N.C., and Hillerød, Denmark. We offer therapies globally through direct affiliate presence in more than 30 countries and a network of distribution partners in more than 50 additional countries. A list of our global locations can be found [here](#).

### About Biogen

Citizenship & Sustainability

Improving Lives

Rethinking Resources

Acting Responsibly

About This Report

GRI G4 Index

## Recent Significant External Recognition

**Dow Jones Sustainability World Index**  
Biotech industry leader.

**Dow Jones Sustainability North America Index**  
Fifth consecutive year.

**Global 100**  
Named as the world's most sustainable company by research firm, Corporate Knights.

**Newsweek**  
Named number one in the world on 2015 Green Rankings.

**100 Best Corporate Citizens**  
Named number 64 on the CR Magazine 100 Best Corporate Citizens list.

**Human Rights Campaign Corporate Equality Index**  
Received perfect score of 100, earning the title of Best Places to Work.

**Boston Globe 100**  
Named number 13 on the top 100 companies to work for in Massachusetts.

**Triangle Business Journal**  
Life Sciences Award Winner – Public Company Category.

**50 Best Places to Work in America**  
Named number 11 on the Business Insider/PayScale Annual Survey.

**Great Place to Work Institute\***  
Germany, Italy, Portugal, Switzerland, United Kingdom.

\*Great Place to Work® is a global research and consulting institute.

## OUR MARKETED THERAPIES As of June 2015

### About Biogen

Citizenship  
& Sustainability

Improving Lives

Rethinking Resources

Acting Responsibly

About This Report

GRI G4 Index

Visit our [website](#) for more detailed information on our therapies.

| Therapy                                                                      | Indication Overview (In United States)                                                                                                                                                                                                                      |
|------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>ALPROLIX®</b><br>[Coagulation Factor IX (Recombinant), Fc Fusion Protein] | Control and prevention of bleeding episodes, perioperative management and routine prophylaxis in adults and children with hemophilia B.                                                                                                                     |
| <b>AVONEX®</b><br>(interferon beta-1a)                                       | Relapsing forms of MS.                                                                                                                                                                                                                                      |
| <b>ELOCTATE®</b><br>[Antihemophilic Factor (Recombinant), Fc Fusion Protein] | Control and prevention of bleeding episodes, perioperative management and routine prophylaxis in adults and children with hemophilia A.                                                                                                                     |
| <b>FAMPYRA®</b><br>(prolonged-release fampridine tablets)                    | Improved walking in adult MS patients who have walking disability.                                                                                                                                                                                          |
| <b>GAZYVA® *</b><br>(obinutuzumab)                                           | Previously untreated chronic lymphocytic leukemia, designed to improve upon the efficacy of RITUXAN.                                                                                                                                                        |
| <b>PLEGRIDY®</b><br>(peginterferon beta-1a)                                  | Relapsing forms of MS.                                                                                                                                                                                                                                      |
| <b>RITUXAN® *</b><br>(rituximab)                                             | As single agent or in combination with other therapies for certain types of non-Hodgkin's lymphoma (NHL). In combination with other therapies for rheumatoid arthritis. In combination with other therapies for CD20-positive chronic lymphocytic leukemia. |
| <b>TECFIDERA®</b><br>(dimethyl fumarate)                                     | Relapsing forms of MS.                                                                                                                                                                                                                                      |
| <b>TYSABRI®</b><br>(natalizumab)                                             | Relapsing forms of MS.                                                                                                                                                                                                                                      |

\*Marketed by Genetech/Roche

**FINANCIAL PERFORMANCE** (As of December 31, 2014)**About Biogen**

See our [2014 Form 10-K](#) for more detailed information on our financial performance.

**Citizenship & Sustainability****Improving Lives****Rethinking Resources****Acting Responsibly****About This Report****GRI G4 Index**

|                                                       | <b>2012</b> | <b>2013</b> | <b>2014</b>   |
|-------------------------------------------------------|-------------|-------------|---------------|
| <b>Operating Results (\$ in millions, except EPS)</b> |             |             |               |
| Total Revenues                                        | 5,516       | 6,932       | <b>9,703</b>  |
| GAAP Net Income Attributable to Biogen                | 1,380       | 1,862       | <b>2,935</b>  |
| GAAP Diluted Earnings Per Share (EPS)                 | 5.76        | 7.81        | <b>12.37</b>  |
| <b>Financial Position (\$ in millions)</b>            |             |             |               |
| Total Liabilities                                     | 3,166       | 3,242       | <b>3,502</b>  |
| Cash Equivalents                                      | 3,700       | 1,800       | <b>3,316</b>  |
| Total Shareholders' Equity                            | 6,964       | 8,620       | <b>10,809</b> |
| R&D Investments (featured in annual reports)          | 1,335       | 1,444       | <b>1,893</b>  |

[Letter from Leadership](#)

[About Biogen](#)

***Citizenship  
& Sustainability***

[Improving Lives](#)

[Rethinking Resources](#)

[Acting Responsibly](#)

[About This Report](#)

[GRI G4 Index](#)

# *Citizenship &* **SUSTAINABILITY**

Our commitment to corporate citizenship and environmental sustainability reflects the best interests of our patients, our stakeholders and the communities we serve. It is a commitment that is built into our culture of excellence and part of what we do each and every day.

[Letter from Leadership](#)

[About Biogen](#)

**Citizenship  
& Sustainability**

[Improving Lives](#)

[Rethinking Resources](#)

[Acting Responsibly](#)

[About This Report](#)

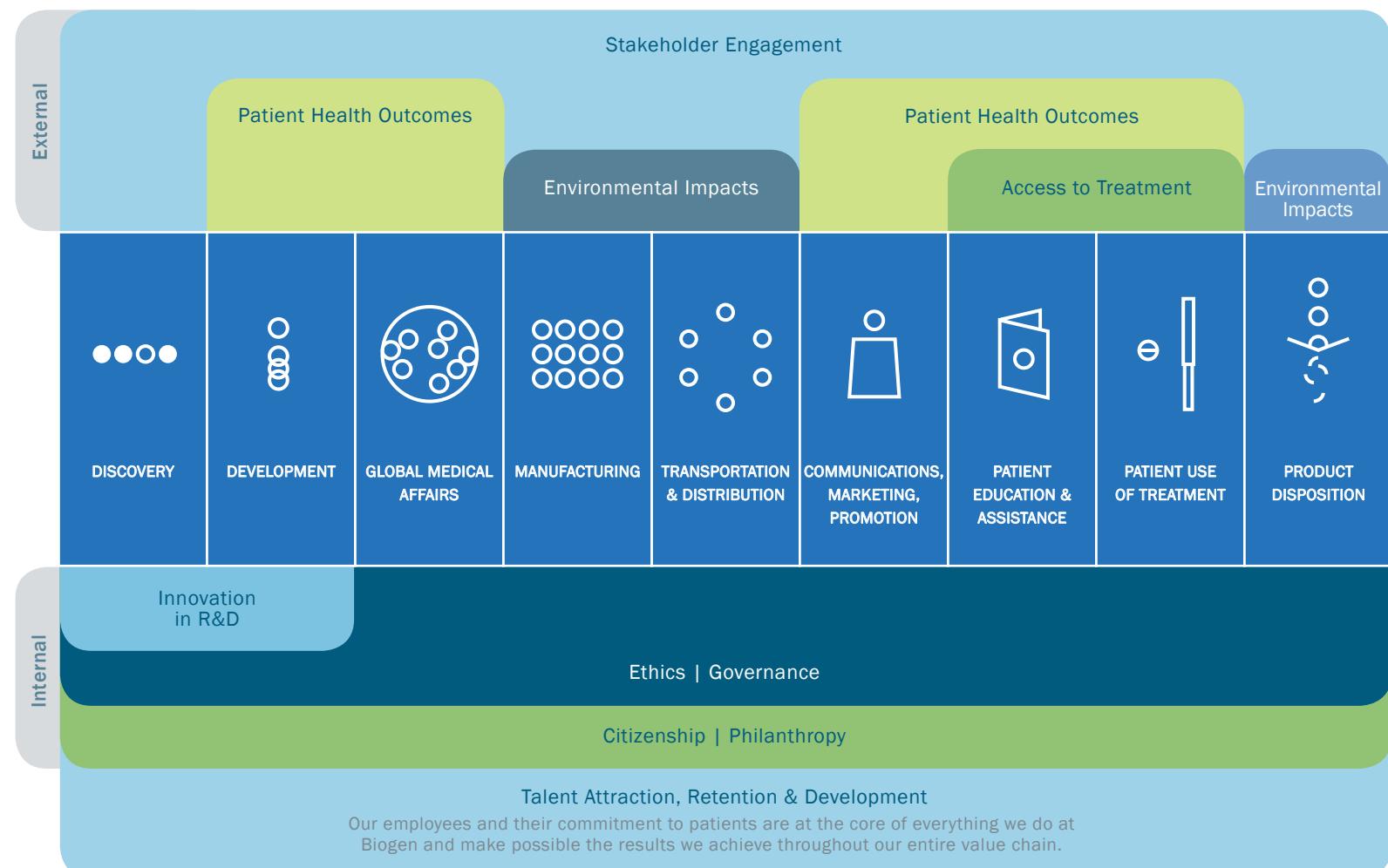
[GRI G4 Index](#)

In developing our 2014 Corporate Citizenship Report, we have followed the Global Reporting Initiative (GRI) Sustainability Reporting Guidelines, known as “G4.” The GRI Guidelines represent the most widely adopted voluntary sustainability reporting standard in the world.

As part of our commitment to corporate transparency, and in keeping with the spirit of the G4 Guidelines, we conducted a full “materiality assessment” in late

2013 and early 2014. We plan to repeat this process approximately every two years. This strategic exercise helped us identify and rank the issues that we believe are most critical to the continued success of our company and that matter most to a wide variety of our stakeholders – both internal and external. These issues are summarized on Pages 14-15 and are discussed throughout this report. For a more detailed discussion of the materiality assessment process, please see Pages 90-92.

## BIOGEN VALUE CHAIN & MATERIAL ISSUES



## OUR MOST MATERIAL ISSUES

(for detail on how we determined our material issues, please see Pages 90-92)

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Where Impact Occurs                                                                   | Our Control or Influence |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|--------------------------|
| <b>Research and Development (R&amp;D) and Innovation</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |    | High                     |
| As a company committed to visionary science and new therapies for diseases with inadequate or no treatment options, our investment in R&D distinguishes Biogen. Within neurology, immunology and non-malignant hematology, we continue to apply our decades of expertise to focus on some of the most challenging disease areas, while building on our expertise to identify adjacencies where the science leads us. This focused approach and commitment to R&D, where we annually invest approximately 20 percent of our revenue, aims at meeting the critical needs of patients and society as we work to reduce the overall burden of debilitating diseases.                                              |                                                                                       |                          |
| <b>Patient Health Outcomes</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |    | High                     |
| Our company's success is ultimately determined by the health outcomes realized by the patients on our therapies, including benefits of the therapies and the services we provide, managing potential side effects, product safety and product security. The benefits of our treatments may encompass improved physical and cognitive function, easier compliance with therapy and a better quality and more productive life. This helps determine the willingness of physicians to prescribe our treatments and impacts the decisions payers must make in covering drugs, especially newly introduced therapies. Product security includes safeguards against counterfeit, adulterated and compromised drugs. |                                                                                       |                          |
| <b>Access to Treatment/Promoting Product Societal Value</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |   | Medium                   |
| One of the more complex tasks we navigate as a company and an industry is helping to ensure that the people whose lives may be improved by our therapies have access to them. This involves considerations such as obtaining regulatory approvals across many jurisdictions, weighing options for compassionate use of therapies prior to approval, ensuring that prescribers are aware of their options, setting product pricing that balances citizenship and fiscal prudence, demonstrating product efficacy and societal value to payers, offering patient financial assistance and helping patients find the healthcare providers they need.                                                             |                                                                                       |                          |
| <b>Ethics/Governance</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  | High                     |
| Sound corporate governance is essential to sustaining our growth and success as a company and to maintaining the trust and confidence of our stakeholders. This extends throughout all aspects of our business, from the way we conduct clinical trials and compensate investigators to the way we market and protect our products, allocate corporate resources and select suppliers. All Biogen employees must comply with our Code of Business Conduct, <i>Values in Action</i> , which guides decision-making throughout our organization.                                                                                                                                                                |                                                                                       |                          |

 external    internal/external

**OUR MOST MATERIAL ISSUES** (continued)

|                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Where Impact Occurs              | Our Control or Influence |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|--------------------------|
| <b>Stakeholder Engagement</b>                                                                                                                                                                                                                                                                                                                                                                                                                          | ○                                | High                     |
| Engaging with a wide range of stakeholders is essential to our business. We work collaboratively to understand patient needs, conduct research, protect the environment, improve the pharmaceutical supply chain and work with government regulators globally. We also strive to understand the needs and desires of our employees and the challenges faced by physicians and caregivers.                                                              | ○                                | High                     |
| <b>Citizenship &amp; Philanthropy</b>                                                                                                                                                                                                                                                                                                                                                                                                                  | ○                                | High                     |
| As a company dedicated to improving lives, Biogen and many of its stakeholders view community, philanthropic and volunteer activities as a core component of our business. Not only is it the right thing to do as a good corporate citizen, but it is essential to the long-term viability of our business and industry, as it engages our employees, strengthens our communities and helps nurture the science and technology leaders of the future. | ○                                | High                     |
| <b>Environmental Impacts</b>                                                                                                                                                                                                                                                                                                                                                                                                                           | ○                                | High                     |
| As a company with significant manufacturing capacity, Biogen uses a considerable amount of energy, water and materials in the production of our products. We have incorporated environmental sustainability as a cultural imperative across the company and are dedicated to reducing the intensity of our natural resource use even as we experience significant growth worldwide.                                                                    | ●                                | Medium                   |
| <b>Intellectual Property</b>                                                                                                                                                                                                                                                                                                                                                                                                                           | ●                                | Medium                   |
| Continued innovation and access to treatments, and fair reimbursement for innovative products, depend in large part on certainty around intellectual property protections, which are necessary to ensure that we are able to make the long-term investments that biopharmaceutical innovation requires.                                                                                                                                                | ○ external   ● internal/external |                          |

○ external   ● internal/external

[Letter from Leadership](#)

[About Biogen](#)

[Citizenship  
& Sustainability](#)

[\*Improving Lives\*](#)

[Rethinking Resources](#)

[Acting Responsibly](#)

[About This Report](#)

[GRI G4 Index](#)

# *Improving* LIVES

Biogen's commitment to improving patients' lives goes beyond scientific research and development. We believe it is equally important to listen to and interact with patients, advocacy organizations and healthcare societies in order to gain insights into unmet needs. We apply similar rigor and passion to improving lives in the community.

[Letter from Leadership](#)

[About Biogen](#)

[Citizenship  
& Sustainability](#)

[Improving Lives](#)

[Rethinking Resources](#)

[Acting Responsibly](#)

[About This Report](#)

[GRI G4 Index](#)



## Research & Development: Going After the Hard Problems

◀ **Doug Williams Ph.D.**

*Executive Vice President - Research and Development*

**Biogen's approach** to research and development (R&D) is designed for maximum impact in our core areas of expertise: neurology, immunology and hematology. When I arrived at the company in 2011, I worked with our CEO and others to help streamline and focus our R&D portfolio where we could make the most difference in the lives of patients. We've built a unique scientific expertise, and we seek to apply that understanding to develop new and improved therapies for areas of unmet medical need.

What that means is, we go after the hard problems.

Biogen's research tackles diseases where there's currently inadequate treatment, or no treatment – the kinds of diagnoses that drastically impact the day-to-day lives of patients and their caregivers. But, science has shown us that there's potential for another way, a better way, that can have a substantial impact on helping people achieve a significantly higher

**“We reinvest about 20 percent of our annual revenues right back into R&D each year.”**

quality of life by slowing the progression of these seemingly intractable diseases, decreasing the burden of disease and making it easier to comply with treatment regimens. To develop therapies with the potential to make a real impact on improving lives, we reinvest about 20 percent of our annual revenues right back into R&D each year. This investment is among the highest in the industry and supports developing new research technologies, as well as building the right team to continue to grow the innovation pipeline and advance patient care.

## RESEARCH AND DEVELOPMENT: GOING AFTER THE HARD PROBLEMS Doug Williams, Ph.D.

### Logical Adjacencies: Strategically Building for Success

For years, Biogen has been a leader in the treatment of MS and, more recently, we have introduced pioneering therapies for managing hemophilia. As we expand our portfolio, we are building upon what we learn from developing the therapies that are successfully introduced, as well as those compounds that, for one reason or another, do not make it all the way through our pipeline.

As we expand beyond MS, we focus on areas of logical adjacencies. For example, while MS and Alzheimer's disease (AD) may seem like completely different conditions, both are neurodegenerative disorders. Both diseases typically advance slowly, but inexorably. The basic principles of how we're treating relapsing forms of MS are not that different than what we're trying to do in AD. We are trying to slow down the progression of these diseases to give the patient a much longer period of time during which they can retain a significant amount of function – whether that is physical or cognitive function or both.

To track our advances over the long R&D timeline, we have established the Biogen Value Pipeline Index (VPI), an internal tool that allows us to measure the quality of development and progress toward new solutions we've achieved on an annual basis. VPI helps us to quantify clinical, biological and safety risks to determine if programs are generating valuable results that help us reduce risk, improve success rates and advance toward our targets. Ultimately, in any given year, we can evaluate how much value our work is creating for shareholders, patients and the company as a whole. This data supports informed decision-making about advancing research from one phase to the next and is used to communicate the value of our current pipeline to our board of directors.

### Building the Pipeline: Fueled by Talent, Technology and Data Insights

Our potential for success is directly impacted by the talent and tools available to push forward toward new discoveries. In 2014, we focused on expanding our in-house R&D strength by welcoming five leading researchers to the Biogen team:

- Dr. Olivier Danos joined Biogen from Kadmon Pharmaceuticals to lead the company's gene therapy research group, a team dedicated to identifying and developing new technologies for gene transfer and genome engineering. Dr. Danos is a true pioneer in the field. We believe that his expertise will help accelerate our development of a world-class gene therapy platform that combines our growing internal capabilities with collaborations with leading research organizations across the globe.



#### United States (Washington, D.C.)

The Children's Inn at the National Institutes of Health in Washington, D.C. provides pediatric patients and their families with an environment where kids can be kids and where families can be together. Biogen volunteers decorated hundreds of sugar cookies and assembled "thoughtful treasure" goody bags with toys for children and families staying at the Inn.



## RESEARCH AND DEVELOPMENT: GOING AFTER THE HARD PROBLEMS Doug Williams, Ph.D.

- Dr. Donald R. Johns joined Biogen from Novartis Institutes for BioMedical Research as vice president to lead Biogen's amyotrophic lateral sclerosis (ALS) Innovation Hub (ALS iHub), a new unit established in 2014 dedicated to accelerating the discovery and development of novel therapies for ALS by integrating research with clinical development. Dr. Johns' experience as a clinician and researcher, his dedication to patients and his successful track record make him a perfect addition to help us in our efforts to bring critical therapies to ALS patients as quickly and efficiently as possible.
- Dr. Christopher Henderson joined Biogen as vice president, Neurology Research, and is advancing our work to identify and accelerate the development of new product candidates for treating neurological diseases. He previously worked for Columbia University where he co-founded the Center for Motor Neuron Biology and Disease and the Columbia Stem Cell Initiative.
- Dr. Richard Ransohoff joined Biogen as senior research fellow, Neuroimmunology, and will work closely with Dr. Henderson. Dr. Ransohoff comes to Biogen from the Cleveland Clinic, where he served as director of the Neuroinflammation Research Center in the Department of Neurosciences of the Lerner Research Institute; professor of Molecular Medicine at the Lerner College of Medicine at Case Western Reserve University; and staff neurologist at the Mellen Center for Multiple Sclerosis Treatment and Research.
- Dr. Rick Rudick joined Biogen to lead our new Value-Based Medicine (VBM) Group. Learn more about Dr. Rudick and VBM on Page 31.

### COLLABORATING FOR SUCCESS



*Goal: Actively engage in at least one collaborative research initiative with a leading academic institution on an ongoing basis, year over year. In 2014, we were engaged in seven active academic collaborations (see description on following pages).*

While deepening our own bench is critical, we also recognize that the challenges of taking on unmet medical needs are bigger than any one company. Making an impact and finding the next big breakthrough requires innovative collaboration between research institutions, the public and private sectors and across industries.

Our partnerships with other research leaders such as AbbVie, Eisai, Biofocus, Isis Pharmaceuticals, Sangamo BioSciences and Swedish Orphan Biovitrum AB are helping produce advances in treatment and expand our footprint to help more patients around the globe.

One of the principles that I think sets Biogen apart from many others in our industry is the way we partner with academia. Not only do we provide funding to leading research institutions, as many companies do, but our researchers

## RESEARCH AND DEVELOPMENT: GOING AFTER THE HARD PROBLEMS

Doug Williams, Ph.D.

work hand in hand with theirs to further understand the underlying causes and potential treatments for complex diseases. This unique approach helps ensure a diversity of ideas, perspectives and, ultimately, data, to tackle challenges that a single institution might not be able

**“With new, innovative approaches like these, we believe the path forward is promising for improving the lives of patients with unmet medical needs.”**

to solve on its own. We have set a goal to have at least one of these collaborations active on an ongoing basis, year over year. These collaborations are funded, in part, by Biogen’s R&D innovation fund, which in 2014 invested \$20 million from our R&D budget.

At its core, R&D is an information-driven capability. Along with our investments in talent, we’ve worked to reshape our information technology (IT) organization to play a more central role in our core business. In particular, newly established global data and digital health technology groups are helping us to gather more robust data sets to drive new treatment and clinical development insights. My colleague, and Biogen’s new Executive Vice President and Chief Information Officer, Andi Karaboutis, offers further insight on this exciting new approach in a following section.

Looking at information technology in new ways has opened the door to opportunities with seemingly unlikely partners. Through an innovative collaboration with Google [X] Life Sciences, we are pioneering the use of novel technologies

and methods, such as sensor platforms and bi-analytical tools, to better characterize the symptoms of MS and to track and measure, in real time, factors that may influence disease severity in different patients. This is something we have not been able to achieve in the past.

With new, innovative approaches like these, we believe the path forward is promising for improving the lives of patients with unmet medical needs. ☺

**Denmark**

In Hillerød, Biogen hosted the area’s Annual Volunteer Meeting, where more than 80 people discussed volunteering efforts in the local community. Part of the time donated by Biogen was spent with Helping Mothers, an organization that supports vulnerable pregnant mothers and families by providing counseling on different program initiatives. Biogen also helped out at the Red Cross Shop by cleaning, decorating and sorting sales items.



## COLLABORATING FOR SUCCESS

While our own research teams are making significant scientific advancements in-house, we recognize that no one has a monopoly on innovation. We value the insights and expertise of other companies and academic institutions and believe that they are necessary to complement our internal expertise. At our core, we know that by bringing together many different disciplines to tackle complex challenges we have the potential to advance medicine more rapidly and effectively.

Collaborations between Biogen scientists and academic researchers are critical to maintaining a vibrant research and development program, and we continuously work to establish new partnerships and consortia.

### Industry Collaborations

Collaborative relationships allow us to leverage complementary skills, technologies and areas of expertise. Through these relationships, we accelerate and enhance how we discover, develop and deliver our therapies to patients. In many instances we have collaborated on multiple projects with partners, often over many years, as we work to sustain collaborations that are successful and mutually beneficial.

**AbbVie Biotherapeutics** – We have continued our partnership with AbbVie to advance new therapies for relapsing-remitting MS. In June 2014, we jointly announced positive top-line results from our Phase III DECIDE clinical trial, where daclizumab high yield process (DAC HYP) demonstrated superiority over interferon beta-1a in reducing patients' relapse rates.

**Amicus Therapeutics** – To further our capability to produce orally-administered treatments, like we did with the launch of TECEP in 2013, we entered into an agreement with Amicus Therapeutics to use their research platform and expertise in discovering and developing small molecule drugs to reduce alpha-synuclein accumulation, a hallmark of Parkinson's disease pathology.

*We value the insights and expertise of other companies and academic institutions and believe that they are necessary to complement our internal expertise.*

**BioFocus** – To advance our immunology efforts, we signed a three-year collaboration agreement with BioFocus, a subsidiary of Galapagos NV, to identify and validate novel targets in scleroderma, an autoimmune disease that causes hardening of the skin and that can also impact organs.

**Eisai** – In early 2014, we entered into an agreement with Eisai, Inc., to jointly develop and commercialize two of their candidates for Alzheimer's disease, which have the potential to reduce A $\beta$  plaques that form in the brains of patients, as well as to slow the formation of new plaques, potentially improving symptoms and suppressing disease progression.

**Isis Pharmaceuticals** – In 2013, we expanded our relationship with Isis Pharmaceuticals to leverage antisense technology in advancing the treatment of neurological diseases, including myotonic dystrophy type 1 (the most common form of muscular dystrophy in adults) and spinal muscular atrophy (SMA) in children. In 2014, one of our SMA drug candidates moved into Phase III trials.

## COLLABORATING FOR SUCCESS

**Quintiles** – In 2014, we launched a multiyear collaboration with Quintiles, a provider of biopharmaceutical development and commercial outsourcing services, to increase the efficiency of our clinical trials. Quintiles will work with Biogen on the design, planning and execution of our Phase II-IV studies as well as select Phase I studies. Biogen will leverage Quintiles' technology and systems across our growing portfolio.

**Samsung Bioepis** – Since 2012 Samsung Biologics and Biogen have collaborated through Samsung Bioepis Co., Ltd., a joint venture to develop, manufacture and market biosimilars. The strategic collaboration between the two companies has enabled Samsung Bioepis to build the capabilities needed to develop high-quality biosimilars.

### A Donation to Transform the Model of Hemophilia Care

It is our goal to improve the standard of care for people with hemophilia worldwide. To help achieve this, Biogen, Swedish Orphan Biovitrum (Sobi), and the World Federation of Hemophilia are working to transform the humanitarian aid model for people with hemophilia in the developing world. In 2014, Biogen and Sobi announced their intent to produce one billion international units (IU) of clotting factor therapy for humanitarian use. This donation is designed to help enable a predictable, sustained humanitarian supply of factor therapy with a goal to improve the quality of care and outcomes for people with hemophilia living in developing countries.

At the end of 2013, Biogen announced that it had entered into an agreement with Samsung Bioepis to commercialize anti-TNF biosimilar product candidates in Europe, including biosimilars for widely used therapies to treat conditions such as rheumatoid arthritis, psoriasis and Crohn's disease.

**“We are delighted to collaborate with Biogen to expand our hemophilia gene therapy program also to hemophilia A and to advance both programs towards clinical testing, always keeping in mind the safety and benefit of the patients.”**

– Luigi Naldini, director, TIGET

**Sangamo BioSciences** – Biogen is exploring gene-editing therapies for serious, inherited hematological diseases through its collaboration with Sangamo BioSciences. The agreement enables Biogen to enhance our expertise in non-malignant hematology by leveraging Sangamo's proprietary genome-editing technology platform to develop treatments targeting sickle cell disease (SCD) and beta-thalassemia.

**Telethon Institute for Gene Therapy (TIGET)** – In early 2015, Biogen entered into a global collaboration with TIGET to jointly develop gene therapies for the treatment of hemophilia A and B. The partnership aims to leverage TIGET's advanced lentiviral gene transfer technology, an approach that could one day lead to a single-dose, lasting therapy for people with hemophilia.

## COLLABORATING FOR SUCCESS

### Academic Collaborations

Collaborations between Biogen scientists and academic researchers are critical to maintaining a vibrant research and development program, and we continuously work to establish new relationships and consortia.

**Columbia University** – Biogen and Columbia University Medical Center have formed a \$30 million strategic alliance to conduct genetics discovery research on the underlying causes of disease and to identify new treatment approaches. As part of this strategic alliance, a sequencing and analysis facility and shared doctoral program will be established at Columbia to support collaborative genetics studies. This multiyear collaboration enables Biogen and Columbia to investigate the genomes of patients showing unusual treatment responses or unique disease presentations and to explore the connections among genes, pathways and disease processes.

**Massachusetts Institute of Technology/Whitehead Institute for Biomedical Research** – We are working in close collaboration with Whitehead researchers to pioneer novel ways to improve human health through basic biomedical research in the areas of immunology, neurology, developmental biology, genetics and genomics. We plan to execute four to five three-year projects starting with epigenetics and immunology.

**Harvard Medical School/Rubin Laboratory** – We are working with Harvard researchers on exciting early-stage projects. These include mapping human protein interactions to yield new insights, pathways and targets

### New ALS Gene Identified

In collaboration with Columbia University Medical Center and Hudson Alpha Institute for Biotechnology, we have identified a new gene that is associated with sporadic ALS. Our findings were published in *Science* in February 2015. The gene, TBK1, plays a key role at the intersection of two cellular pathways, inflammation and autophagy, that previously have been implicated in the disease.

This publication is an important achievement for Biogen, and the discovery is another step forward for the ALS community in better understanding this disease. This is the type of finding we intended when we launched this collaboration less than three years ago, and since that time we have screened the largest number of ALS patients in a single study.

The speed with which we achieved this result speaks to the power of our approach to focused collaborations with true pioneers in the academic community.

## COLLABORATING FOR SUCCESS

for a wide range of diseases; modeling system genetics to identify new pathways for Parkinson's disease; and investigating methods of action for spinal muscular atrophy (SMA), ALS and Parkinson's disease in conjunction with the Rubin Laboratory.

**ALS Consortium** – Biogen and several leading academic research centers have formed a consortium dedicated to identifying new approaches to treating ALS. The consortium includes representatives from Yale University, Harvard University, Columbia University and The Rockefeller University.

**Duke University/Hudson Alpha Institute for Biotechnology** – In coordination with the ALS Consortium, we worked with Duke University and Hudson Alpha Institute for Biotechnology, two premier research institutions, to sequence the genomes of nearly 3,000 patients with ALS. This project, which screened the largest number of ALS patients in a single study, identified a new gene associated with ALS (see Page 23).

**Lawrence Berkeley National Lab/University of Connecticut Health Center** – Biogen, the Berkeley Lab and UCONN Health Center are investigating RNA binding protein sequencing to identify essential functional modules between ribonucleoprotein complexes (RBPs) and RNA. We are using this data to explore interactions relevant to neurodegeneration and, we hope, determine its potential cause.

### BIOGEN ACQUIRES CONVERGENCE PHARMACEUTICALS



*In early 2015, Biogen acquired U.K.-based Convergence Pharmaceuticals, a clinical stage biopharmaceutical company with a focus on developing treatments for neuropathic pain.*

*Biogen intends to leverage Convergence's expertise in chronic pain research and clinical development to advance new therapies for neuropathic pain. Convergence's lead candidate, CNV1014802, which is in Phase II development, has demonstrated proof of concept for treating pain associated with lumbosacral radiculopathy, more commonly known as sciatica, and has potential applicability in several other neuropathic pain states.*

## COLLABORATING FOR SUCCESS

**Scleroderma Consortium** – Biogen's immunology group created this consortium to investigate the underlying pathogenesis of scleroderma. Investigators from Tufts University, Yale University, University of Pennsylvania, University of Utrecht and the University of Glasgow – all representing different fields of immunology – will coordinate their research activities and collaborate with Biogen scientists to identify new targets with potential for therapeutic intervention.

**University of Edinburgh** – In 2013, Biogen and University of Edinburgh agreed to a three-year collaboration to study MS and motor neuron disease, then identify drug compounds that could potentially be used as treatments.



[Letter from Leadership](#)

[About Biogen](#)

[Citizenship  
& Sustainability](#)

[Improving Lives](#)

[Rethinking Resources](#)

[Acting Responsibly](#)

[About This Report](#)

[GRI G4 Index](#)



## Technology & Business Solutions: Beyond the Traditional IT Team

Adriana Karaboutis

*Executive Vice President, Technology and Business Solutions*

***When I was approached*** about moving from my role as Dell's Chief Information Officer to run Technology and Business Solutions for Biogen, one piece of the company's strategy in particular helped convince me to make the leap: Technology innovation is at the core of our long-term growth strategy.

For many companies, IT is primarily an operational support function. At Biogen we are taking IT to another level to drive real business solutions and advance the way computer technology is applied in the biopharma industry. Traditionally, the pharmaceutical industry is very good at accumulating data. What we are looking to do at Biogen is not only find more sources of information, but better connect the dots between that data to reveal correlations that have the potential to help with faster drug discovery, better design of clinical trials and improved outcomes for patients.

***“Through powerful search capabilities and integrated perspectives, we’re able to discover and expose trends and insights that help Biogen scientists get to a better result faster.”***

In 2014, we reorganized our approach to using information to better capitalize on that potential, creating three interconnected global teams.

- Recognizing that data is a core asset of our company, our new global data function is charged with mining that information to enhance our approach to developing groundbreaking therapeutic advances. Through powerful search capabilities and integrated perspectives,

## TECHNOLOGY & BUSINESS SOLUTIONS: BEYOND THE TRADITIONAL IT TEAM

Adriana Karaboutis

we're able to discover and expose trends and insights that help Biogen scientists get to a better result faster. Moving forward, we believe this will elevate our ability to identify disease targets, design better clinical trials and understand how patients are faring on our therapies.

- Our digital health and technology team is seeking ways to put cutting edge devices in the hands of patients and care providers to both improve therapy delivery and to monitor and track patient response. Whether through wearables or more personalized medicine solutions, our aim is to transform the delivery of clinical care

and research through the collection of real-world data from which to glean new insights to both help individual patients and advance toward new discoveries.

- The chief information office, which oversees the more traditional aspects of IT, is charged with managing and maintaining the advanced technologies and systems that enable our researchers and their supporting teams to think and innovate. And, we're doing it in a way that helps support Biogen's ambitious environmental goals. Initiatives such as an increased Cloud presence and right-sizing global server capacity save energy and reduce carbon emissions.

At Biogen, Technology and Business Solutions sits squarely at the cross-section of R&D and Patient Health Outcomes. With the pace of digital innovation continuing to accelerate, our technology team's ability to adapt, learn and grow is mission-critical for supporting new advances in human health. 



### United States (Massachusetts)

Beautifying the front entrance, building planters and benches, dressing up a once dreary sidewalk and painting a mural – these were some of the many projects Biogen volunteers completed for The Everett Boys and Girls Club. The upgrade pays tribute to an organization that works daily to address significant community needs. These needs include school time opportunities, extracurricular sports and a place where teens receive genuine support and guidance from their peers and adults.



## PRODUCT PIPELINE

### Innovation in Our Pipeline

Cutting-edge science can change the course of devastating diseases. Patients worldwide benefit every day from our industry-leading MS products and our new treatments for hemophilia. Through our strong product pipeline, we are also working hard to bring new therapies to market for patients with MS, Alzheimer's disease and other areas of high unmet need.

Below is a summary of the therapies in our pipeline. For more details see the [Research & Pipeline](#) section of our website.

#### Phase III Trial

*Daclizumab High-Yield Process (DAC HYP) – For relapsing-remitting multiple sclerosis. Developed in collaboration with AbbVie Biotherapeutics.*

*ISIS-SMNrx – For spinal muscular atrophy. Developed in collaboration with Isis Pharmaceuticals.*

*Natalizumab – For secondary progressive multiple sclerosis.*

*Obinutuzumab (GA101) – For diffuse large B-cell lymphoma (DLBCL) and indolent non-Hodgkin's lymphoma, front-line and refractory. Currently approved as GAZYVA for chronic lymphocytic leukemia (CLL). We collaborate on obinutuzumab in the United States with Genentech, Inc., a wholly-owned member of the Roche Group. The Roche Group and its sub-licensees maintain sole responsibility for the development, manufacturing and commercialization of obinutuzumab.*

### Early- and Mid-stage Product Candidates

*Aducanumab (BIIB037) – For Alzheimer's disease.*

*Anti-BDCA2 – For systemic lupus erythematosus.*

*Anti-CD40 Ligand – For systemic lupus erythematosus. Developed in collaboration with UCB, Inc.*

*Anti-LINGO-1 (BIIB033) – For multiple sclerosis.*

*Anti-TWEAK – For lupus nephritis.*

*BAN2401 (Humanized anti-amyloid beta mab) – For Alzheimer's disease. Developed in collaboration with Eisai Co., Ltd.*

*BIIB061 (Oral re-myelination) – For multiple sclerosis.*

*CNV1014802 – For Trigeminal Neuralgia. Acquired in acquisition of Convergence Pharmaceuticals.*

*E2609 (BACE1 Inhibitor) – For Alzheimer's disease. Developed in collaboration with Eisai Co., Ltd.*

*ISIS-DMPKRX – For myotonic dystrophy, type 1. Developed in collaboration with Isis Pharmaceuticals.*

*Natalizumab – For Acute Ischemic Stroke.*

*Neublastin (BG00010) – For neuropathic pain.*

*STX-100 – For idiopathic pulmonary fibrosis.*

[Letter from Leadership](#)

[About Biogen](#)

[Citizenship  
& Sustainability](#)

[Improving Lives](#)

[Rethinking Resources](#)

[Acting Responsibly](#)

[About This Report](#)

[GRI G4 Index](#)



## A Single Mission: Improving Patient Health

◀ **Tony Kingsley**

*Executive Vice President, Global Commercial Operations*

***Everything we do*** at Biogen boils down to one common goal: to improve the lives of patients. That is the very essence of our company. And we come at that challenge from many different avenues.

At the most basic level, the clinical effectiveness of our therapies is paramount to our success and to the health outcomes patients can expect to achieve. In our industry, this has traditionally been the domain of the R&D organization. But since coming to Biogen in 2010, I have seen and aided in a paradigm shift toward more fully integrating other functions into the drug development process, including IT, market access and patient advocacy group engagement. This more holistic approach gives us important information that we use to design better clinical trials and helps ensure that when our therapies receive regulatory approval, they are made available to as many patients as possible as a first-line reimbursable treatment.

### Serving the “Whole” Patient

As core as clinical effectiveness is to our mission, it is essential that we look well beyond just the patient’s condition and that we see the whole person. That’s why we have put so much emphasis on building world-class Patient Services and why we’re developing programs and apps that are designed to help patients lead better lives.

When a patient is prescribed one of our therapies, they can benefit from Patient Services programs where available, which facilitates patients getting started on treatments and complying with drug regimens so they have better overall outcomes. We help them navigate the informational, emotional and logistical considerations that accompany living with a chronic disease.

## A SINGLE MISSION: IMPROVING PATIENT HEALTH

Tony Kingsley

Where local regulations permit, we seek to ensure that every patient who is prescribed a Biogen therapy avails themselves of our Patient Services process. In the United States, where we're able to uniformly measure this, we have set a goal to increase the percentage of patients who go through the process year over year. While it may not be possible to hit that 100 percent mark, we want to get as close as possible.

### **Onboarding for Better Outcomes**

**Goal:** For each patient who is prescribed a Biogen product, we work to ensure that as many as possible go through our Patient Services program.

*Percentage of U.S. MS patients going through the Biogen Patient Services program:*

| 2013  | 2014  |
|-------|-------|
| 63.5% | 80.5% |

For any therapy to perform at its full potential, patients must comply with their treatment regimen. While that may sound simplistic, it can be a real issue – one that our onboarding process addresses. For example, several of our products are self-administered by injection, and the patient needs to know how and when to do that and overcome reservations they might have about injecting themselves. We offer training through a 24-hour toll-free number, as well as an email alert service so that patients know when to dose. Medications may also have unpleasant side effects, especially at the onset of treatment.

We invest a significant amount of resources in helping patients anticipate, understand, track and manage side effects so that they remain compliant with their regimen and have a better health experience.

The sooner a patient starts on a therapy, the more likely they are to have better outcomes. This is especially true for progressive diseases like MS. Through a variety of consultative activities, our Patient Services group helps shorten the time before they can start experiencing the potential benefits of the therapy.

### **State of MS Report**

*As part of Biogen's relentless commitment to improve the lives of patients – an effort that extends well beyond medication – we commissioned a landmark study in 2014 in conjunction with The State of MS Consortium, an international steering committee. The study focused on a key aspect of MS care: communication between patients and their doctors. Conducted online by Harris Poll, the [State of MS Report](#) revealed that, despite the generally positive assessment of current practice in MS, certain aspects of communication between doctors and patients could be better. Our hope is that this new data will prompt crucial discussion about how physicians and patients speak together about symptoms – especially hidden ones – which can help neurologists know if they're helping change patients' lives for the better.*

## A SINGLE MISSION: IMPROVING PATIENT HEALTH

Tony Kingsley

### Taking a Value-Based Approach

One of the most important developments in 2014 was the launch of our Value-Based Medicine (VBM) Group, which seeks to enhance individualized treatment outcomes through emerging technology, clinical innovation and continuous learning for the benefit of the entire MS community. The goal of VBM is to capitalize on new and emerging technology to collect and better synthesize information to improve our knowledge of the impacts of the disease and therapy.

We are fortunate to have welcomed Dr. Rick Rudick aboard to lead this team. Dr. Rudick comes to Biogen from the Cleveland Clinic where he served as director of the Mellen Center for Multiple Sclerosis Treatment and Research for nearly 30 years. He has been a valued partner of the company for more than two decades and played key roles in our clinical trials for AVONEX and TYSABRI. His vision, expertise and passion bolsters our efforts to create real-world, practical solutions to empower better decision-making and improve the way people live with MS. Under Dr. Rudick's leadership we aim to help physicians and patients make more evidence-based, individualized treatment decisions with the goal of improving MS care.

### Applying Technology in New Ways

We learn so much from the patients we serve – and we are using these insights to develop and deliver innovative services that complement our therapies and help patients live their lives to the fullest. To this end we introduced several new technology-based tools in 2014.

The MySidekick™ smart device app was launched in November 2014 and allows patients and their caregivers to easily record mood, energy level, activities and sensations

as often as they like. This helps patients track their health and better prepare for conversations with their doctors. The initial response to this free tool has been very positive, exceeding targets for number of downloads and garnering a high rate of return users.

The Micro8 tool for patients with hemophilia and their caregivers was developed in partnership with MicroHealth, an innovative digital community exclusively for people with hemophilia. Micro8 helps connect patients, clinicians, caregivers, families and friends – even the rest of the hemophilia community – to share relevant information. Micro8 provides several options for tracking infusions and patient progress via text, online and mobile.

### MS Visionaries

In 2014, Biogen launched the MS Visionaries program, an initiative designed to highlight outstanding individuals who have developed programs, tools or services to benefit the MS community. Profiles of these innovators were featured on Yahoo Health, a digital magazine covering modern health and wellness topics. Over the course of a month, Yahoo Health featured weekly stories of MS Visionaries as well as inspiring personal accounts of people living with relapsing forms of MS who have been treated with a Biogen therapy.

## A SINGLE MISSION: IMPROVING PATIENT HEALTH

Tony Kingsley

We also conducted a joint study in 2014 with industry partner, PatientsLikeMe, to assess the feasibility of using a consumer wearable device to monitor activity among people with MS in a real-world setting. Results from the study established a potential framework for the rapid and effective deployment of activity tracking devices to MS

*“Through the passion of our people and the data and tools that we are putting in their hands, Biogen is helping to redefine the art of the possible in meeting unmet medical needs.”*

patients and subsequent data collection. If an individual chooses to share logs with their care team, then doctors or nurses can use this information to support clinical decisions.

I am personally very excited and encouraged by the strides we've made in 2014 in paving the way for better health outcomes for patients. What's more is that this is just the tip of the iceberg. Through the passion of our people and the data and tools that we are putting in their hands, Biogen is helping to redefine the art of the possible in meeting unmet medical needs. 

### HACK MS



In February 2015, Biogen hosted its first MS Hackathon with the external technology community. The challenge for Hack MS was to develop potential solutions for people living with MS to manage stress. Twenty-two teams undertook the challenge over a 48-hour period. First, second and third place prizes were awarded, ranging from \$5,000 to \$20,000, to help winners kick-start their ideas. Biogen will use insights gleaned from the winners and all the presenting teams to further refine and innovate programs that serve the MS community.

## ADVOCACY ORGANIZATIONS ENGAGEMENT

A key component of our mission to improve the lives of patients is engaging with patient advocacy organizations, which provide a critical link to real-world patient experiences. Armed with a deep understanding of what it is like to live with chronic conditions such as MS, hemophilia or one of the conditions currently under research by Biogen scientists, patient advocacy organizations help us better understand unmet patient needs, shape our discovery and development programs and enhance our treatments and patient experiences.

*We have formed collaborations with organizations in every country where we operate and help them advance their own missions through sponsorship and support for a wide range of initiatives.*

Biogen has a strong history of working with patient organizations to amplify the patient's voice and support equitable access to treatment. We have formed collaborations with organizations in every country where we operate and help them advance their own missions through sponsorship and support for a wide range of initiatives. These have included core funding, disease awareness programs, fundraising and support for organizational development.

In 2014, Biogen commissioned a third-party research firm to survey key MS advocacy groups in the United States to help us assess our advocacy relations efforts. The survey provided rich insights into how our company and our programs are perceived by the MS community and whether they appropriately address the needs of patients.

We are leveraging these findings to enhance our disease awareness initiatives, expand support of patient education to underserved populations and infuse a stronger community focus into our MS programs. In 2015, we will complete a similar survey in Europe.

In addition to the following examples of our work to improve outcomes for people living with MS and people living with hemophilia, Biogen also works to support those facing many diseases of high unmet need as represented by our pipeline therapeutic areas of interest (e.g. Alzheimer's disease, ALS and Spinal Muscular Atrophy). Through engagements with patient advocacy organizations early in our development process, we work collaboratively to define clinically meaningful endpoints, capture important data across the natural history of disease and share information about our



### United States (North Carolina)

Biogen and Habitat for Humanity both strive to achieve the vision of making a positive difference in the lives of others. Our volunteers partnered with Habitat in North Carolina erecting frames, roofing, painting and landscaping to help build homes that benefit local families in need.



## ADVOCACY ORGANIZATIONS ENGAGEMENT

clinical programs. All of these initiatives support the overall goal of working together to develop treatments that are meaningful to patients.

For additional information on how we collaborate with advocacy organizations, please also see Public Policy Support on Page 68 and Access to Treatment on Page 62.

### **MS Awareness Week – Raising Public Awareness**

Biogen employees in the United States celebrated MS Awareness Week 2014 with a variety of activities, including live educational programs, community events and fundraising campaigns to support key patient advocacy organizations. To kick off the week, Biogen sponsored the National MS Society's Taking Steps Initiative—Climb to the Top event in New York and other cities, including Boston. During the New York event, more than 1,500 participants climbed 66 flights to the top of Rockefeller Center to raise awareness and funds for the nonprofit's crucial work in the community. We also supported a series of live patient education programs hosted by the MS Foundation in Savannah, Ga., Dallas, Texas and San Diego, Calif.

### **Multiple Sclerosis Association of America Hispanic Outreach Program – Reaching an Underserved Community**

For non-English speakers living with MS in the United States, obtaining accurate information and counsel for managing MS can be a challenge. Recognizing the need to support MS education for underserved populations, Biogen has provided support to the Multiple Sclerosis Association of America for a new Hispanic Outreach Program. Through 14 Spanish-language patient education programs in Spanish-speaking communities throughout the United States, the program aims to provide participants

with updates in their native language on emerging therapies and strategies for MS symptom management to help them make more informed decisions about their treatment.

### **Multiple Sclerosis International Federation (MSIF) – Helping to Build Advocacy Capacity and Community Awareness Internationally**

Biogen has enjoyed a strong relationship with MSIF for years, and we've broadened our partnership to enhance our impact in the MS community on a global scale. We provide financial support to key MSIF initiatives like the Atlas of MS Database – the only up-to-date online source of information on the worldwide epidemiology of MS and the global accessibility of resources for people with MS – and a new MSIF capacity building program aimed at supporting and strengthening local patient advocacy organizations in Latin America and the Middle East.

**Biogen recognizes the need to support MS education for underserved populations.**

Biogen has participated in MSIF's global "World MS Day" campaign since its inception in 2009. In 2014, we donated space on our website to promote the day, and our affiliates undertook a wide range of activities to raise awareness about MS worldwide and support MS advocacy groups locally around the world.

### **MS Underserved Populations Initiative (MS-UP)**

Biogen is committed to finding ways – through support of research, educational resources and patient advocacy organizations – to address health problems in ethnically diverse communities. As part of our vision and commitment

## ADVOCACY ORGANIZATIONS ENGAGEMENT

### Oceans of Hope – Educating and Empowering the MS Community

In 2014, Biogen signed on as principal sponsor and official partner of the Sailing Sclerosis Foundation's (SSF) [Oceans of Hope](#) project. This multiyear, global campaign is designed to use sailing as a means to educate and empower the MS community, changing perceptions of what it means to live with the disease and demonstrating the benefits of an active lifestyle.

The Oceans of Hope project was pioneered by Dr. Mikkel Anthonisen, Founder of SSF and a MS specialist at Copenhagen University Hospital, Rigshospitalet. Starting in June, Dr. Anthonisen and several other crew members began stopping in multiple harbors in Europe, North America, South America and Australia to build strong bonds with the global MS community. Each port day was celebrated with an interactive event, giving people living with MS the opportunity to learn to sail and participate as crew.



to bring innovative solutions to the MS patients and communities we serve, MS-UP's cross-functional team was formed to help improve outcomes among the racial and ethnic minority populations in the United States. We aim to achieve this through data generation and external education in partnership with a steering committee representing top experts in the field, as well as collaborations with advocacy organizations already working in the areas of MS and minority health.

#### European Multiple Sclerosis Platform (EMSP)

The EMSP is the umbrella organization for 39 MS societies from 34 European countries representing more than 700,000 persons with MS. Biogen has supported the EMSP for many years and collaborates on various projects and initiatives to support the European MS community. Key projects include:

- The European Register for Multiple Sclerosis Project (EUReMS): Aimed at addressing the lack of data on treatment and care for people with MS, the EUReMS project has developed a groundbreaking tool for accessing, comparing and enhancing the status of people living with MS throughout the European Union. After more than four years of data collection from MS registries across Europe, the EMSP presented the first results of the EUReMS research studies at the ACTRIMS-ECTRIMS Meeting in September 2014 and released a comprehensive report to the public in October 2014. The data collected and analyzed through this pioneering initiative can be leveraged to address inequalities in accessing treatment, care and employment across European markets.

## ADVOCACY ORGANIZATIONS ENGAGEMENT

- Believe & Achieve: In 2014, we joined the EMSP's Believe & Achieve program, an initiative designed to help young people with MS gain access to employment and professional development opportunities. As part of the program, we launched our MS in the Workplace Internship Program and accepted our first intern in our Italy affiliate in early 2015. For six to 12 months, participants in the paid internship program will gain career experience and attend training sessions to develop their transferable skills and employability. We are piloting the program in the United Kingdom and Belgium as well, and, if successful, it will be rolled out across Europe.
- MS Nurse Professional: A modular, online training curriculum to support the evolving role, competencies and leadership of European MS Nurses.

*Other examples of support for MS patient advocacy organizations around the globe include:*

**Biogen Australia – Raising Funds and Awareness**  
Biogen Australia participated in MS Walk and MS Gong Ride events in 2014 to raise awareness and to help raise funds for people living with MS. We also participated in the ALS ice bucket challenge and raised over \$7,000.

**Biogen BeLux (Belgium and Luxembourg) – World MS Day in Focus**  
Biogen BeLux employees cleared their agenda on May 28, 2014 – World MS Day – to spend the entire day with MS patients and their families at the animal park Paira Daiza, the location of an MS awareness event that was organized by the local MS patient associations.

### **Biogen Germany – Supporting Patient Activities**

Biogen Germany collaborates with several different chapters of the German MS Society (DMSG) to support patient events, patient journals and other activities such as World MS Day via sponsorships and advertising.

### **Biogen Italy – Empowering People Living with MS**

Biogen Italy supported the National Observatory on Women Health (Onda) with an unconditioned grant to ideate and run an Italian MS awareness campaign. The campaign addressed the difficulties of a life with MS and focused on evidence that dreams don't stop for MS, because patients keep looking at their future with strength and positivity.



Norway

The Church City Mission in Oslo runs the Bekkelagshjemmet retirement home. A group of Biogen volunteers spent the day painting the garden pavilion and one of the home's living rooms to provide a change in scenery for the residents. Another group of Biogen volunteers visited a center run by the Blue Cross for drug addicted people to help serve food, participate in motivating conversations and assist with checking identification cards for entry into the facility.



## ADVOCACY ORGANIZATIONS ENGAGEMENT

### **Biogen Poland – Collaboration to Improve Access**

In 2014, Biogen Poland supported the creation of the report “Socio-economic consequences of multiple sclerosis in Poland”. It was a joint initiative of the Lazarski University and patient advocacy group, Urszula Jaworska’s Foundation. The goal of the report was to collect data from public institutions financing diagnosis, treatment and care about MS patients and costs of lost productivity to society.

### **Biogen Portugal – Literary Prize in MS to Raise Awareness**

Biogen Portugal partnered with the Portuguese MS Patient Association (SPEM) on a project called “Literary Prize in MS”. Over the year, SPEM made presentations about MS at schools throughout the country and challenged students from fifth and sixth grades to write stories or poems about the topic.

With the support of the Ministry of Education and National Institute for Rehabilitation, this project raised awareness about MS and how it affects society.

### **Biogen Sweden – Patient Power and MS Disease Awareness**

Biogen Sweden has collaborated with the Swedish patient organization, Neuro Sweden, for several years. The collaboration in 2014 included a seminar for healthcare policymakers and decision-makers about new treatment guidelines being developed for MS, as well as an online educational program to support, educate and empower people living with MS.



### **United States (Massachusetts)**

Biogen supported The Dimock Center, which works to benefit Boston's inner city neighborhoods of Roxbury, Dorchester and Jamaica Plain. The center provides vital services to over 40,000 families annually within the Boston community. Biogen upgraded the center by painting and planting new garden beds.



### **Biogen Switzerland – Every Step Counts!**

Biogen Switzerland supports the work of the Swiss Multiple Sclerosis Society with its participation in two major events: World MS Day and msrun® at the Swiss City Marathon Lucerne, which is held every year as a mark of solidarity for people with MS and their families.

### **Biogen UK – Focus on Disease Awareness and Access**

Biogen UK has worked with the UK MS Society and the MS Trust for years to support efforts to improve patients' understanding of their disease and provide support, information and education, as well as improve access to appropriate treatments and services.

## ADVOCACY ORGANIZATIONS ENGAGEMENT

### European Federation of Neurological Associations (EFNA)

The EFNA is an umbrella group representing pan-European neurology patient organizations that work to empower patient neurology organizations and build their capacity.

- [The Book of Evidence on Brain, Mind, and Pain:](#)

Following a wide-reaching patient survey conducted with support from Biogen in 2014, EFNA published a book summarizing brain and chronic pain disorders, patients' experiences and best practices from a number of European countries on how to address patients' unmet needs.

- European Parliament Interest Group on Brain, Mind, and Pain: In 2014, Biogen, along with other corporate partners, provided support to EFNA and the Pain Alliance Europe to form an interest group on brain, mind and pain. The objective of the interest group is to raise political awareness of the impact of neurological and chronic pain disorders in Europe and encourage policy solutions aiming to encourage research, increase access to innovative treatment, improve quality of life and decrease stigma.

### The European Patients Forum (EPF)

The EPF is an umbrella organization working with patient organizations to advocate, support and empower them in their health policy objectives across Europe. EPF works to ensure equitable access to treatments and equal care for all. Members of the EPF represent a wide range of patients and therapy areas, allowing coordination and exchange of best practices at both European and national levels. Biogen has supported the EPF for a number of years and provided grants to support EPF's independent capacity building work.

### EURORDIS

EURORDIS (Rare Diseases Europe) is a nongovernmental alliance representing 678 rare disease patient organizations. It works to build a strong community of people living with a range of rare illnesses and advocates for their collective needs. These organizations represent 30 million patients who are affected by rare diseases across 63 countries within Europe.

Biogen has a long-standing relationship with EURORDIS on a number of projects. In 2014, Biogen supported the Rare Connect project, a tool for sharing information among people living with a rare disease. This is a noncommercial, online platform that patients can use to support one another across borders and languages, as well as accessing publications from medical experts and patient organizations.

***My Life, Our Future offers genetic testing, or genotyping, to people with hemophilia.***

### **My Life, Our Future – With Every Yes, Progress**

After a successful pilot program completed in early 2013, Biogen joined leaders in hemophilia advocacy and treatment to announce the national rollout of My Life, Our Future: Genotyping for Progress in Hemophilia, which offers genetic testing, or genotyping, to people with hemophilia in the United States. My Life, Our Future is a partnership with the National Hemophilia Foundation, American Thrombosis and Hemostasis Network and Bloodworks Northwest.

## ADVOCACY ORGANIZATIONS ENGAGEMENT

My Life, Our Future is halfway to its overall goal. Currently, more than 65 hemophilia treatment centers are participating in the program and more than 2,500 people have enrolled. Once 5,000 people contribute to the repository, scientists and researchers at academic institutions or companies will be able to apply to study the samples and data, potentially leading to improvements in treatment and care. To date, more than 80 percent of participants have contributed their samples to the repository.

### ***World Hemophilia Day – Shining a Light on the Hemophilia Community***

Every April, Biogen celebrates World Hemophilia Day to increase awareness of hemophilia and other inherited bleeding disorders. In 2014, our efforts included launching a public service announcement that aired on Boston's local television affiliates, raising awareness via a social media hemophilia campaign and registering dozens of Biogen participants for the New England Hemophilia Association's 2014 Hemophilia Walk.

In 2015, Biogen expanded its World Hemophilia Day awareness activities by collaborating with hemophilia advocacy groups to illuminate more than 15 prominent landmarks red throughout the United States, including Boston's Zakim Bridge and Prudential Tower, Chicago's Wrigley Building, New Orleans' Mercedes-Benz Superdome and Denver's Coors Field. The lightings coincided with hemophilia community events organized by Biogen with hemophilia chapter organizations. The events occurred in a dozen locations across the country, and recognized the day with educational and family-friendly activities.

### **SMA and Newborn Screening**

SMA is a hereditary, neurodegenerative disease that causes weakness and wasting of the voluntary muscles in infants and children. There are several types of SMA, with infantile-onset SMA being the leading cause of genetically related death in children under two years of age.

Biogen works with SMA patient advocacy groups and experts in the field of newborn screening to develop and validate tests that can be used to identify babies with SMA as soon as possible following birth. These tests are able to identify 95 percent of all babies genetically predisposed to developing SMA, including those with the infantile onset form of the condition, the most severe type. Timely identification of SMA through screening is especially important as we believe that the earlier treatment is started the greater benefit it may have.

We also are working to support the development and expansion of an SMA patient registry that is expected to further the healthcare, patient and research community's understanding of this disease. The registry should be a rich source of data that will help inform the research efforts of the entire biomedical community.

### **Alzheimer's Disease**

Based on extrapolations of [World Health Organization projections](#), by 2050 there will be about 70-80 million individuals worldwide living with Alzheimer's disease. The impact of this disease on individuals and families throughout the world is staggering. Biogen is currently working to advance several therapeutic options in this disease space. By supporting and participating in many global Alzheimer's disease organizations and coalitions, we ensure that progress on our clinical development programs are well communicated to the Alzheimer's community.

## ADVOCACY ORGANIZATIONS ENGAGEMENT

Notably, Biogen participates in the Alzheimer's Association Research Roundtable, a consortium of senior scientists from the pharmaceutical, biotechnology, diagnostics, imaging and cognitive testing industries, and senior staff and advisors from the Association. Our scientists and medical experts participate in the Roundtable to contribute to and benefit from the state-of-the-field scientific discourse, debate and information sharing in order to advance the field of Alzheimer's research and development.

*Our scientists and medical experts contribute to and benefit from the state-of-the-field scientific discourse, debate and information sharing in order to advance the field of Alzheimer's research.*

### ALS

Biogen, in partnership with the ALS Association, is currently funding ongoing natural history studies at several universities in order to further understand the most common genetic cause of ALS, in preparation for clinical trials in those whose disease is affected by the C9orf72 gene. Upon the successful completion of these studies, we will have carefully defined important elements of ALS due to the C9orf72 gene and established the clinical data and biomarkers needed to successfully plan a clinical trial for C9orf72 ALS patients.



## PATIENT SERVICES

Our commitment to improving patients' lives goes beyond the treatments we develop – we also work to support patients and their caregivers with a range of best-in-class services. For example, we've created a number of programs under the [Above MS™](#) umbrella to help people with MS understand and access the resources they may need along their journey with MS. This includes our programs focused on helping patients and their families understand their insurance coverage and ensure cost is not a barrier to treatment through our comprehensive financial assistance solutions. In 2014, Biogen provided nearly \$1 billion in financial assistance in the form of free drug, drug copay assistance, infusion assistance and charitable contributions.

For patients in the hemophilia community, we offer the [MyALPROLIX™](#) and [MyELOCTATE™](#) programs. Our aim is to provide comprehensive assistance programs to find the most cost effective means for the community to access ALPROLIX and ELOCTATE. We are offering a variety of assistance programs based on the needs of people with hemophilia and shaped by community input, including a copay program, financial counseling, as well as free drug and free trial programs.

We are committed to providing personalized assistance for each individual affected by hemophilia. Everyone who calls into MyALPROLIX or MyELOCTATE is partnered with a coordinator to provide one-on-one support to help tailor resources to meet patient needs. Additionally, everyone on the MyALPROLIX and MyELOCTATE teams has had the opportunity to meet face to face with hemophilia community members.



## PATIENT SAFETY AND TRANSPARENCY

### Patient Safety During Clinical Trials

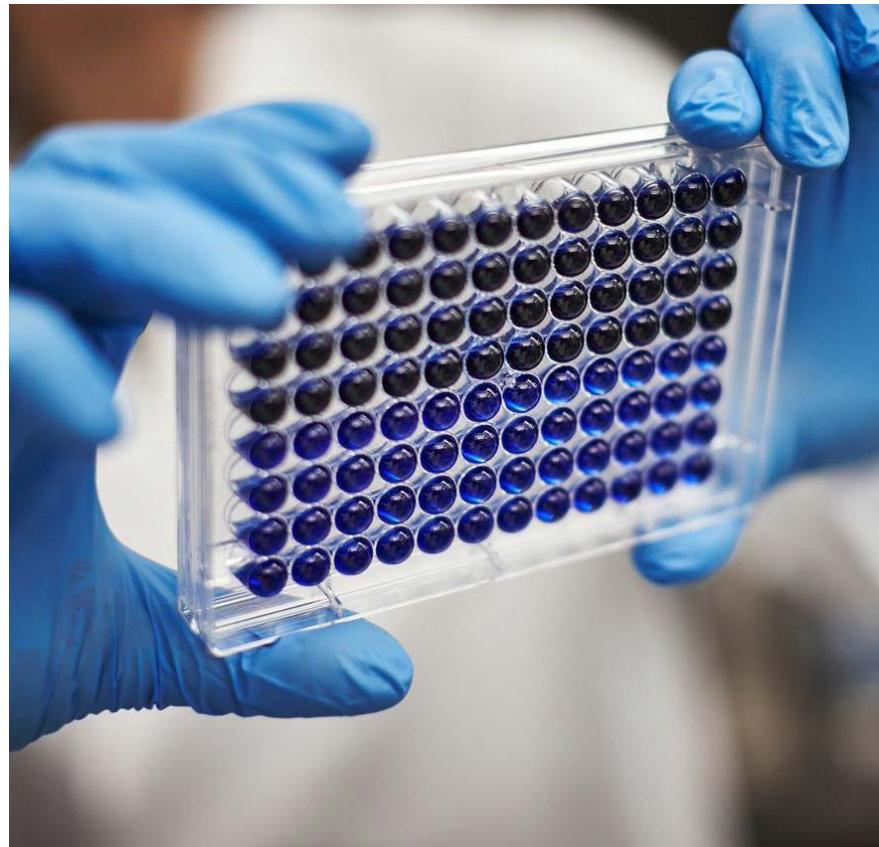
Clinical research is essential to the development of our therapies. It gives doctors and researchers valuable data on the benefits, side effects and possible applications of new drugs, as well as on potential new combinations, doses and indications.

*One of the highest priorities at Biogen is to protect the health and safety of the patients participating in our clinical trials and to help them understand the potential benefits and risks.*

In 2014, more than 22,000 patients in multiple countries participated in clinical trials sponsored by Biogen. Please see our website for more information on how we conduct [clinical trials](#).

### Patient Communications

For any patient facing a serious disease, the decision to seek treatment must be an informed one. Biogen is committed to openly communicating the benefits and risks of therapies to help healthcare professionals and patients make the best choices. In addition to strictly adhering to all laws and regulations regarding product labeling and communications materials, we also ensure that healthcare professionals have open access to information about our therapies. Please see our website for more information on [patient safety](#).



## COMMUNITY

### Improving Lives in Our Communities

At Biogen, we “Care Deeply” for those around us. We work not only to serve the best interests of our patients, but also to serve as model neighbors in the communities where we operate. This commitment is brought to life each day by our employees who passionately support causes that enhance community vitality around the world.

As a company focused on advancing life-changing science, we are committed to inspiring the next generation of innovators through effective STEM (science, technology, engineering, math) education programs that cultivate a healthy curiosity in young learners. Through these efforts, we empower students not only to consider exciting careers in science but also to contribute to society in innovative ways.

As a community-focused company, we are also committed to lending our neighbors a hand when they need it most. During natural disasters and emergency situations, we quickly mobilize support and deliver humanitarian aid to help communities rebuild and recover.

### Caring Deeply Around the World

For the fourth consecutive year, our global colleagues participated in Biogen’s Care Deeply Volunteer Day, which shattered last year’s record turnout with a 54-percent increase in employee participation. This worldwide project enables employees to participate in meaningful community service projects and has a beneficial impact in every location where Biogen operates around the world. More than 3,000 employees from 27 countries took part in more than 150 projects in 2014. Throughout this report we’ve showcased Care Deeply Day initiatives from around the world.

### Aiding the Fight Against Ebola

In March 2015, Biogen donated interferon beta-1a as part of a pilot study in Ebola virus-infected patients in Guinea, West Africa.

Interferon beta-1a, sold by Biogen under the trade name AVONEX, is a known antiviral that has shown to be effective against other viruses, such as hepatitis C. While it has never been studied in humans with Ebola, nonclinical data of the effect of the drug in Ebola-infected monkeys is available from a study at the National Institutes of Health in 2014.

The clinical trial protocol for testing interferon beta-1a in Ebola-infected patients was developed jointly by an independent research team and approved by Biogen’s Interferon Clinical Trial Review Committee.

Biogen secured interferon beta-1a pre-filled syringes, subcutaneous needles, half-dose devices and sharps containers, and put together customized directions for the handling, storage and administration of the drug in both English and French (the official language of Guinea).

One year after the largest outbreak of Ebola was first identified, a trial is underway to learn if interferon beta-1a has the potential to save the lives of those stricken with the deadly virus.

## COMMUNITY

### Biogen Foundation

The Biogen Foundation is focused on strengthening communities and enhancing STEM education through innovative, interactive hands-on programming. We believe that a solid foundation in STEM education opens doors to opportunity for all students, and we are committed to helping make high-quality STEM experiences accessible around the world.

In support of this vision, we continued to expand the global reach of our programs and engaged in new long-term initiatives to ensure our investments in STEM have a sustained impact. These efforts are engaging more young people in STEM disciplines, helping to build a pipeline of smart, enthusiastic scientists some of who may one day become Biogen employees. After a successful launch of our international grants program in 2013, we've continued to provide financial support to international organizations with a proven track record of supporting excellent science education programming. In 2014, the Foundation awarded \$7 million in grants worldwide, which includes \$800,000 in matching gifts through our Employee Matching Gifts program.

*These efforts are helping to build a pipeline of smart, enthusiastic scientists some of who may one day become Biogen employees.*

The programs we support are designed to improve opportunities and outcomes for students of all backgrounds and at all phases of their education,



### Spain

A team of Biogen volunteers spent time with MS patients visiting Parque Europa in Madrid. The park hosts replicas of some of the most important historic monuments found in major European cities. Our volunteers and patients spent time getting to know each other, and patients let their disease fade into the background.



allowing us to build a diverse pipeline of future scientists. We also support professional development for STEM educators to ensure they have the tools and resources necessary to inspire and teach future innovators and leaders.

### Notable STEM initiatives in 2014:

**Teach For America** – A \$5 million grant to [Teach For America](#), the largest grant awarded by the Biogen Foundation to date, will address disparities in STEM education and help fill STEM teaching positions in low-income neighborhoods. The grant will be spread over five years to support the nonprofit's recruiting, training and professional development opportunities for teachers who focus on STEM education. Students and teachers will also have opportunities to engage with Biogen employees at our Community Labs (see story on Page 45) throughout the year.

## COMMUNITY

**The World Biotech Tour** – With support from the Biogen Foundation, the [World Biotech Tour](#) (WBT) will travel to 12 leading science centers and museums worldwide for three-day science festivals focused on the theme of biotechnology. Formed in partnership with the Association of Science-Technology Centers, the WBT will run from 2015 to 2017 with the goal of engaging young people in science and technology through hands-on learning opportunities. Science centers participating in the WBT will provide a culturally unique visitor experience through several activities developed and hosted at each science center.

**Swiss Science Center Technorama** – With approximately 65,000 student visitors per year, the [Swiss Science Center Technorama](#) plays a vital role in encouraging interest and enthusiasm for science and technology at an early age. To further these efforts, the Biogen Foundation has committed to providing more than \$625,000 over the course of three years to support Technorama's hands-on learning lab, as well as the development of new workshops and training for teachers. This marks the Foundation's largest grant ever awarded outside of the United States.

**North Carolina Museum of Natural Sciences, Raleigh, N.C.** – Through support from the Biogen Foundation, the [North Carolina Museum of Natural Sciences](#) was able to triple the number of classes offered through its Micro World Investigate Lab. In 2014, this program engaged more than 31,000 visitors and students in lab-based activities. The Foundation's support made it possible for approximately 800 students from underserved school districts and afterschool programs to participate in these hands-on programs, providing transportation for many of these students.

**Community Lab** – The Biogen Community Lab is the longest-running, hands-on corporate science lab in the nation, engaging middle and high school students with hands-on, real-world science. Over 25,000 students in Greater Boston have experienced real laboratory science through the Community Lab.

In October 2014, Biogen opened a second Community Lab at our RTP facility in North Carolina. Modeled on the success of our Cambridge program, the Community Lab expansion continues Biogen's mission to inspire the next generation of STEM leaders through hands-on learning.

The Community Lab is a catalyst for students to learn firsthand that there are countless careers in science and biotechnology. Biogen and the Community Lab have partnered with different programs to help promote career



### Argentina

Biogen volunteers helped the Mother Mary Joseph Center and three other community organizations that focus on supporting children. Our volunteers conducted renovation projects, painted and upgraded the centers. They also helped raise awareness around healthcare habits through educational talks tailored for the kids, ultimately benefitting a total of 195 children.



## COMMUNITY

exploration in biotechnology. Programs include [Young Women in Bio](#), [MassBioEd](#), [Biomedical Science Careers](#) and North Carolina Museum of Natural Sciences.

**Supporting Science Education** — The Biogen Foundation launched the Ignite the Power of STEM Competitive Grants Program in 2013 to support science education programs in public and charter elementary, middle and high schools in Massachusetts. The program was expanded to North Carolina in 2014. Ignite the Power of STEM grants are designed to enable teachers to bring new, exciting hands-on science experiences to their students, promote science literacy in innovative ways, encourage underserved youth with the potential to pursue science as a career and create excitement about STEM topics within the classroom. The Foundation awarded more than \$200,000 to more than 50 schools in Massachusetts and North Carolina in 2014.

**Biomedical Science Careers Program (BSCP)** – For years, the Biogen Foundation has been a strong supporter of the BSCP, supporting professional development and educational programming and providing a HOPE Scholarship award to a deserving student in need of financial assistance. The goal of the BSCP is to increase the number of under-represented minorities in the health professions and the biomedical sciences. Many BSCP students have gone on to pursue successful careers in healthcare and biomedical sciences, including two former BSCP students who are now Biogen employees. One is a scientist with our molecular discovery team and the other is a senior research analyst with our public policy and government affairs group.

**Kinder-Universität Zürich** – For the fifth straight year, Biogen has been the exclusive biotechnology sponsor of [Kinder-Universität Zürich](#) (Children's University of Zurich), a program that provides lab-based curricula to third through sixth graders. This program, which serves about 700 children per year, makes lab learning fun as it introduces students to such topics as microscope use, climate change and electricity.

**Strong Communities** – The Biogen Foundation also provides grants for innovative programs that address vital community needs, including general education, human services, and culture and the arts. Partners include [Boston Healthcare for the Homeless](#), [Cradles to Crayons](#) and [Food Bank of Central and Eastern North Carolina](#).

### **U.S. Employee Matching Gifts Program**

*In 2014, our Employee Matching Gifts program grew 45 percent, awarding nearly \$800,000 in employee matching gifts to more than 580 organizations across the United States. The program allows Biogen employees to double their donations to the organizations they care about most – these range from the National MS Society, to camps for children with serious illnesses, to disaster relief efforts around the world.*

## ADVANCING MEDICAL EDUCATION

Biogen continuously strives for new ways to increase disease awareness, improve patient access to care and help patients with unmet medical needs. To that end, we offer educational grants, fellowships and other support to academic institutions, hospitals and community-based healthcare organizations in the therapeutic areas we serve. In 2014, Biogen contributed approximately \$10 million to independent medical education programs for healthcare providers, including physicians, nurses and pharmacists. All medical education programs are developed and administered completely independent of any direction or influence from Biogen, in accordance with our company's internal policies and relevant external regulations.

*The Biogen MS Clinical Fellowship Program has supported promising clinical fellows who are helping to lead the effort to care for MS patients and find new treatments for this serious disease since 2006.*

**Fellowship Programs** – In 2014 we donated more than \$1.9 million to fellowship programs, including the MS Clinical Fellowship Program, Hemophilia Fellowship Program, Global MS Registries Research Fellowship Program and R&D Fellowship Program. For the 2014-2015 academic year, Biogen awarded 16 grants totaling more than \$1.3 million to top universities and academic institutions across the United States to support MS Clinical Fellowships. Once grants are awarded, the selection and placement of the MS Clinical Fellows are at the discretion of the recipient institution. The Biogen MS Clinical Fellowship Program has supported promising clinical fellows who are helping to lead the effort to care for MS patients and find new treatments for this serious disease since 2006. Please visit our website for more information about our [grants programs](#).



### Australia

Biogen collaborated with five different organizations around Australia. Our volunteer efforts helped organizations such as OzHarvest, Royal Society for the Prevention of Cruelty to Animals, Meals on Wheels, Community First, and Clean Up Australia. We fed the hungry, distributed supplies to the disadvantaged, helped support the prevention of animal cruelty and worked to clean up area parks and communities.



[Letter from Leadership](#)

[About Biogen](#)

[Citizenship  
& Sustainability](#)

[Improving Lives](#)

***Rethinking Resources***

[Acting Responsibly](#)

[About This Report](#)

[GRI G4 Index](#)

# *Rethinking* RESOURCES

As Biogen grows, we are rethinking the way we use resources like water, energy and materials in an effort to reduce or freeze our environmental footprint, even as we expand our product portfolio and manufacturing throughput. By applying innovation to everything we do, we are confident that we can continue to improve the lives of patients in a sustainable and responsible manner.

[Letter from Leadership](#)

[About Biogen](#)

[Citizenship  
& Sustainability](#)

[Improving Lives](#)

[Rethinking Resources](#)

[Acting Responsibly](#)

[About This Report](#)

[GRI G4 Index](#)



## Making the Leap to a Net Zero Carbon Footprint

John Cox

Executive Vice President, Pharmaceutical Operations and Technology

**Being a responsible corporate citizen** is at the very heart of how we operate as a company. Respect for the environment and our communities is deeply rooted in our company culture, and it plays out in the high standards we use to guide our conduct. We want to be a company for which our employees are proud to work, and we empower them to be innovators who find and implement the solutions behind our many achievements in the area of environmental sustainability.

**“Biogen is now a carbon neutral company. We have effectively neutralized all the carbon emissions associated with our business.”**

I consider it both my personal and executive responsibility to help shape Biogen's sustainability vision, strategy and goals and to guide our efforts to reduce our companywide environmental footprint. We challenge ourselves to think of new paradigms and rethink the way we use resources, with a particular focus on water, energy and waste.

One of the most exciting developments to come out of 2014 from a sustainability perspective is that Biogen is now a carbon neutral company. That means we have reduced and then effectively neutralized all the carbon emissions associated with our business.

We were able to achieve this Net Zero Carbon Footprint milestone by continuing to invest in sustainable innovation internally and by funding external renewable energy and offset projects to zero balance the rest of the carbon emissions associated with our business value chain. This includes emissions from our own operations, employee commuting and business travel, purchased electricity, upstream suppliers and downstream business activities. After years of cutting emissions by increasing manufacturing and building efficiency and generating much of our own power with our co-generation plant that uses cleaner burning natural gas, we decided to take this next major step.

## MAKING THE LEAP TO A NET ZERO CARBON FOOTPRINT

John Cox

Getting to and maintaining a Net Zero Carbon Footprint is no small undertaking. But the enormous strides we have made – and will continue to make – in shrinking our operational footprint and working with suppliers to do the same, made it easier.

In fact, this remarkable achievement is really just an extension of our overall commitment to corporate citizenship and environmental sustainability. Since 2006, we have reduced our operational carbon emissions

***“We realized that we had the opportunity to make an immediate impact by doing our part to curb carbon emissions. It was the right thing to do and the right time to do it – for society, for the environment and for our business.”***

intensity by 70 percent and water use intensity by 72 percent. And we have set a goal to reduce them both by 80 percent by 2020, using 2006 as our baseline. That means we'll be using about the same amount of water and emitting the same amount of carbon from our operations as we did in 2006, despite real and anticipated business growth. We expect this will make it easier and less costly to continue to neutralize our emissions and maintain our Net Zero Carbon Footprint. We are also committed to achieving zero manufacturing waste-to-landfill status in the facilities that we own and operate.

We intend to meet our water and carbon goals through ongoing manufacturing innovation that will enable us to dramatically increase the throughput of our therapy production with little or no increase in carbon emissions and water use.

### **Zeroing in on Our Target**

Carbon emissions are linked to global climate change, which has, in turn, been linked to extreme weather events and drought. The World Health Organization says that climate change may also affect access to sufficient food and water and the stability of the healthcare infrastructure, thus impacting human health. As a company focused on improving the lives of patients, these are issues that we must take into consideration as we plan for the future.

In 2014, we identified that we weren't that far from reaching a Net Zero Carbon Footprint, thanks to the improvements we've made in curbing our operational emissions over time. We realized that we had the opportunity to make an immediate impact by doing our part to curb carbon emissions. It was the right thing to do and the right time to do it – for society, for the environment and for our business.

First we worked with respected third parties to determine our current footprint. When we look at the carbon emissions associated with Biogen, both inside and outside our walls, we see that the majority comes from our suppliers. The rest is split between our operations and employee commuting and business travel.

Then we neutralized these emissions by investing in credible, certified projects that were already putting cleaner energy onto the grid. These investments support wind, solar,

## MAKING THE LEAP TO A NET ZERO CARBON FOOTPRINT

John Cox

landfill gas-to-energy and low impact hydroelectric power projects in the United States and Europe. We applied our usual high standards using very specific criteria to ensure each project had a current and meaningful impact. Additionally, a portion of our purchases support Solar 4R Schools, which use solar technology as a hands-on, interactive education tool to cultivate a new generation of clean energy leaders.

***“Without the passionate efforts of Biogen employees across the globe, these great achievements would not have been possible.”***

Before declaring that our carbon footprint is net zero, we took painstaking steps, again with a third-party auditor, to assure that this was indeed true, based on the internationally accepted [ISO14064:3](#) standard.

### Owning it Throughout the Organization

Without the passionate efforts of Biogen employees across the globe, these great achievements would not have been possible. While we have a dedicated Environmental Health Safety and Sustainability (EHS+S) organization, environmental responsibility is everyone's job. To drive that point home, each year we nominate and recognize employees for their extraordinary actions to support our EHS+S goals. But only employees whose primary job function is not EHS+S are eligible to win. It is this culture of ownership and innovation that's gotten us this far along our sustainability journey.

So where do we go from zero? We plan to continue to drive the use of natural resources out of our system and, as a result, make it easier to maintain our Net Zero Carbon Footprint. And we will do it using the three-pronged approach that got us here – driving sustainability internally, working with our suppliers and investing in cleaner energy projects. I am confident that we will be successful. 



## ENVIRONMENTAL STRATEGY AND MANAGEMENT



## ENVIRONMENTAL STRATEGY AND MANAGEMENT

### Management and Goals

Our impact on the environment factors significantly in how we view our mission to improve the lives of patients and operate as a responsible and sustainable company. We carefully manage the way we use resources, striving to reduce, mitigate and, in the case of carbon emissions, neutralize our footprint wherever possible. We focus our efforts where we have the most potential impact: water use, energy use/carbon emissions and solid waste.

In our last Corporate Citizenship Report, we outlined bold new environmental goals for 2020 tied to these areas. Through innovative management and manufacturing and greener buildings, we've made substantial progress against these targets, which are:

- Reducing our water use by 80 percent by 2020 compared to 2006, normalized by revenue.
- Reducing our direct and indirect operational carbon emissions by 80 percent by 2020 compared to 2006, normalized by revenue.
- Setting and achieving the goal of having a Net Zero Carbon Footprint across our value chain by funding certified renewable energy and carbon offset projects to neutralize the balance of our carbon emissions. This includes emissions remaining from our operations plus employee commuting and business travel, purchased electricity, upstream suppliers and downstream business activities.
- Achieving zero manufacturing waste-to-landfill status at all major owned locations.

These goals are ambitious, but we've cultivated a culture of working fearlessly to measure and address what really counts. We believe our global EHS+S strategy, coupled with innovative manufacturing technologies, will enable us to reach and maintain these environmental performance milestones. For more information on our global EHS+S approach and a summary of our strategy and management system, see Pages 78-79.

We are also pleased to report that Biogen did not have any fines for noncompliance with environmental laws and regulations in 2014. However, we received notice of violations for exceeding a wastewater permit limit in one of our RTP facilities and for exceeding a mercury limit in a small amount of water that was poured down a drain at one of our Cambridge labs. To address these issues, we implemented additional controls at the RTP site, which were agreed to by the local authority and incorporated into our permit conditions, and enhanced communications and training in our Cambridge facility.

### Manufacturing Innovation

Launched in 2014, our Operations Technology and Innovation Group – a cross-product, cross-functional group housed within our Pharmaceutical Operations and Technology function – uses a structured innovation process that focuses on bringing many Biogen departments together to create significant breakthroughs throughout our operations.

## ENVIRONMENTAL STRATEGY AND MANAGEMENT

While it's intuitive to think that producing more products requires more water and energy, Biogen is challenging this paradigm. A key focus of this newly formed group is driving manufacturing innovation that has the potential to dramatically multiply our drug throughput and increase our manufacturing capacity with little or no increase in the amount of natural resources used.

*By increasing the capacity of our existing operations, manufacturing innovation reduces the need for new facilities, as well as the attendant business risk.*

Increasing productivity at this level requires a smarter approach to biology, where more of the active ingredients for our therapies can be extracted from the cultures in which they are grown. The process of separating components of mixtures is known as chromatography. Cells in our bioreactors create byproducts that require water to purify. We are using technologies that allow us to run chromatography at higher concentrations, which significantly decreases our water use at this stage of production. This not only cuts down on our water use, but also reduces the energy required to move and purify the large amounts of water it takes to create safe, high-quality biopharmaceutical products.

Our efforts to increase productivity also have implications for downstream manufacturing processes and our bottom line. By increasing the capacity of our existing operations, manufacturing innovation reduces the need for new facilities, as well as the attendant business risk.



## ENVIRONMENTAL STRATEGY AND MANAGEMENT

### EHS+S AWARDS



Our annual global EHS+S Awards recognize non-EHS+S employees who go above and beyond their core duties to help us achieve our EHS+S goals. For our most recent set of awards, a team of EHS+S leaders thoroughly evaluated more than 100 nominations to arrive at global and regional award winners in two categories: Sustainability and Health + Safety.

The Sustainability Award goes to individuals or teams who have completed a measurable project or initiative that improves performance of an environmental metric, such as water, waste or energy. The winners are featured below, with the global winner being selected from the ranks of the regional winners. (Health + Safety award winners are featured on Page 80.)

#### Global Sustainability Award Winner:

- Our Italy Affiliate Office's "Green Team" (Silvia Donzelli, HR Partner; Verena Mitterer, Assistant, Office Management; Linda Pizzichini, Senior Administrative Assistant; Alice Sala, Senior Administrative Assistant; Antonella Scaldaferri, Administrative Associate) for several sustainability initiatives. Accomplishments include switching to 100 percent renewable energy, launching a recycling program, installing "green" printers through the office and executing a "Thinkbeforeprinting.org" campaign.

#### Regional Sustainability Award Winners:

- **Johan Bruun, Engineer II, Process (Hillerød)** for eliminating the use of nitrogen gas in our water purified rinse tanks.

- **John Kelliher, Senior Engineer III (Cambridge)** for multiple sustainability projects including renovating and completing a fan wall conversion of our Building 6 to reduce air demand, resulting in an annual energy cost savings of approximately \$50,000 per year.

- **Jimmy Smith, Senior Supervisor, Instrumentation & Controls (RTP)** for developing an innovative new level calibration process for buffer solution holding tanks, thus reducing water use by 55,000 liters and cutting the time needed to complete this process by 15 percent.

- **Our India Affiliate Office's "Green Team" (Virender Bhasin, Senior Manager, Affiliate Finance; Gaurav Khanna, Senior Associate I, Office Management; Davendra Mal Singhvi, Associate Director, Affiliate Finance)** for driving sustainable behaviors in our India operations. This includes reducing energy costs by nearly 40 percent, establishing a paper recycling system, curbing the use of sealed water bottles in the office, reusing wood fixtures from the old India office in the new office and proposing additional energy-reduction projects.

## ENVIRONMENTAL STRATEGY AND MANAGEMENT

### LEED Certification and Sustainable Construction

Biogen considers physical infrastructure an important component of our approach to environmental sustainability. We operate four energy-efficient buildings with Leadership in Energy & Environmental Design (LEED) certification. These include two LEED Platinum buildings, one in Weston, Mass., and one in Cambridge, and two Gold certified buildings, including our headquarters in Cambridge, Mass., and a facility in RTP, N.C.

In 2015, we will launch sustainable renovation and construction guidelines that aim to speed up the selection of sustainable materials and equipment for smaller projects involving facilities that we control.

### Water Use

Water plays a critical role in many aspects of our business. It is used to help make our products, to sterilize and clean equipment, in our cooling towers, for irrigation, and elsewhere throughout our office and manufacturing operations. Because it is so valuable to us – and our communities – we focus on ways to reduce our dependence on water, recycle more of it, and make sure it adheres to the highest quality and safety standards before being returned back to the environment.

By completing innovative projects across our operations, we've made sure that every drop counts. Projects in recent years have included installing flexible volume manufacturing processes, HVAC water reclamation systems, a rainwater-harvesting cistern, clean-in-place process improvements and upgrades to our cooling towers.

### Getting to Zero

*After identifying innovative ways to reduce our operational carbon emissions and collaborating with our suppliers to do the same, we funded certified renewable energy and carbon offset projects to bring us to a Net Zero Carbon Footprint.*

*Specifically, for 2014, we offset the greenhouse gas emissions we created internally (Scope 1) by helping fund a project that uses landfill gas to generate energy in Utah. Our indirect emissions from purchased electricity (Scope 2) were offset by investments that support wind, solar and low-impact hydroelectric projects throughout the United States and Denmark. The remaining emissions in our value chain (Scope 3), including those associated with employee commuting and business travel, upstream suppliers and downstream business activities were neutralized by funding projects using landfill gas to generate energy in Massachusetts and New York, as well as projects that fund wind farms in Texas.*

*Biogen enlisted credible third-party auditors to assure our emissions data and our methodology for achieving our Net Zero Carbon Footprint status. Our Scope 1, Scope 2 and Scope 3 (business travel only) emissions were verified by [Trucost](#), in accordance with the AA1000 Assurance Standard (2008). All other Scope 3 emissions data were assured by ERM CVS. Net Zero Carbon Footprint determined according to Biogen's Carbon Neutrality Methodology assured by [ERM CVS](#) based on [ISO14064:3](#).*

## ENVIRONMENTAL STRATEGY AND MANAGEMENT

### Energy Use and Carbon Reductions

Developing therapies that improve patients' lives is a fairly energy-intensive process. Paying close attention to how we use energy and implementing energy-efficient strategies and projects have helped us achieve significant energy and carbon emissions reductions. These reductions are driven internally through innovative projects like optimizing our glycol distribution systems and using our own co-generation plant to generate much of the energy for our Cambridge campus, using cleaner burning natural gas.

### Materials and Waste

In 2014, we achieved a virtually zero manufacturing waste-to-landfill status\* at our owned locations. This is in part due to identifying innovative ways to divert from landfills all materials and waste associated with our owned operations, as well as having all of our major operations located in areas with substantial waste recovery, recycling and composting infrastructure.

Our goal is to achieve zero waste-to-landfill status going forward at all of the major locations that we control. To do so, we will continue to leverage a suite of projects that avoid, recycle and compost our waste, as well as use some of it to create or recover energy. This includes proper management and disposal of hazardous waste, adhering to both local and international standards and regulations. We're also finding innovative ways to transform some of our manufacturing byproducts from hazardous materials into useful fertilizers and compost.

### Status Change Leads to Innovation

*In 2012 and 2013, we reported that we had achieved zero waste-to-landfill status (defined as a landfill waste diversion rate of 100 percent). We subsequently identified that a small amount of non-hazardous waste – primarily in the form of off-spec inventory and unused medication – from one of our Cambridge facilities was properly disposed of in a landfill specialized for this purpose. This represented less than 1 percent of our total waste. This meant that we had achieved a virtually zero-waste-to-landfill status\* in 2012 and 2013.*

*In response to this error, earlier this year we implemented an innovative program to “offset” this past waste by arranging and paying for an equal amount of waste from local small organizations in Cambridge to be diverted from landfills. Not only will this help us realize our goal of achieving zero waste to landfill, but it will help build awareness among these smaller companies of how they might reduce their own environmental footprints.*

\*Virtually Zero Waste to Landfill is a designation granted to facilities that have achieved a landfill diversion rate of 98% or greater, by global independent safety science company, UL.

## ENVIRONMENTAL PERFORMANCE

|                                                                                | 2006 Baseline | 2012      | 2013      | 2014                 |
|--------------------------------------------------------------------------------|---------------|-----------|-----------|----------------------|
| <b>Energy</b>                                                                  |               |           |           |                      |
| Total Energy Use (gas, oil, steam and electricity in MMBTUs)                   | 1,029,436     | 1,102,430 | 1,144,818 | 1,180,044            |
| Energy Intensity (MMBTUs/million \$ revenues)                                  | 384           | 200       | 165       | 122                  |
| Electricity Use (MWh)                                                          | 92,788        | 89,558    | 91,904    | 97,691               |
| Electricity Intensity (MWh/million \$ revenues)                                | 34.6          | 16.2      | 13.3      | 10.1                 |
| Renewable Energy (% of electricity use)                                        | 0             | 0.2       | 1.0       | 100 <sup>1</sup>     |
| Renewable Energy (% of total energy use)                                       | 0             | 0.1       | 0.3       | 28.2                 |
| <b>Carbon Emissions</b>                                                        |               |           |           |                      |
| Scope 1 (gas, oil, U.S. fleet in metric tons CO <sub>2</sub> e)                | 38,907        | 46,554    | 49,821    | 50,885               |
| Scope 1 Intensity (metric tons/million \$ revenues)                            | 14.5          | 8.5       | 7.2       | 5.2                  |
| Scope 2 (electricity and steam in metric tons CO <sub>2</sub> e) <sup>2</sup>  | 49,227        | 39,419    | 41,552    | 44,532               |
| Scope 2 Intensity (metric tons/million \$ revenues)                            | 18.4          | 7.2       | 6.0       | 4.6                  |
| Scope 1 and 2 (metric tons CO <sub>2</sub> e)                                  | 88,134        | 85,973    | 91,373    | 95,418               |
| Scope 1 and 2 Intensity (metric tons/million \$ revenues)                      | 32.9          | 15.6      | 13.2      | 9.8                  |
| Scope 3 (Value Chain in metric tons CO <sub>2</sub> e)                         | 8,325         | 13,183    | 17,788    | 345,217 <sup>3</sup> |
| Purchased goods and services (category 1) <sup>4</sup>                         | N/A           | N/A       | N/A       | 247,700              |
| Capital goods (category 2) <sup>5</sup>                                        | N/A           | N/A       | N/A       | 31,300               |
| Fuel and energy related activities (not included in Scope 1 or 2 – category 3) | N/A           | N/A       | N/A       | 17,118               |

## ENVIRONMENTAL PERFORMANCE

|                                                                                     | 2006<br>Baseline | 2012    | 2013    | 2014                 |
|-------------------------------------------------------------------------------------|------------------|---------|---------|----------------------|
| <b>Scope 3 (Value Chain in metric tons CO<sub>2</sub>e)<sup>3</sup> (Continued)</b> |                  |         |         |                      |
| Waste generated in operations (category 5)                                          | N/A              | N/A     | N/A     | 78                   |
| Business travel (category 6)                                                        | 8,325            | 13,183  | 17,788  | 20,661               |
| Employee commuting (category 7)                                                     | N/A              | N/A     | N/A     | 17,252               |
| Upstream leased assets (category 8)                                                 | N/A              | N/A     | N/A     | 4,208                |
| End of life treatment, sold products (category 12)                                  | N/A              | N/A     | N/A     | 6,900                |
| <b>Net Zero Greenhouse Gas Emissions</b>                                            |                  |         |         |                      |
| Total Emissions (metric tons CO <sub>2</sub> e)                                     | 96,459           | 99,156  | 109,161 | 440,635 <sup>3</sup> |
| Carbon Offsets (metric tons CO <sub>2</sub> e)                                      | 0                | 0       | 20,000  | 292,971              |
| MWh neutralized through Renewable Energy Credits (metric tons CO <sub>2</sub> e)    | 0                | 90      | 462     | 147,664              |
| Net Emissions (Scope 1, 2 and 3 in metric tons CO <sub>2</sub> e) <sup>6</sup>      | 96,459           | 99,066  | 88,699  | 0                    |
| Net Intensity (metric tons/million \$ revenues)                                     | 36.0             | 18.0    | 12.8    | 0                    |
| Emissions Offset (% of total Scope 1, 2 and 3)                                      | 0                | 0       | 19      | 100                  |
| <b>Water and Wastewater</b>                                                         |                  |         |         |                      |
| Water Use (cubic meters)                                                            | 671,871          | 555,541 | 583,969 | 677,136              |
| Water Intensity (cubic meters/million \$ revenues)                                  | 250              | 101     | 84      | 70                   |
| Wastewater Discharge (cubic meters)                                                 | N/A              | 310,277 | 375,487 | 385,465              |
| Wastewater Discharge Intensity (cubic meters/million \$ revenues)                   | N/A              | 56      | 54      | 40                   |
| Reclaimed/Reused Water (%) <sup>7</sup>                                             | 10               | 17      | 16      | 18                   |

## ENVIRONMENTAL PERFORMANCE

|                                                                           | 2006<br>Baseline | 2012  | 2013  | 2014  |
|---------------------------------------------------------------------------|------------------|-------|-------|-------|
| <b>Waste</b>                                                              |                  |       |       |       |
| Non-hazardous Waste Generated (metric tons)                               | N/A              | 3,326 | 4,446 | 3,809 |
| Waste Composted (metric tons)                                             | N/A              | 1,650 | 1,562 | 1,501 |
| Waste Recycled (metric tons)                                              | N/A              | 804   | 1,854 | 1,009 |
| Waste to Energy (metric tons)                                             | N/A              | 592   | 875   | 1,104 |
| Solid Waste to Landfill (metric tons) <sup>8</sup>                        | 331              | 52    | 18    | 9     |
| Non-hazardous Waste Generated Intensity (metric tons/million \$ revenues) | N/A              | 0.60  | 0.64  | 0.39  |
| Hazardous Waste (metric tons) <sup>9</sup>                                | N/A              | 228   | 138   | 186   |

N/A = Data was not collected in reporting year.

1 | Data includes 191,945, and 281,977 MWhs of renewable energy certificates and guarantees of origin purchased in 2012, 2013 and 2014, respectively. Of the 281,977 purchased in 2014, 97,691 MWhs neutralize Biogen's electricity use and the remaining 184,286 MWhs is used to neutralize electricity use within our value chain.

2 | Data reflects CO<sub>2</sub>e from electricity and steam use, excluding impacts from renewable energy.

3 | Data reflects business travel only for 2006 to 2013. 2006 baseline data is extrapolated based on data from prior years. Scope 3 categories 4, 9, 10, 11, 13, 14 and 15 were determined to not be relevant to our value chain.

4 | Data includes 156,100 metric tons CO<sub>2</sub>e from fuel usage and 91,600 metric tons CO<sub>2</sub>e from electricity use.

5 | Data includes 19,700 metric tons CO<sub>2</sub>e from fuel usage and 11,600 metric tons CO<sub>2</sub>e from electricity use.

6 | Data reflects inclusion of carbon offsets and renewable energy.

7 | Data reflects percentage of total water need sourced from reclaimed potable water, greywater and rainwater.

8 | Data includes non-hazardous solid waste from our routine operations only. Waste derived from construction and demolition debris, incinerator ash and other contractor activities is not included. See Page 57 for discussion on restatement of previously reported 2012 and 2013 values.

9 | Data reflects biomedical, hazardous and other regulated wastes.

[Letter from Leadership](#)

[About Biogen](#)

[Citizenship  
& Sustainability](#)

[Improving Lives](#)

[Rethinking Resources](#)

[\*Acting Responsibly\*](#)

[About This Report](#)

[GRI G4 Index](#)

# *Acting* **RESPONSIBLY**

Biogen works to ensure honesty, fairness and integrity in everything we do. We balance the needs of patients, society, shareholders and other key stakeholders through a focused and strategic approach. We treat employees with respect and provide an inclusive work environment that helps them grow and thrive.

[Letter from Leadership](#)

[About Biogen](#)

[Citizenship & Sustainability](#)

[Improving Lives](#)

[Rethinking Resources](#)

[\*\*Acting Responsibly\*\*](#)

[About This Report](#)

[GRI G4 Index](#)



## Access to Treatment: Innovative Solutions to Real-World Challenges

◀ David Miller

*Senior Vice President, Global Market Access*

***Biogen has the opportunity*** to improve the lives of patients every day by bringing transformative therapies to market. But winning regulatory approval is just part of the challenge. For patients combatting serious chronic conditions to benefit from our efforts, they need access to the products we can provide. When that happens, everybody wins. Patients lead richer lives. Society benefits from a healthier, more productive workforce with less stress on an already strained healthcare system. And Biogen earns a profit while returning value to shareholders, which enables us to reinvest in drug research and development.

### **Global Market Access (GMAx): Mission Driven Success**

As the leader of our GMAx organization, I lead a team that is passionately driven to make patient access a reality. Our GMAx organization is uniquely positioned to operate at the intersection of science, medicine and economics. Together, we're focused on a singular mission: to define and implement innovative, evidence-based pricing and reimbursement strategies that ensure access to all of our therapies in markets around the globe.

This is easier said than done, of course. It requires a thoughtful approach to balancing the needs of patients with our own return on investment to fund future therapies. And in today's dynamic healthcare landscape, this balancing act is growing increasingly complex. Payers, such as governments and insurance providers, are influencing more treatment decisions than ever before, requiring companies like Biogen to demonstrate the value of therapies beyond just safety and efficacy. We must show that our newly introduced products offer sufficient benefits over current treatments and, in many cases, that reimbursing the cost of the new treatment outweighs the economics of not doing so over the long term.

## ACCESS TO TREATMENT: INNOVATIVE SOLUTIONS TO REAL-WORLD CHALLENGES

David Miller

In pricing our products at Biogen, we seek to balance three elements: (1) access for patients; (2) sustainability for health systems; and (3) financial returns to support continued investment in innovation. As a result, we have generally priced our products to ensure that the choice to use a Biogen product does not increase overall costs to the healthcare systems in which we operate. We also provide significant patient assistance in the form of free drugs for indigent patients, drug copay assistance and infusion assistance.

As a company focused on diseases where the unmet need for new treatment options is exceptionally high, it is especially important that we get this balance right. If we fail, patients may not have anywhere to turn for innovative treatments that could significantly improve their quality of life.

Achieving regulatory approval for a therapy means that a given regulatory body, such as the FDA, is convinced of its safety and effectiveness. It is not a guarantee that payers will cover the cost of the new therapy. GMAX strives to close the gap between the number of patients who can benefit from our recently launched products and the number who have access to them through payer reimbursement programs. While it's not always possible to close the gap completely, we work to narrow it year over year.

### Coming at Access from Multiple Directions

Biogen meets the challenge of patient access through research design, engagement with payer and patient-advocacy organizations, flexible pricing structures, patient financial assistance and free drugs.

\*A health technology assessment is a multidisciplinary process to evaluate the social, economic, organizational and ethical issues of a health intervention or health technology.

One of the more innovative approaches we have taken in the past few years is to integrate more patient access considerations into our research and development design. GMAX and our R&D organization have begun collaborating much earlier on in the process. With payers making reimbursement contingent upon the kinds of data that can take years of post-launch experience to collect, we have made incorporating more evidence-driven strategies into our product development programs mandatory. This allows us to generate the types of data that can help advance regulatory approval for our therapies and satisfy expectations of payers, pricing reimbursement authorities and health technology assessment (HTA)\* organizations. In fact, we now have specialized health economists embedded in all of our clinical trials.

### BIOSIMILARS



*Working to meet societal demands for access to effective therapies at reduced cost, we are working with Samsung Bioepis (see Page 22), to commercialize biosimilar anti-TNF product candidates in Europe. These are expected to include biosimilars for widely used therapies.*

*We are working to bring lower-cost versions of important biological therapies to patients following an appropriate period of exclusivity for the innovator product.*

## ACCESS TO TREATMENT: INNOVATIVE SOLUTIONS TO REAL-WORLD CHALLENGES David Miller

We are initiating more conversations with payers and HTA authorities early in the development process of our therapies, as well. These conversations have yielded great insights into the perceived value of the products in our pipeline and the types of evidence needed to help ensure their acceptance for reimbursement down the road. We see only an upside to engaging payers so early on. Maintaining an open dialogue with payers and HTA authorities is enabling us to make better decisions at every stage in the development process.

We are also engaged in continuous dialogue with many third-party patient advocacy organizations. These partners offer a highly credible and growing voice in the healthcare system. To support their efforts in helping patients gain access to better treatments and services, we make sure they are armed with the research, knowledge and expertise they need to represent the patient perspective to policymakers and payers.

There will always be discrepancies around the world in payers' and patients' abilities to afford therapies that satisfy unmet medical needs. Our philosophy is that a patient should never be denied access to a life-changing therapy due to an inability to pay. For this reason, we have put in place responsible pricing structures that take into consideration the wealth of individual nations. In the case of our hemophilia factors, we have committed to giving the drug away in the world's poorest countries where the need exists.

### **Helping to Ensure Financial Access: Biogen Pricing Models**

- *Volume Rebates (primarily in the United States)*
- *Risk Sharing (in some European countries)*
- *Price Volume Agreements that cap payers' total financial exposure*
- *Portfolio Pricing (where allowed by law)*
- *Variable Pricing based on countries' gross national product*

In the United States, our Patient Services team helps patients navigate the often complex reimbursement process and puts them in touch with agencies that can help them secure the financial assistance they need. We also offer a free drug program to those patients that can't access our therapies any other way.

We believe we are on the right track but know that there's still much work to be done. Our ultimate goal is to ensure that everyone who is prescribed a particular therapy has the financial access to afford it. If we only secure access for a portion of the affected patient population who need our products, we've let patients, society and Biogen down. Because the stakes are so high, Biogen works relentlessly to ensure that patients have access to our products. 

## ENGAGING WITH STAKEHOLDERS

Regular stakeholder engagement is a critical component of how we pursue innovation across the enterprise. To help inform the content of both our 2013 and 2014 Corporate Citizenship Reports, we conducted a series of interviews in 2014 with representatives from the investment community, as well as with several U.S.-based MS patient advocacy groups.

**The following is a summary of our overall stakeholder engagement activities.**

**Engaging with Investors** – We regularly engage and communicate with the investment community, both with traditional and socially responsible investors. For the past five years we have provided detailed information to RobecoSAM and the Dow Jones Sustainability Index (DJSI) – two of the most prominent entities that track and evaluate the performance of the world's leading companies against economic, environmental and social criteria. We also participated in the healthcare working group of the Sustainability Accounting Standards Board (SASB), which helped inform SASB's Biotechnology Sustainability Accounting Standard. This nonprofit organization is engaged in the development of industry-specific sustainability accounting standards that will be suitable for disclosure in standard filings such as the Form 10-K.

In 2013, we contracted with a third party to conduct an investor perception survey to gauge traditional investors' and analysts' opinions on our strategy, R&D capability, management team, communication efforts and capital allocation. While the information derived from this survey is proprietary, it was one of many inputs included in our 2013/2014 Materiality Assessment (see Pages 90-92) that informed the

content of this report, and we are using the survey results to help shape how we continue to create value for our shareholders.

**Engaging with Patients, Patient Groups and Healthcare Professionals** – As part of Biogen's commitment to improving the lives of patients, we engage with them one on one, indirectly through advocacy groups and professional healthcare societies and through our own patient services and assistance programs. Our global approach to working with patient advocacy groups is, in part, a result of such engagement. See Pages 33-40 for more information.

**As a result of our patient engagement efforts, Biogen has developed patient mentoring and financial aid and free drug programs.**

Through ongoing dialogue and dedicated research, and through a series of interviews with MS patient advocacy groups, Biogen works to support patients and their continued focus on key concerns. These include drug availability and safety, financial support, access to drug information, expanded access programs, accelerating clinical development and approval timelines, improving the success rates of treatment and improving the overall patient experience.

As a result of our overall patient engagement efforts, Biogen developed patient mentoring and financial aid and free drug programs; makes significant investments in R&D, both within our own organization and in collaboration with others; works with regulators to help accelerate drug approvals and expand access to treatment; and provides advocacy groups with both financial aid and capacity building.

## ENGAGING WITH STAKEHOLDERS

In 2014, we created the Patient Center of Excellence (PCOE) in the United States, which cultivates a deep understanding of the MS patient and leverages insights to provide solutions that meet their needs.

### *Some of the Patient Advocacy Groups and Professional Healthcare Societies with which we Engage Include:*

- Accelerate Cures and Treatment for Alzheimer's Disease (ACT-AD) Coalition
- ALS Association
- Alzheimer's Association
- American Academy of Neurology
- American Academy of Nursing
- Chronic Disease Fund
- Coalition for Hemophilia B
- Coalition for Pulmonary Fibrosis
- Committee of Ten Thousand
- CureSMA
- European Federation of Neurological Associations (EFNA)
- European Patients Forum (EPF)
- European Multiple Sclerosis Platform (EMSP)
- Genetic Alliance
- Global Genes (RARE)
- Hemophilia Federation of America (HFA)
- Hemostasis and Thrombosis Research Society (HTRS)
- Infusion Nurses Society
- International Alzheimer's Disease Association
- Leaders Engaged on Alzheimer's Disease (LEAD) Coalition
- Lupus Foundation of America
- Lupus Research Institute
- Members of the MS Coalition (Accelerated Cure Project for Multiple Sclerosis, Can Do MS, Consortium of Multiple Sclerosis Centers, International Organization of Multiple Sclerosis Nurses, Multiple Sclerosis Association of America, Multiple Sclerosis Foundation, National Multiple Sclerosis Society, United Spinal Association)
- MS Cure Fund
- MSWorld
- Multiple Sclerosis International Foundation (MSIF)
- MS Views and News
- Muscular Dystrophy Association
- Myotonic Dystrophy Foundation
- National Alliance on Caregiving
- National Health Council
- National Hemophilia Foundation (NHF)
- National Organization for Rare Disorders (NORD)
- Patient Services Incorporated
- Pulmonary Fibrosis Foundation
- Rare Diseases Europe (EURORDIS)
- Save One Life
- SMA Europe
- SMA Trust
- SMA Foundation
- World Federation of Hemophilia (WFH)

## ENGAGING WITH STAKEHOLDERS

**Engaging with Employees** – Listening to our employees is critical to the success of our company. We solicit feedback through a variety of company surveys, periodic roundtables and employee meetings. But we do more than just listen. We act upon their suggestions and concerns. For example, our sabbatical program and now annual year-end shutdown arose from employee feedback (see Page 71 for more information).

**Engaging with Industry** – Biogen engages in several industry forums designed to further incorporate citizenship and sustainability. We are a member of the Global Environmental Management Initiative (GEMI), an organization of leading companies dedicated to fostering excellence in sustainable business practices. We are also an active participant in the Pharmaceutical Supply Chain Initiative, which supports better social, economic and environmental outcomes for all those who make up the pharmaceutical supply chain.

We are active members in organizations that share best practices within and outside our industry, including:

- BioPharma EHS Forum
- Biotechnology Industry Organization (BIO)
- California Health Institute (CHI)
- Corporate Responsibility Officers Association (CRO)
- Direct Employers Association
- European Federation of Pharmaceutical Industries and Associations (EFPIA)
- European Biotech Association (EuropaBio)
- European Confederation of Pharmaceutical Entrepreneurs (EUCOPE)
- Massachusetts Biotech Council (MassBio)

- National Association for Environmental Management (NAEM)
- North Carolina Biosciences Organization (NCBIO)
- Pharmaceutical Research and Manufacturers of America (PhRMA)

**Engaging in Public Policy** – In 2014, Biogen CEO George Scangos joined the leadership of PhRMA, the largest biopharmaceutical industry trade association. George will assume the chairmanship of PhRMA in 2016, after serving one-year terms as Treasurer and Chairman-elect, respectively. This leadership role is more than just a great opportunity – it's an obligation to help shape the future of the biopharmaceutical ecosystem.

*The development of good public policy is one of the many ways that Biogen and our industry can care deeply and change lives.*

Our mission depends on our ability to discover the latest scientific advancements, develop and deliver innovative medicines to patients living with serious diseases, and create a policy environment that makes it possible to devote huge sums of financial and human resources over long periods of time to fight daunting medical problems. Innovative products require creative policy solutions to ensure that scientific discoveries are translated into available treatments as quickly as possible. The development of good public policy is one of the many ways that Biogen and our industry can care deeply and change lives.

## ENGAGING WITH STAKEHOLDERS

**Public Policy Support** – Biogen participates in public policy discussions to benefit our patients and foster innovation and growth in the industry. In 2014, our work in public policy revolved around a number of key issues, including:

- Ensuring Patient Access. Sufficient protections should be in place to establish healthcare systems that ensure timely patient access to the most appropriate healthcare providers, services and treatments. Biogen worked closely with U.S. policymakers to incorporate a policy change that will accelerate the review of conditions to be added to the newborn screening panel of tests. Our work will help newborns with heritable conditions receive earlier access to potentially life-saving treatments.
- Strong Intellectual Property Protection. Fair and effective incentives are necessary for continued biomedical innovation and ongoing investment in research to fund new treatments and cures for patients facing the most challenging diseases.
- Advancing Drug Development. Supporting regulatory reforms, including those that target clinical trials and regulatory science, to reduce development and approval timelines and accelerate the availability of treatments for patients with unmet medical needs. Biogen is actively engaged in the 21st Century Cures Initiative to help develop a regulatory framework in the United States that accelerates the pace of treatments and cures for patients.

- U.S. Corporate Tax Reform. To help the United States attract and retain innovative companies, as well as the jobs and societal benefits that go with them, we must build a competitive corporate tax system that provides incentives for companies to invest in research, development and manufacturing in the United States.

For more information on Biogen and public policy, please visit our [website](#).

Through the Biogen Political Action Committee, we support candidates that we believe shape the issues that impact our industry and the patients we serve. Information on our contributions can be found on the [U.S. Federal Election Commission](#) website and our [Political Contributions Policy](#) can be found on our website.

[Letter from Leadership](#)

[About Biogen](#)

[Citizenship  
& Sustainability](#)

[Improving Lives](#)

[Rethinking Resources](#)

**[Acting Responsibly](#)**

[About This Report](#)

[GRI G4 Index](#)



## Funding Our Future Through Human Capital

◀ **Ken DiPietro**

*Executive Vice President – Human Resources*

**Biogen is only as great** as the people we attract, develop and retain. As a company on the forefront of cutting-edge science and medicine, our business depends on innovative thinking from passionate people who care deeply for the patients we serve.

Today, the pharmaceutical industry is facing headwinds it has never before experienced. The dynamic of how we do business is changing. The goal of meeting unmet medical needs has grown more complex in an environment where drug companies are increasingly being asked to prove not only the safety and effectiveness of their products, but the economic and societal benefits as well. In this period of incredible change, human capital will differentiate us in an industry where expectations to perform keep rising.

Ensuring that we have the right people and programs in place to navigate this emerging environment is no small feat. But as I reflect on the advancements we made in 2014 to improve our company's learning strategy and the pipeline and development of talent, I'm confident that our business is poised for continued growth.

### Turning Learning into Leadership

In 2014, we established the position of Chief Learning Officer to work closely with our executive team to ensure that our talent development agenda aligns with our corporate strategy. As a result, we've established the Biogen University Advisory Board – a group comprising senior leaders who are tasked with advising, funding and directing our overall approach for delivering learning inside the company. Through this initiative, we've evolved what was once a highly decentralized structure into a more centralized learning function that can develop employees at Biogen more efficiently and effectively.

## FUNDING OUR FUTURE THROUGH HUMAN CAPITAL

Ken DiPietro

We nearly doubled participation in our Leading at Biogen (LAB) program, a leadership course for high-potential individuals at Biogen that I co-teach alongside our CEO George Scangos. This six-day intensive course not only imparts fundamental leadership skills and strategies to these rising stars, but also gives us insights into the talent within our company. By the fall of 2015, we expect more than 45 employees will have completed this program. These alumni will essentially serve as an extension of our leadership team, working on key projects and initiatives that give them the opportunity to test their leadership skills while solving real-world business challenges at Biogen.

***“We have launched *Raising the Bar: Advancing Women on Boards*, a pilot program introduced in early 2015 to sponsor high-potential female leaders to take on roles on corporate boards.”***

We've also listened to our current employees and developed new initiatives to help them better understand how to advance their career at Biogen. In 2014, we launched a small task force to research who succeeds at Biogen and why. We are currently sorting through this data for insights that will help us make better development decisions.

We have also expanded our Organization and Human Resource Planning (OHRP) process, an initiative that leads to rich, constructive conversation with managers and direct reports about their potential assessment, as well as the development actions needed to progress to the next step in their career. When we first launched OHRP in 2013, we kept it at a fairly high level, but we've

since gone much deeper into the organization around the world. We've also developed career model frameworks for a broad set of functions within Biogen that outline the core competencies and experiences needed to grow a career here.

### **Embracing Differences, Driving Innovation**

Beyond learning, we have also invested in programs that support a diverse workforce and inclusive culture at Biogen. This includes cultivating a strong network of female leaders within our company. In 2014, we partnered with professors at Babson College specializing in teaching entrepreneurship to develop our company's first leadership program designed specifically for high-potential women at Biogen. We will be piloting this program with our first group of 20 women in 2015.

We have also launched *Raising the Bar: Advancing Women on Boards*, a pilot program introduced in early 2015 to sponsor high-potential female leaders to take on roles on corporate boards. Women hold less than 20 percent of Fortune 500 board seats and approximately 10 percent of board roles in biotech companies. There is an immense pool of talented, but underutilized women eager to help companies succeed at the highest level. While the program is still in its infancy, we've already secured two board placements through this initiative.

These kinds of innovative programs, coupled with our Global Diversity + Inclusion initiative and growing Employee Resource Networks, have established Biogen as a leader in advancing diversity and inclusion as a strategic imperative. This is reflected in the increasing percentage of employees who – based on surveys conducted over the past several years – believe Biogen recognizes and respects the value of human differences. And externally, Biogen continues to be recognized as a great place to work.

## FUNDING OUR FUTURE THROUGH HUMAN CAPITAL

Ken DiPietro

### **Building for our Future:**

#### ***Attracting and Retaining the Very Best***

Biogen offers both traditional and nontraditional benefits and rewards to help keep employees engaged and satisfied, while also maintaining a healthy work-life balance. For example, we introduced a new Global Sabbatical Program in 2014. After six years of service to the company, Biogen employees are now eligible for a four-week fully paid sabbatical leave. Thoughtfully disconnecting from work for an extended period to pursue personal interests leaves employees energized and ready to immerse themselves when they return. That belief has been reinforced by feedback from the first group to take advantage of this program.

***“I like to remind myself and other company leaders, at the end of each day our strategy walks out the door and every morning it walks back in.”***

We have also made enhancements to our long-term incentive program to better resonate with our senior leaders and give them more ownership in the success of our company. Even as other companies have moved away from long-term incentives, we continue to grant them broadly as a way to align our interests with the interests of our shareholders while also rewarding our best employees for their performance.

But as we look to grow our ability to improve the lives of patients, we know we need to be even more strategic in how we identify and attract the best and brightest minds to Biogen. To that end, we launched our competitive

talent landscaping initiative in 2014 to build a deep familiarity with talent pools across the biotechnology industry. By developing an understanding of who the best people in the industry are and evaluating their potential to help Biogen, we’re deepening our pipeline of candidates for future positions within our company.

We have made tremendous strides in 2014, but there will always be more to accomplish. Biogen is fundamentally dependent on attracting and retaining the very best people, instilling in them a sense of mission and wrapping it around an extraordinary culture. We must get this combination right. Because, as I like to remind myself and other company leaders, at the end of each day our strategy walks out the door and every morning it walks back in. 

## CREATING A GREAT WORK ENVIRONMENT

Promoting Diversity + Inclusion

Our future as a company depends upon a workplace that enables our employees to grow their careers and achieve their objectives – both at work and outside the office. When this happens, everyone benefits. To this end, we embrace a global Culture of Excellence through collaboration, innovation, development, diversity, recognition and work-life balance.

*We embrace top talent from all backgrounds and foster a work environment where all employees feel empowered to do their best work.*

Our people are our foundation, and we draw our entrepreneurial spirit from the energy of a team with different backgrounds, perspectives and life experiences. We have worked hard to infuse Diversity + Inclusion principles and practices into our global culture. We embrace top talent from all backgrounds and foster a work environment where all employees feel empowered to do their best work.

In early 2014, we launched our Global Diversity + Inclusion (D+I) initiative to elevate our company's commitment to diversity and inclusion. We set out to prepare more women for leadership roles, integrate the needs of diverse patients, encourage supplier diversity, train our managers in inclusive leadership and further develop our Employee Resource Networks (ERNs). We've made significant progress in these areas, and we continue to measure our impact.

Our D+I Strategic Council – a group of 18 men and women drawn from across our business –



continues to guide our efforts to move our D+I initiative forward and enhance our position as a great place to work for people of all backgrounds.

### Recognition

In 2014, for the second consecutive year, we achieved a perfect score of 100 on the Human Rights Campaign's (HRC) Corporate Equality Index and were named one of HRC's Best Places to Work. The Corporate Equality Index is a widely recognized, national benchmarking tool for corporate policies and practices related to lesbian, gay, bisexual and transgender employees. In 2014, we were also recognized as a best place to work by the [Boston Globe](#) and [Triangle Business Journal](#), as a leader in diversity by the [Boston Business Journal](#), and nominated

for the 2014 [Secretary of Defense Employer Support Freedom Award](#) for our commitment to supporting employees serving in the National Guard and Reserve.

### Supporting Underserved MS Patients

Our Underserved Populations Initiative seeks to improve MS outcomes among racial and ethnic minority populations in the United States. In collaboration with an external steering committee, we are working across functional groups within Biogen to launch programs that help ensure under-represented MS populations have access to the information and treatment they need. Launched in 2014, this initiative focuses on:

- Data Generation: Increase the availability of information on clinical outcomes and treatment responses in minority populations.
- External Education: Increase awareness of MS among minority populations and improve the availability of educational resources tailored to their specific needs.
- Internal Education: Increase our awareness of the needs of MS patients in minority populations and lead efforts to address them.

As part of this initiative, a group of Biogen leaders recently traveled to the Caribbean Neurology Center in San Juan, Puerto Rico, to identify ways we can meet the medical needs of MS patients in the Hispanic community.

### BIG CHAMPIONS OF INCLUSION AWARDS



Our “BIG Champions of Inclusion” program identifies and recognizes employees who promote diversity and inclusion in their day-to-day work. In 2014, we received more than 350 inspiring nominations and honored five individuals for their outstanding contributions. The awardees were:

- **Giuseppe Banfi** for encouraging everyone in the Milan office to share their insights and opinions, accept ideas from colleagues and participate in inter-departmental discussions.
- **Roger Carter** for helping the ERNs develop TeamNet sites and distribution lists and recruiting others to help by matching their interests and skills with opportunities.
- **Kurt Kreiter** for providing opportunities for team members to explore and understand their competencies, ensure they realize why they’re successful in certain areas and how they can replicate success.
- **Pamela Haire** for creating and implementing programs to innovate and empower employees and for co-leading our Women’s Innovation Network (WIN) RTP chapter.
- **Lisa Amaya Price** for creating the name “WIN” and inspiring her team to do their best and be inclusive of what everyone brings to the table.

### **Encouraging Inclusive Leadership**

We believe that there are certain attributes and behaviors required to foster a workplace where everyone's contributions are recognized and valued. To bring these to life, we provide our managers with the opportunity to test and improve their leadership through an e-learning program called *Becoming an Inclusive Leader*.

Employees use a workbook to record their insights and commitments as they move through online course modules. Throughout the course, employees conduct self-assessments, create a plan of action related to the course content, and plan discussions with their managers and peers on how to promote more inclusive decision-making.

### **Employee Resource Networks**

Our employees have the opportunity to participate in ERNs for people with shared characteristics or life experiences, and all supporters are welcome to join any network to help advance the inclusion of others. Each of our employees that participated in our ERNs in 2014 helped embed our D+I commitment throughout Biogen.

#### ***U.S. Military Veterans Employee Resource Network***

Launched on Veterans Day in 2014, our newest ERN provides U.S. veterans and members of military families with a platform to connect and educate others about their unique background and experience. This group helps veterans translate their experience to the workforce and raise awareness within Biogen of how individuals with military backgrounds can enhance our teams. In 2015, this organization will strive to grow its membership and continue attracting the interest of talented veterans, adding to our already diverse community.

### ***Advancing Women's Leadership***

To continue to thrive as a company and an industry, we must advance leadership opportunities for women. Women currently make up just over half of our global workforce and about 40 percent of our management team.

***We conducted a survey on women's leadership with female executives and directors within Biogen to understand the experiences of emerging women leaders.***

Our Women's Innovation Network (WIN) Employee Resource Group provides opportunities for women to network, learn, seek out mentors and develop their careers. Though primarily focused on women's careers and leadership, WIN proactively recruits and welcomes employees of all gender identities who wish to act as allies. WIN has approximately 1,200 members, both women and men, in chapters at all our major offices worldwide.

In 2014, we also laid the groundwork to launch our Women's Leadership Program, a new leadership development program for high-potential women employees. We conducted a survey on women's leadership with female executives and directors within Biogen to understand the experiences of emerging women leaders, potential challenges to their advancement, and ways to better leverage the talents of women.

Based on this feedback, we developed the Women's Leadership Program in collaboration with Babson College's Center for Women's Entrepreneurial Leadership. This program focuses on enhancing the careers of

high-potential, emerging women leaders in management positions and develops a talent pipeline to fill future senior leadership positions. Taught by faculty at the college, the program includes in-class curriculum as well as hand-on development activities related to each participant's current role.

Twenty high-potential women leaders from cross-functional areas of our company were selected to participate in the pilot program, which launched in January 2015. Initial feedback is overwhelmingly positive, and we look forward to reporting the pilot's outcomes in 2015.

### ReachOUT Employee Resource Network

ReachOUT is our network for lesbian, gay, bisexual, transgender and questioning (LGBTQ) employees, along with their straight allies. This organization works to increase awareness and acceptance of the LGBTQ community within Biogen, support a best-in-class

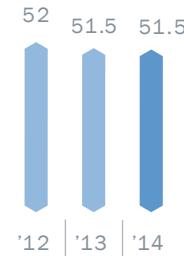
working environment for LGBTQ employees and exemplify our commitment to social responsibility and innovation. Among other milestones, in 2014, this group helped us become one of the few companies in the United States to offer employees transgender health coverage that includes gender reassignment surgery.

### Mosaic Employee Resource Network

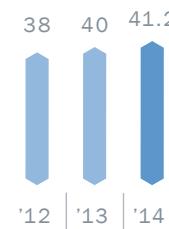
Mosaic focuses on opportunities to celebrate and learn from the multicultural backgrounds of Biogen employees. The group fosters awareness, appreciation and collaboration by encouraging members to develop a richer understanding of one another's cultural heritages and identities. Our U.S. chapters have attracted both immigrants and people who trace their American ancestry back generations, while our European chapters celebrate the diversity of often dozens of nations represented in a single worksite. Mosaic also sponsors cultural events hosted at our Cambridge, RTP and Hillerød locations to celebrate the diverse backgrounds of our employees with a different cultural theme each month.

## DIVERSITY AT BIOGEN (in percent)

### WOMEN IN GLOBAL WORKFORCE



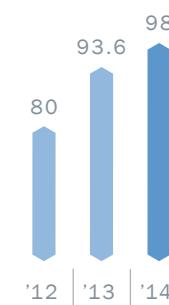
### WOMEN IN MANAGEMENT (defined as Director and above in all locations)



### MINORITIES IN MANAGEMENT (defined as Director and above in the United States)



### LOCAL NATIONALS IN MANAGEMENT (defined as Director and above in all locations)



## CREATING A GREAT WORK ENVIRONMENT

Beyond Benefits

### Rewarding Great Work

Biogen offers a comprehensive employee incentive program – one that goes “beyond benefits” and is highly competitive with other biotechnology and pharmaceutical leaders. It features valuable protection so employees can focus on their careers, knowing that there are incentives available to them to encourage success. The program focuses on these key areas:

- Protecting Employee Health – Our program features preventive care and wellness programs and access to comprehensive care and services.
- Protecting Employee Income – Biogen automatically provides company-paid life insurance and disability coverage. If needed, employees can supplement this coverage to be sure they have the right level of financial security.
- Balancing Work and Personal Life – Biogen offers a range of individual and family support programs designed to help employees manage life’s daily responsibilities and challenges.
- Planning for the Future – Biogen offers a variety of programs to help employees with their financial well-being and assist them with planning for a secure financial future.
- Recognizing Commitment and Contributions – Biogen’s BIG recognition program is designed to encourage and enable timely and personalized recognition. Awards range from peer-to-peer thanks for a job well done to service awards for continued commitment to the company.



Visit our website for more information about [employee benefits](#) at Biogen.

## CREATING A GREAT WORK ENVIRONMENT

Health + Safety Commitment

### Employee Health and Safety

A key component of our commitment to acting responsibly is constantly striving to find new and innovative ways to ensure a safer, healthier and more pleasant environment for our employees and visitors. We are continuously challenging ourselves to provide and foster a culture where health and safety are the norm.

As a growing, international company, we recognize the importance of having a world-class EHS+S management model and delivering exceptional performance. Our goal is to create a workplace that is free from disabling injuries, and our updated EHS+S Management System helps us do that efficiently and effectively. See Page 78 for a visualization of that system.

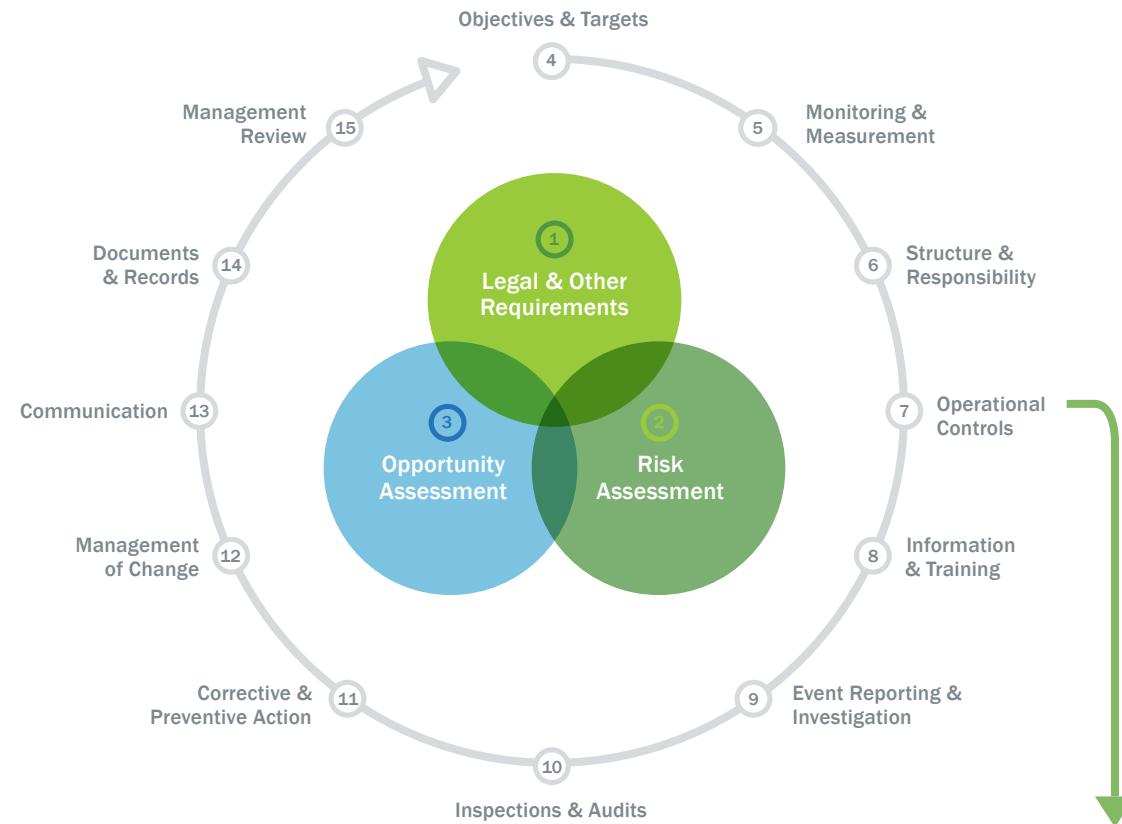
### EHS+S Mission:

*We will develop and manufacture therapies, as well as design, build and operate our facilities in ways that maintain a safe and healthful workplace; conserve energy, water and raw materials; and prevent harm to public health and the environment. We will establish and maintain effective procedures and systems to adhere to these principles and track progress against our EHS+S strategy.*



## CREATING A GREAT WORK ENVIRONMENT Health + Safety Commitment

### Global EHS+S Management Standards



### Global Operational Control Standards



## CREATING A GREAT WORK ENVIRONMENT

Health + Safety Commitment

**EHS+S Planning and Operating Strategy:** A key element of the Biogen management system is our annual global EHS+S planning process. Each year, the company updates its three-year strategic EHS+S plan based on current progress, emerging issues and internal and external stakeholder feedback. Company objectives are integrated into corporatewide and facility-level EHS+S plans to create global alignment and focus. For more information on the environmental and product stewardship aspects of our strategy, please see Pages 48-60 and 85, respectively.



[Letter from Leadership](#)

[About Biogen](#)

[Citizenship  
& Sustainability](#)

[Improving Lives](#)

[Rethinking Resources](#)

[Acting Responsibly](#)

[About This Report](#)

[GRI G4 Index](#)

## Our Health and Safety Culture

We believe the best way to cultivate a culture of health, safety and wellness is to empower our employees and recognize those who champion this culture. Each year, our EHS+S Awards honor employees who voluntarily go beyond their duties to promote a better workplace. To qualify for these awards, the employee's primary job responsibilities must be outside of EHS+S.



The Health + Safety Award distinguishes an employee or team who has positively influenced internal health and safety behaviors, demonstrated leadership or raised awareness of key health and safety issues, reduced the risk of an identified hazard, or improved our company's health or safety performance. We have highlighted the Health + Safety Award winners here, and more information on the Sustainability Award and its winners can be found on Page 55.

Our Global Health + Safety Award Winner for 2014 was Willy Thomsen (Hillerød) for making a positive impact on the health and safety culture during a key construction-related project.

Our 2015 Regional Health + Safety Award Winners:

- *Renata Lopes (Japan, Australia and Emerging Markets) for looking for ways to provide employees with better working conditions and benefits, emphasizing the importance of having a healthy balance between work and personal life.*
- *Kenneth Romig (Cambridge) for leveraging his manufacturing safety expertise to conduct new employee training and mentoring less experienced operators.*
- *Tanja Ruah (Germany) for initiating Biogen's participation in the Munich city run, B2RUN, forming a weekly running group and raising awareness about the importance of personal health.*
- *Marianne Strickler Binder (Zug) for introducing new employees to important health and safety topics and assisting employees with ergonomic seating.*
- *Rich Toniazzo (RTP) for being instrumental in the implementation of the graphical lockout/tagout program at the Oral Solid Dose (OSD) site for the Manufacturing group and being an active member of the OSD Safety Committee.*
- *Andrea Tremontozzi (Cambridge) for establishing safe waste handling and personal protective equipment practices for the new Oral Drug Product Laboratory.*
- *Mike Casey, Mike Cole, Allison Groseclose, Jack Kane, Chien Lin, Keith Melchior and Mark Von Bokern (RTP) for identifying a more efficient lockout/tagout solution that uses a single isolation point rather than a traditional multipoint approach, setting a precedent for similar future equipment and process designs.*

## CREATING A GREAT WORK ENVIRONMENT

Health + Safety Commitment

### Enhancing EHS+S Culture in our Affiliate Offices

Biogen provides a safe and healthy workplace for all of our employees at each of our locations. In 2014, we created the *EHS+S in Affiliate Offices Guide* to tailor the relevant aspects of our global health and safety program to these smaller, office-type environments where occupational hazards are relatively low. Because our affiliate offices often do not have dedicated health and safety managers on-site, we created an assessment process to complement the guide. During 2015, we will enlist a third-party consultancy to assess about half of our affiliate office locations, which will account for about 90 percent of our affiliate-office employees.

### Safeguarding Contractors and Employees

**Contractors** – Our commitment to a safe workplace benefits both our employees and the contractors working within our facilities. In 2014, our incident rate was 2.4 across our three major sites and more than 407,000 subcontractor hours. This number stems from two Lost Time Accidents and three recordable injuries. While our rate in 2014 is not quite as good as the previous year, Biogen continues to rank better than the industry average for contractor safety.

**Employees** – Overall, our employee safety record has improved over time. In fact, our occupational safety performance continues to be in the first quartile of companies in the biopharmaceutical industry. There will be individual years when the Days Away Case Rate (DACR) or Accidents per Million Miles (APMM) rates increase, but we expect that the trend of decreased rates will continue over time. While our DACR appreciably deteriorated in 2014, we believe the systems in place are still effective, and that no major structural or

systems-related changes are needed. Our goal to reduce our DACR by 80 percent by 2020 (compared to our 2006 baseline) is still relevant and achievable.

**Fleet** – In 2014, our Accidents per Million Miles rate increased over 2013. It is Biogen's policy to provide a company vehicle to field-based employees who have an ongoing business need for ground transportation in order to perform their job duties effectively.

Biogen is committed to promoting a high level of safety awareness and responsible driving behavior in our employees. Employees are required to attend behind-the-wheel driver training, drive and maintain the vehicle in a safe operating condition at all times.

### Health and Safety Performance

|                                         | 2012 | 2013 | 2014 |
|-----------------------------------------|------|------|------|
| Days Away Case Rate                     | 0.12 | 0.10 | 0.27 |
| Accidents per Million Miles (U.S. only) | 9.57 | 7.72 | 8.7  |

About Biogen

Citizenship  
& Sustainability

Improving Lives

Rethinking Resources

***Acting Responsibly***

About This Report

GRI G4 Index

## INCIDENT-INJURY FREE IN HILLERØD



Incident-Injury Free (IIF) is a personal and organizational commitment to create an environment absent of incident and injury. Our Hillerød location adopted IIF in 2014 on a continuing basis for our water Purification 2 Harvest 2 project. IIF is not a program, a campaign or a “zero injuries” project. It is a journey and mindset that brings safety to the next level by making it personal to all employees and company leadership. The IIF approach takes people beyond simply learning how to avoid what they don't want to happen to learn how to achieve what they do want to see happen.

### Promoting Employee Wellness

We work to create robust wellness initiatives focused on advancing a work environment that supports healthy lifestyles. The Global Wellness Program at Biogen builds on a simple premise – a person's health and well-being matters for a lifetime. This program employs strategies that aim to enhance our employee's physical, mental, emotional and financial well-being.

An important part of cultivating a healthy workplace is empowering employees with knowledge about their own health. We incent employees to take a health risk assessment and receive biometric screenings each year.

We invest in the well-being of our employees by encouraging them to use an array of company-supported wellness offerings, including state-of-the-art fitness centers on-site at all major locations; cafes with healthy dining options; walk-and-work stations and ergonomic instruction and support; free on-site nutrition counseling and biometric screenings throughout the year; on-site massage therapy and many educational and program opportunities targeted to specific health risks and lifestyles.

Individual locations also champion their own wellness programs that align with their resources and most prevalent health risk factors. Some examples from across our operations include:

- The Cambridge Wellness Center provides holistic well-being services, including fitness for duty evaluations, ergonomic assessments, immunizations and clinical tests.
- Our RTP Wellness Program offers employee activity groups that promote active lifestyles and weight loss and offers nutritional counseling, health seminars and other on-site health services.
- Employees in Denmark can take advantage of on-site health services including massage therapy and physiotherapy.
- Switzerland-based employees, primarily in Zug, have access to a growing number of wellness opportunities, including fitness classes, clubs and stipends, access to healthy food and ergonomic workspaces.
- At our major U.S. and international locations, we hold benefits fairs at which employees have their health and fitness levels measured.

## PRODUCT RESPONSIBILITY

### Responsible Supply Chain

Improving the lives of patients encompasses an array of measures to ensure that we source supplies and materials responsibly and protect the integrity of our products throughout their lifecycle, from production through final disposition. We do this through checks and balances within our company and in collaboration with others in the pharmaceutical supply chain.

All of Biogen's suppliers are subject to our Code of Business Conduct, [Values in Action](#), and must meet rigorous compliance standards for quality, as well as comply with applicable external laws and regulations. Currently we source the majority of our materials from regions that are not considered high risk from an environmental, social and governance perspective, such as the United States and Europe. Nonetheless, we work diligently to make sure our supply chain is of the highest quality.

For those vendors that supply products and services that relate directly to the safety and integrity of our products and the continuity of our manufacturing process, we employ self-assessment surveys to gauge corporate citizenship performance. Since 2011, we have processed over 65 surveys and are using this information to better understand supplier practices. We also intensified our focus on implementing a proactive supply-chain risk management process. This annual process assesses the risks associated with our supplier base from an environmental, social and governance perspective across multiple factors, including water risks. We have not identified any at-risk suppliers through this process.

### Pharmaceutical Supply Chain Initiative (PSCI)

[PSCI](#) is a group of major pharmaceutical companies that share a vision of better social, economic and environmental outcomes for everyone in the pharmaceutical supply chain, including improved conditions for workers, economic development and a cleaner environment for local communities. PSCI seeks to establish formal industry guidelines about ethics, labor, health and safety, the environment and management systems, and to support suppliers to build capacity to operate in a manner consistent with those expectations. The initiative is being facilitated by [Business for Social Responsibility](#) (BSR).

*All of Biogen's suppliers are subject to our Code of Business Conduct, [Values in Action](#), and must meet rigorous compliance standards for quality, as well as comply with applicable external laws and regulations.*

Biogen is an active participant in PSCI, and supports the Principles, which align with international frameworks and standards, including the United Nations Global Compact and the International Labour Organization. PSCI's initiatives include shared audits of major suppliers, conducted by third parties under PSCI direction, and supplier capacity building. This approach yields a broad array of critical information about the supply chain, provides guidance for suppliers and streamlines the process for both pharmaceutical companies and their suppliers.

## PRODUCT RESPONSIBILITY

Over the last three years, PSCI completed 27 joint audits and 60 shared PSCI audits. Audit results are available through the PSCI Online Supplier Directory, which gives PSCI members quick and easy access to audit reports and documents. PSCI also expanded its resources for building supplier capacity by creating a robust online resource library. To date, there have been 240 environmental, health, safety, labor and social-related standards and documents loaded into the Supplier Library.

PSCI held supplier events reaching over 200 suppliers in China in 2014 to promote suppliers' capabilities to operate in a manner consistent with the group's expectations. In September 2014, PSCI held a conference in Suzhou, China, to present its Principals for Responsible Supply Chain Management to leading suppliers of PSCI members. The conference focused on the following topics:

- An overview of the PSCI core Principles, with a focus on management systems, ethics and labor practices.
- An in-depth understanding of selected critical health and safety practices related to the management of process safety and industrial hygiene challenges in the pharmaceutical industry.
- An overview of the environmental laws of the People's Republic of China and selected environmental protection practices, with an emphasis on hazardous waste and wastewater management.

### **Supplier Diversity**

Biogen's supplier diversity commitment aims to have our employees, suppliers and patients embody the rich and diverse communities we serve. Our philosophy is based in the belief that by enriching our partnerships through the inclusion of small businesses and businesses owned by veterans, service-disabled veterans, LGBT individuals, women and minorities, we further support our company's economic growth, innovation and competitive advantage. In 2014, we spent more than \$143 million with diverse suppliers.

To learn more about our commitment to supplier diversity, please visit the [Supplier Diversity](#) page on our website.

### **Product Security and Brand Protection**

Biogen takes the issue of counterfeit, adulterated and compromised drugs very seriously and is committed to the highest standards of drug quality and patient safety. Counterfeits, adulterated and compromised drugs by their nature are of unknown safety and efficacy, thereby putting patients at risk. As part of our commitment to patients, Biogen is dedicated to protecting the safety and integrity of our products around the world.



## PRODUCT RESPONSIBILITY

Worldwide markets for biopharmaceutical products like ours are generally well regulated for the secure delivery of medicines, and we have great trust in the governments and commercial partners who help distribute our therapies. Our product security and brand protection program supports an effective, secure and resilient global supply chain, and the overall integrity of Biogen's medicines, for the protection and safety of our patients. Some of the measures Biogen is employing to deter, detect and disrupt the criminal counterfeiting of our medicines include:

- Implementing sophisticated technology into our product packaging
- Auditing and monitoring of supply chain partners globally
- Monitoring drug sales and potential threats to the supply chain with counterfeit or diverted product

Biogen supports the use of appropriate track-and-trace techniques to advance the security of the supply chain. Delivering safe, secure, effective products to patients remains our commitment.



### Product Stewardship

While ensuring the integrity of our products and their end-of-life disposition has long been a priority at Biogen, we have recently begun taking a more expansive and strategic view of this important topic. Our product stewardship efforts are aimed at minimizing adverse health, safety, environmental and social impacts and maximizing the benefits and value of our products throughout their full lifecycle. We view it as a core responsibility and an opportunity for innovation and ongoing improvement.

Our product stewardship approach encompasses decisions and activities at every stage of the product lifecycle and will continue to develop and focus on the following areas:

- Using green chemistry to reduce the use of energy, water and hazardous materials in our development and manufacturing processes
- Reviewing materials used in devices to reduce their environmental footprint
- Reducing the environmental impact of product manufacturing
- Disposing of products responsibly at end of life
- Ensuring that our products adhere to national and international regulations such as [REACH](#), [RoHS](#) and other industry-related standards, including those governing conflict minerals

## ENSURING ETHICAL BUSINESS PRACTICES

### Code of Business Conduct

Biogen conducts business ethically and with the highest degree of integrity. Sound corporate governance is essential to sustaining our growth and success as a company and to maintaining the trust and confidence of our stakeholders. This extends throughout all aspects of our business, from the way we conduct clinical trials to the way we market our products. All employees must comply with our Code of Business Conduct, [Values in Action](#), which guides decision-making throughout our organization. We update the Code as needed and require employees to participate in training sessions to ensure that they understand all the principles and practices that it sets forth.

#### *The Code covers six core principles:*

- We Respect Patients and Healthcare Professionals
- We Work Together As a Team
- We Are Fair and Honest With Our Business Partners
- We Protect Our Information and Assets
- We Never Compromise Our Integrity
- We Are Transparent

The Code was updated in 2013 to contain new sections that illustrate Biogen's ethical foundations, the real-life application of company values and resources for taking action. There are also new credo statements, as well as revamped chapters, including content on the importance of speaking up, putting patients first and ethical decision-making. The revised Code places particular focus on patients, one of our key values.

*Every function within Biogen works to advance our efforts to operate responsibly and sustainably.*

Every Biogen employee is required to be trained on our Code of Business Conduct. Our Anti-Bribery and Anti-Corruption Policy outlines standardized global operating procedures focused on grants and donations, sponsorships and fees for services and hospitality.

Responsibility for our performance begins with our board of directors. As of May 2015, the board has 11 members, three women and eight men, all of whom meet the independence requirements of the NASDAQ, with the exception of our CEO. The board's Corporate Governance committee sets our company's governance framework in our Corporate Governance Principles. For more information on our board and board committees, please see the [Corporate Governance](#) section of our website.

## ENSURING ETHICAL BUSINESS PRACTICES

### Corporate Citizenship Strategy

Our commitment to corporate citizenship and environmental sustainability is grounded in our Code of Business Conduct, *Values in Action* and the Biogen Sustainability Policy, adopted in 2011 by our Corporate Sustainability Council (CSC), a cross-functional team chaired by our CEO. *Values in Action* sets forth expectations for patient care, research ethics and human rights, among other topics.

The Sustainability Policy lays out our commitment to operating in a manner that reduces our environmental impact, improves social conditions and promotes economic prosperity. The Policy also requires the company to develop a long-term corporate citizenship strategy, including goals, objectives and targets, and an annual report on our progress. Every function within Biogen works to advance our efforts to operate responsibly and sustainably. Each function develops strategic plans that are approved by management, and in certain cases, by the board of directors.

### Payments to Investigators

To ensure the integrity of our research, we employ stringent guidelines in identifying and contracting with investigators (physicians and other personnel) who implement the clinical trials sponsored by Biogen. We also conduct extensive capability assessments to determine whether investigators are able to comply with the requirements of the protocol. We require both investigators and the institutions that employ them to review the services they

will perform in conjunction with a trial and agree to an associated budget and payment structure. Biogen conducts fair market value assessments to ensure that investigators are paid fairly for their work conducted. We also have policies that require investigators to disclose any financial interests in our company, thereby reducing the potential for conflicts of interest.

### Animal Welfare

In fulfilling its mission to improve human health worldwide through the discovery of therapeutic compounds – and to ensure their efficacy and safety for use in humans – Biogen uses insights that can be acquired only through studies involving the use of certain animals. In many cases, this is essential to determining the therapeutic relevance of new research approaches for human diseases.

Biogen is at times required by standards of scientific best practice, or by government agencies charged with the protection of public health, to sponsor research that uses animals in order to determine the efficacy and safety of therapeutic compounds.

When required to sponsor research that uses animals, Biogen adheres to applicable national and international laws, policies and guidelines on the humane treatment of animals used in research, including but not limited to the Animal Welfare Act, the U.S. Public Health Service Policy, the National Institutes of Health and the Association for Assessment and Accreditation of Laboratory Animal Care (list of applicable regulations: <http://www.aaalac.org/resources/usregs.cfm>).

## ENSURING ETHICAL BUSINESS PRACTICES

### Responsible Marketing

We are committed to providing information that is accurate, supported by scientific evidence and presented honestly and fairly in every context. Our interactions with patients and healthcare providers are governed by all applicable laws and regulations, as well as by our Code of Business Conduct, *Values in Action*, and our Comprehensive Compliance Program. All applicable employees receive regular training and education programs regarding our marketing policies and practices.

We recently revised our Code of Business Conduct, *Values in Action*, among other actions, to update and improve on our policies regarding product information and promotion, as well as our interactions with healthcare professionals and organizations.

*All employees were required to take part in online and hands-on training, which used real-world examples to help bring these policies to life. We aim to ensure that all of our marketing materials are created and communicated in an ethical and responsible manner.*

All employees were required to take part in online and hands-on training, which used real-world examples to help bring these policies to life. We aim to ensure that all of our marketing materials are created and communicated in an ethical and responsible manner.

Our Product Review Committees are responsible for reviewing and approving marketing materials before they are distributed publicly. We have adopted a global policy that identifies general principles to be incorporated when global promotional materials are created, as well as standard operating procedures that are implemented by all Biogen offices throughout the world.



[Letter from Leadership](#)

[About Biogen](#)

[Citizenship  
& Sustainability](#)

[Improving Lives](#)

[Rethinking Resources](#)

[Acting Responsibly](#)

[\*\*About This Report\*\*](#)

[GRI G4 Index](#)

# *About This* REPORT

Biogen's annual Corporate Citizenship Report presents our citizenship and sustainability achievements, challenges and goals to our employees and outlines our ongoing engagement with patients and other key stakeholders.

## ABOUT THIS REPORT

This report was prepared in accordance with the [Global Reporting Initiative](#) (GRI) G4 Guidelines “Core” option and includes a substantial amount of information required of the “Comprehensive” option. The report constitutes a high degree of transparency and data inclusion.

Our Scope 1, Scope 2 and Scope 3 (business travel only) emissions were verified by [Trucost](#), in accordance with the AA1000 Assurance Standard (2008). All other Scope 3 emissions data were assured by [ERM CVS](#). Net Zero Carbon Footprint determined according to Biogen’s Carbon Neutrality Methodology assured by ERM CVS based on [ISO14064:3](#).

Data in this report covers our domestic and international companywide operations, including consolidated subsidiaries but excluding joint ventures, for calendar years 2012 through 2014, with an emphasis on 2014 activities. Some activities of note from the first half of 2015 are also covered. Our 2014 environmental data includes our main locations (Weston, Mass., Cambridge, Mass. and Research Triangle Park, N.C. in the United States and Hillerød, Denmark).

This report excludes one small entity, Neurimmune SubOne, which Biogen does not own but consolidates for financial reporting purposes.

All references to currency are in U.S. dollars. Biogen is responsible for the preparation and integrity of the content in this report. Through a system of internal controls, including a comprehensive verification process by internal subject matter experts, we believe this report accurately represents our corporate citizenship and sustainability initiatives. For more information on this report, send questions or comments to [patrick.hoy@biogen.com](mailto:patrick.hoy@biogen.com).

### Determining Material Issues

In late 2013 and early 2014, Biogen conducted a full Materiality Assessment to determine what citizenship and sustainability issues have the most impact on our company and are most important to key stakeholders. We have strived to include in-depth coverage of the most material topics within this report and/or on applicable sections of our website. We believe that these issues have remained largely consistent since the 2013/2014 Materiality Assessment and plan on periodically conducting assessments to ensure that we are addressing the issues most important to our company and our stakeholders. We have made some minor changes to our Materiality Matrix and Grid to reflect the following:

- The topic of Intellectual Property was deemed to be more significant to certain external stakeholders than we had indicated in our last report, based on additional secondary research we conducted in 2015.
- The topic of Diversity was moved further to the right in the Materiality Grid, reflecting the increasing emphasis we place on this important issue.
- The topics of Training and Development and Talent Attraction/Retention were combined under a single heading of Talent Management.

The topics included in this report have been affirmed by our Executive Vice President of Pharmaceutical Operations and Technology, John Cox, as being our most material citizenship and environmental sustainability issues.

## ABOUT THIS REPORT

We conducted our Materiality Assessment through a rigorous methodology that included the review of key guidelines set forth by respected external organizations. In all, we explored 37 topics. To populate the list of topics to include in our analysis, we referenced the Sustainability Accounting Standards Board (SASB) Biotechnology Sustainability Accounting Standard, which has its own rigorous materiality process; United Nations Global Compact's Ten Principles; The Ceres Roadmap for Sustainability; and the Dow Jones Sustainability Indexes.

*A detailed look at our material issues, including where the associated impacts occur and the relative level of control that Biogen can exert over these issues, is found in our Material Issues Grid*

We also conducted a review of topics covered by the following types of organizations: patient advocacy organizations in two of our main therapeutic areas, MS and hemophilia, and pharmaceutical and biopharmaceutical companies and associations.

Additionally, in 2014, we conducted a series of external interviews with representatives of three members of the investment community and six U.S.-based MS patient advocacy organizations for the specific purpose of informing the content of this report. Internally, in third quarter 2013, we conducted a materiality workshop with representation from virtually every area of our company and followed with

one-on-one interviews with more than a dozen Biogen subject matter experts, as well as reviewed an abundance of company literature and research. Based on these factors, the issues deemed as the most material to our company and to stakeholders are shown in the upper right quadrant of our Materiality Matrix (Figure 1).

A more detailed look at our material issues, including where the associated impacts occur and the relative level of control that Biogen can exert over these issues, is found in the Material Issues Grid (Figure 2). The full range of issues explored is found in Figure 3.

[Letter from Leadership](#)

[About Biogen](#)

[Citizenship & Sustainability](#)

[Improving Lives](#)

[Rethinking Resources](#)

[Acting Responsibly](#)

[About This Report](#)

[GRI G4 Index](#)

## 2014 MATERIALITY MATRIX

Figure 1



## 2014 MATERIAL ISSUES GRID

Figure 2



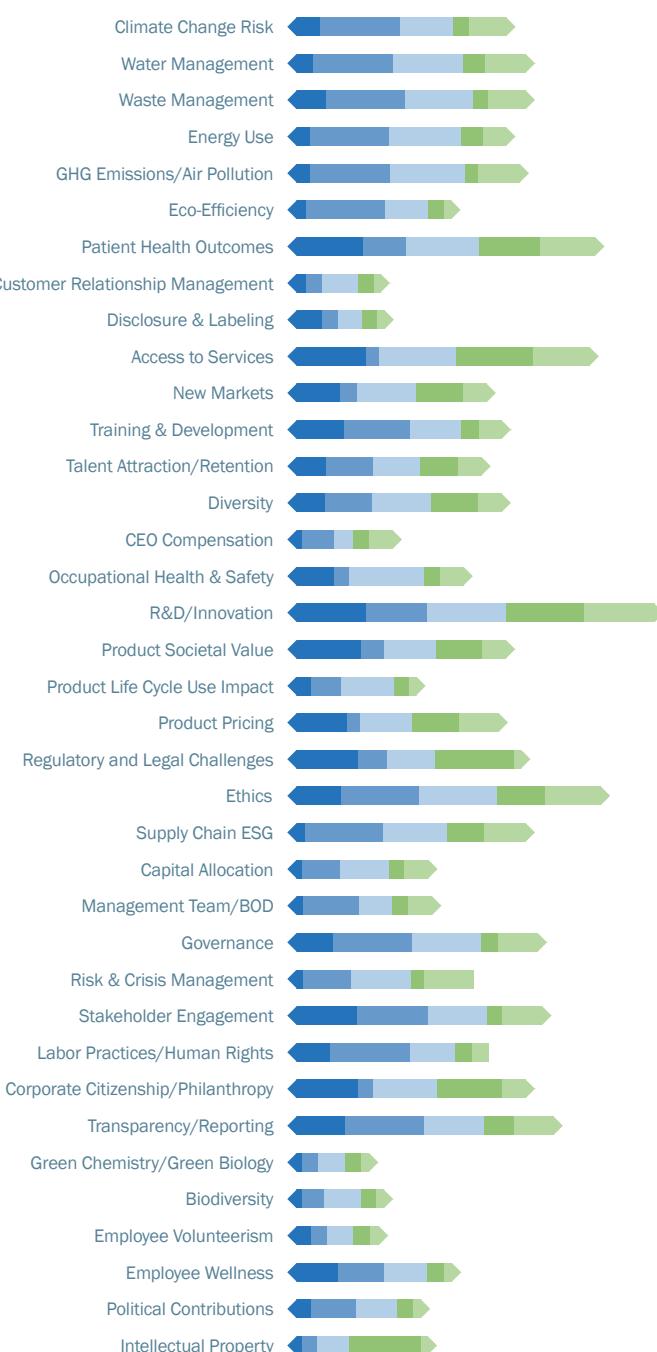
- ▲ BIIB has high control or influence
- BIIB has medium control or influence
- ▼ BIIB has low control or influence

- Impacts occur internally
- Impacts occur internally and externally
- Impacts occur externally

## FULL RANGE OF ISSUES/ IMPORTANCE TO KEY STAKEHOLDER GROUPS

Figure 3

■ Patient Groups ■ NGOS ■ Competitors ■ Associations ■ Investors



## GRI G4 INDEX

| GRI Indicator                 | Location and/or Description                                                                                                                                                                                                                                                                                                                                                                  | Page Number                                |
|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|
| <b>Strategy and Analysis</b>  |                                                                                                                                                                                                                                                                                                                                                                                              |                                            |
| G4-1; G4-2                    | <a href="#">CEO Letter; Citizenship &amp; Sustainability 2014 10-K</a> (Pages 22-31)                                                                                                                                                                                                                                                                                                         | 3-5; 12-15<br>Website                      |
| <b>Organizational Profile</b> |                                                                                                                                                                                                                                                                                                                                                                                              |                                            |
| G4-3                          | Biogen Inc.                                                                                                                                                                                                                                                                                                                                                                                  |                                            |
| G4-4                          | <a href="#">About Biogen</a>                                                                                                                                                                                                                                                                                                                                                                 | 10                                         |
| G4-5                          | World headquarters: Cambridge, Mass., United States<br>International headquarters: Zug, Switzerland                                                                                                                                                                                                                                                                                          |                                            |
| G4-6                          | <a href="#">About Us</a>                                                                                                                                                                                                                                                                                                                                                                     | Website                                    |
| G4-7                          | Publicly traded company listed on the NASDAQ Stock Exchange                                                                                                                                                                                                                                                                                                                                  |                                            |
| G4-8                          | <a href="#">About Biogen; Citizenship &amp; Sustainability; Improving Lives; Acting Responsibly</a>                                                                                                                                                                                                                                                                                          | 7-10; 14-15;<br>17-25, 28,<br>29-42; 62-64 |
| G4-9                          | <a href="#">About Biogen 2014 10-K</a> (Item 1, Pages 1-6)                                                                                                                                                                                                                                                                                                                                   | 7, 11<br>Website                           |
| G4-10                         | <a href="#">About Biogen; Acting Responsibly</a>                                                                                                                                                                                                                                                                                                                                             | 7; 75                                      |
| G4-11                         | Approximately 6 percent of our employees are under a collective bargaining agreement. All of these employees work in our Hillerød, Denmark, manufacturing facility.                                                                                                                                                                                                                          |                                            |
| G4-12                         | <a href="#">Citizenship &amp; Sustainability</a> (see value-chain diagram); <a href="#">Acting Responsibly</a>                                                                                                                                                                                                                                                                               | 13; 83-85                                  |
| G4-13                         | Biogen experienced significant growth from 2013 to 2014. Total revenues increased from \$6.9 billion to \$9.7 billion. We changed our name from Biogen Idec to Biogen. Biogen acquired Convergence Pharmaceuticals for \$200 million in cash and \$475 million in potential milestone payments. Additionally, in 2014, we launched ALPROLIX and ELOCTATE for hemophilia and PLEGRIDY for MS. |                                            |
| G4-14                         | Biogen applies the precautionary approach by achieving carbon neutrality, ensuring the safety of patients, and performing detailed risk analyses related to our operations.                                                                                                                                                                                                                  |                                            |
| G4-15, G4-16                  | <a href="#">Acting Responsibly</a> ( <i>Engaging with Stakeholders, Pharmaceutical Supply Chain Initiative, Animal Welfare; G4 Index – Labor Practices and Decent Work [DMA]</i> )                                                                                                                                                                                                           | 65-68, 87; 97                              |
| G4-17                         | <a href="#">About This Report 2014 10-K</a> (Pages F19-F30, F46-F56)                                                                                                                                                                                                                                                                                                                         | 90<br>Website                              |
| G4-18                         | <a href="#">Citizenship &amp; Sustainability; About This Report</a>                                                                                                                                                                                                                                                                                                                          | 13-15 ; 89-92                              |

| GRI Indicator                                     | Location and/or Description                                                                                                                                                                                                                                                                                                                                                                                                      | Page Number      |
|---------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|
| <b>Identified Material Aspects and Boundaries</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                  |                  |
| G4-19, G4-20, G4-21                               | Citizenship & Sustainability; About This Report                                                                                                                                                                                                                                                                                                                                                                                  | 14-15; 92        |
| G4-22                                             | Rethinking Resources (Status Change Leads to Innovation)                                                                                                                                                                                                                                                                                                                                                                         | 57               |
| <b>Stakeholder Engagement</b>                     |                                                                                                                                                                                                                                                                                                                                                                                                                                  |                  |
| G4-24, G4-25, G4-26,<br>G4-27                     | Improving Lives; Acting Responsibly; About This Report                                                                                                                                                                                                                                                                                                                                                                           | 33-40; 62-68; 91 |
| <b>Report Profile</b>                             |                                                                                                                                                                                                                                                                                                                                                                                                                                  |                  |
| G4-28, G4-29, G4-30,<br>G4-31, G4-32, G4-33       | About This Report<br><br>Biogen reports on its Corporate Citizenship commitment annually.<br><br>Our most recent report prior to this report was released in June 2014.                                                                                                                                                                                                                                                          | 90               |
| <b>Governance</b>                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                  |                  |
| G4-34                                             | Acting Responsibly<br><a href="#">Committee Composition and Charters</a>                                                                                                                                                                                                                                                                                                                                                         | 87<br>Website    |
| G4-35, G4-36                                      | Acting Responsibly                                                                                                                                                                                                                                                                                                                                                                                                               | 86-87            |
| G4-37                                             | <a href="#">Contact the Board</a>                                                                                                                                                                                                                                                                                                                                                                                                | Website          |
| G4-38, G4-39                                      | Acting Responsibly<br><a href="#">Board of Directors</a><br><a href="#">2015 Annual Meeting of Stockholders and Proxy Statement</a><br>(Pages 24-29)                                                                                                                                                                                                                                                                             | 86<br>Website    |
| G4-40                                             | <a href="#">2015 Annual Meeting of Stockholders and Proxy Statement</a><br>(Pages 24-29)                                                                                                                                                                                                                                                                                                                                         | Website          |
| G4-41                                             | Code of Business Conduct, <a href="#">Values in Action</a> (Page 26)<br><a href="#">2015 Annual Meeting of Stockholders and Proxy Statement</a> (Page 63)                                                                                                                                                                                                                                                                        | Website          |
| G4-42, G4-43                                      | <a href="#">Corporate Governance Principles</a><br><a href="#">Risk Committee Charter</a>                                                                                                                                                                                                                                                                                                                                        | Website          |
| G4-45, G4-46, G4-47                               | Acting Responsibly<br><a href="#">2015 Annual Meeting of Stockholders and Proxy Statement</a> (Page 29)<br><a href="#">Risk Committee Charter</a>                                                                                                                                                                                                                                                                                | 86-87<br>Website |
| G4-48                                             | Our Executive Vice President of Pharmaceutical Operations and Technology, John Cox, has affirmed that we have identified our most material citizenship and environmental sustainability issues in this report. A team of Biogen subject matter experts at the associate director, director, senior director and senior and executive vice president levels have approved the report content related to their areas of expertise. |                  |
| G4-49                                             | <a href="#">Contact the Board</a>                                                                                                                                                                                                                                                                                                                                                                                                | Website          |
| G4-51, G4-52, G4-53                               | <a href="#">2015 Annual Meeting of Stockholders and Proxy Statement</a><br>(Pages 12, 31-62)                                                                                                                                                                                                                                                                                                                                     | Website          |

| GRI Indicator                        | Location and/or Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Page Number             |                                                                             |
|--------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|-----------------------------------------------------------------------------|
| <b>Ethics &amp; Integrity</b>        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                         |                                                                             |
| G4-56                                | Code of Business Conduct, <a href="#">Values in Action</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                         | Website                                                                     |
| G4-57, G4-58                         | Code of Business Conduct, <a href="#">Values in Action</a> (Page 35)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                         | Website                                                                     |
| <b>Specific Standard Disclosures</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                         |                                                                             |
| GRI Indicator                        | Location and/or Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Page Number             | Assurance                                                                   |
| <b>Economic</b>                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                         |                                                                             |
| G4-EC1                               | <a href="#">About Biogen 2014 10-K</a> (Page 35, F2-F8)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 11                      | Pricewaterhouse Coopers LLP<br>(For details, see Page F65 of our 2014 10-K) |
| G4-EC2                               | <p>We have identified a number of potential risks associated with climate change, including:</p> <ul style="list-style-type: none"> <li>Physical risk to property and employees, including increased droughts, hurricane severity, power or communications failures and flooding, which could affect our operations.</li> <li>Operating and financial risks, including extreme weather events and rising sea levels, that could disrupt transportation of goods/services/employees and physically impact our R&amp;D and manufacturing sites. We could also be impacted financially if sectors we source from become subject to greenhouse gas regulations.</li> </ul> <p>Also see our <a href="#">CDP survey responses</a>.</p> |                         |                                                                             |
| G4-EC3                               | In the United States, we do not have any defined benefit plan obligations. Outside of the United States, we make government-mandated pension contributions.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                         |                                                                             |
| G4-EC6                               | <a href="#">Acting Responsibly (Diversity at Biogen chart)</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 75                      |                                                                             |
| G4-EC8                               | <a href="#">About Biogen; Improving Lives (Hack MS, Believe and Achieve, Patient Services); Acting Responsibly</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 7; 32, 36, 41;<br>62-64 |                                                                             |

| GRI Indicator                                                                                                                                    | Location and/or Description                                                                                                                                                                                                  | Page Number | Assurance                                                                                           |
|--------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-----------------------------------------------------------------------------------------------------|
| <b>Environmental</b>                                                                                                                             |                                                                                                                                                                                                                              |             |                                                                                                     |
| G4-EN1, G4-EN3, G4-EN4,<br>G4-EN5, G4-EN6, G4-EN8,<br>G4-EN9, G4-EN10,<br>G4-EN15, G4-EN16,<br>G4-EN17, G4-EN18,<br>G4-EN19, G4-EN23,<br>G4-EN26 | <p><i>Rethinking Resources</i><br/>           Note: All of our water is drawn from municipal sources. We do not believe we significantly affect any water sources, but continue to work to reduce our water consumption.</p> | 55, 58-60   | Water use,<br>energy use and<br>Scopes 1 and 2<br>CO <sub>2</sub> e emissions<br>assured by Trucost |
|                                                                                                                                                  | <i>About This Report (description of external assurance)</i>                                                                                                                                                                 | 90          | Scope 3 CO <sub>2</sub> e<br>emissions (business<br>travel only) assured by<br>Trucost              |
|                                                                                                                                                  |                                                                                                                                                                                                                              |             | All other Scope 3 CO <sub>2</sub> e<br>emissions assured by<br>ERM CVS                              |
| G4-EN24                                                                                                                                          | Biogen did not have any significant spills in 2014.                                                                                                                                                                          |             |                                                                                                     |
| G4-EN25                                                                                                                                          | <p><i>Rethinking Resources</i><br/>           We produce both chemical and medical waste, virtually all of which is incinerated for waste-to-energy purposes. We do not ship any waste internationally.</p>                  | 57          |                                                                                                     |
| G4-EN27                                                                                                                                          | <i>Rethinking Resources</i>                                                                                                                                                                                                  | 49-52, 57   |                                                                                                     |
| G4-EN29                                                                                                                                          | <i>Rethinking Resources</i>                                                                                                                                                                                                  | 53          |                                                                                                     |
| G4-EN30                                                                                                                                          | <p><i>Rethinking Resources</i><br/>           Biogen reports emissions of CO<sub>2</sub>e associated with its value chain.</p>                                                                                               | 58-60       | Scope 3 CO <sub>2</sub> e<br>emissions (business<br>travel only) assured by<br>Trucost              |
|                                                                                                                                                  | <i>About This Report (description of external assurance)</i>                                                                                                                                                                 | 90          |                                                                                                     |
|                                                                                                                                                  |                                                                                                                                                                                                                              |             | Scope 3 CO <sub>2</sub> e<br>emissions (business<br>travel only) assured by<br>Trucost              |
|                                                                                                                                                  |                                                                                                                                                                                                                              |             | All other Scope 3<br>CO <sub>2</sub> e emissions<br>assured by<br>ERM CVS                           |
| G4-EN33                                                                                                                                          | <i>Acting Responsibly</i>                                                                                                                                                                                                    | 83-85       |                                                                                                     |

| GRI Indicator                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Location and/or Description                                                                                                                                                                                                                                                                                                                          | Page Number   | Assurance |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|-----------|
| <b>Labor Practices and Decent Work</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                      |               |           |
| Biogen follows laws, regulations and international conventions related to labor practices and ensuring decent work, including the ILO Tripartite Declaration of Principles concerning Multinational Enterprises and Social Policy and the Organisation for Economic Co-operation and Development Guidelines for Multinational Enterprises. Specific commitments to Respect in the Workplace and Workplace Health and Safety are outlined in our Code of Business Conduct, <i>Values in Action</i> . Employees are responsible for upholding the code. Suppliers are also subject to the code. |                                                                                                                                                                                                                                                                                                                                                      |               |           |
| G4-LA2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <i>Acting Responsibly (partially reported)</i>                                                                                                                                                                                                                                                                                                       | 76            |           |
| G4-LA4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | At our Hillerød, Denmark, facility, the minimum notice period is based on seniority and specified in the collective bargaining agreement. Notice periods may vary anywhere from one to six months.                                                                                                                                                   |               |           |
| G4-LA6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <i>Acting Responsibly</i>                                                                                                                                                                                                                                                                                                                            | 81            |           |
| G4-LA10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <i>Acting Responsibly</i>                                                                                                                                                                                                                                                                                                                            | 69-71, 74     |           |
| G4-LA11                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | All Biogen employees receive a performance and career development review, annually.                                                                                                                                                                                                                                                                  |               |           |
| G4-LA12                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <i>Acting Responsibly (Diversity at Biogen chart); Board of Directors</i>                                                                                                                                                                                                                                                                            | 75<br>Website |           |
| G4-LA15                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <i>Acting Responsibly</i>                                                                                                                                                                                                                                                                                                                            | 83-85         |           |
| <b>Human Rights</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                      |               |           |
| G4-HR4, G4-HR5, G4-HR6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | We have not identified any owned operations or suppliers where there is a significant risk of human rights violations. Our major operations are not in areas considered to be at high risk. We are continuing to work to improve monitoring of human rights in our supply chain through participation in the Pharmaceutical Supply Chain Initiative. |               |           |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Code of Business Conduct, <i>Values in Action</i> (Page 15)                                                                                                                                                                                                                                                                                          | Website       |           |
| G4-HR11                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <i>Acting Responsibly</i>                                                                                                                                                                                                                                                                                                                            | 83-85         |           |
| <b>Society</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                      |               |           |
| G4-SO1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <i>Improving Lives</i>                                                                                                                                                                                                                                                                                                                               | 33-40, 43-47  |           |
| G4-SO3, G4-SO4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <i>Acting Responsibly</i><br>Code of Business Conduct, <i>Values in Action</i> (Page 29)                                                                                                                                                                                                                                                             | 86<br>Website |           |
| G4-SO6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <i>Acting Responsibly</i>                                                                                                                                                                                                                                                                                                                            | 67-68         |           |
| G4-SO10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <i>Acting Responsibly</i>                                                                                                                                                                                                                                                                                                                            | 83-85         |           |

| GRI Indicator                                                                                                                                                                                                                                          | Location and/or Description                                                                                                                                                                                                                                                                                                                                                                                                                                   | Page Number             | Assurance |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|-----------|
| <b>Product Responsibility</b>                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                         |           |
| G4-PR1                                                                                                                                                                                                                                                 | All of our products are assessed for health and safety impacts.                                                                                                                                                                                                                                                                                                                                                                                               |                         |           |
| G4-PR3                                                                                                                                                                                                                                                 | Due to the nature of our business, all of Biogen's products have stringent product information and labeling requirements. See the following for links to prescribing information for our marketed therapies:<br><a href="#">ALPROLIX</a> , <a href="#">AVONEX</a> , <a href="#">ELOCTATE</a> , <a href="#">FAMPYRA</a> , <a href="#">GAZYVA</a> ,<br><a href="#">PLEGRIDY</a> , <a href="#">RITUXAN</a> , <a href="#">TECFIDERA</a> , <a href="#">TYSABRI</a> |                         |           |
| G4-PR5                                                                                                                                                                                                                                                 | In 2013, Biogen engaged a third-party firm to measure patient and healthcare provider satisfaction with our company. While the results were quite positive, we consider the results proprietary and, as such, do not publicly report them.                                                                                                                                                                                                                    |                         |           |
| <b>Disclosures on Management Approach of Material Issues</b>                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                         |           |
| <i>For each issue described below, see Pages 14-15 for an explanation of why that issue has been identified as material to Biogen. Many of our most material issues are managed by multiple functions throughout the company, as referenced below.</i> |                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                         |           |
| GRI Indicator                                                                                                                                                                                                                                          | Location and/or Description                                                                                                                                                                                                                                                                                                                                                                                                                                   | Page Number             |           |
| Research and Development (R&D) and Innovation                                                                                                                                                                                                          | <i>Improving Lives</i>                                                                                                                                                                                                                                                                                                                                                                                                                                        | 17-20, 21-25, 26-27     |           |
| Patient Health Outcomes                                                                                                                                                                                                                                | <i>Improving Lives</i>                                                                                                                                                                                                                                                                                                                                                                                                                                        | 29-32, 33-40, 41-42     |           |
| Access to Treatment/Promoting Product Societal Value                                                                                                                                                                                                   | <i>Improving Lives; Acting Responsibly</i>                                                                                                                                                                                                                                                                                                                                                                                                                    | 41; 62-64, 65           |           |
| Ethics/Governance                                                                                                                                                                                                                                      | <i>Acting Responsibly</i><br><a href="#">Corporate Governance Principles</a>                                                                                                                                                                                                                                                                                                                                                                                  | 83-85, 86-88<br>Website |           |
| Stakeholder Engagement                                                                                                                                                                                                                                 | <i>Improving Lives; Acting Responsibly; About This Report</i>                                                                                                                                                                                                                                                                                                                                                                                                 | 33-40; 65-68; 90-92     |           |
| Citizenship & Philanthropy                                                                                                                                                                                                                             | <i>Improving Lives</i>                                                                                                                                                                                                                                                                                                                                                                                                                                        | 33-40, 43-47            |           |
| Environmental Impacts                                                                                                                                                                                                                                  | <i>Rethinking Resources</i>                                                                                                                                                                                                                                                                                                                                                                                                                                   | 49-57                   |           |
| Intellectual Property                                                                                                                                                                                                                                  | <a href="#">2014 10-K</a> (Pages 7-9)                                                                                                                                                                                                                                                                                                                                                                                                                         |                         | Website   |

## Independent Assurance Statement to Biogen Inc.

ERM Certification and Verification Services, Inc. (ERM CVS) was engaged by Biogen Inc. (Biogen) to provide assurance in relation to its Net Zero Carbon Footprint assertion as reported on page 52 of the *Committed to What Counts: 2014 Corporate Citizenship Report* for the calendar year 2014.

| Engagement Summary                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Scope:</b>                       | Whether Biogen's Net Zero Carbon Footprint assertion for the period 1 <sup>st</sup> January 2014 – 31 <sup>st</sup> December 2014 is, in all material respects, appropriately presented. The scope of assurance includes review of: <ul style="list-style-type: none"> <li>• Biogen's separately verified GHG Scope 1, 2 and 3 emissions as presented on 58 and 59 of the <i>Committed to What Counts: 2014 Corporate Citizenship Report</i></li> <li>• Biogen's Project Offsets, Renewable Energy Certificates and Guarantees of Origin (converted to tones co<sub>2</sub>e) as presented on 59 of the <i>Committed to What Counts: 2014 Corporate Citizenship Report</i>.</li> <li>• The underlying calculations to achieve a Net Zero Carbon Footprint.</li> </ul> <p><i>"Appropriately presented" means we have assessed the selected data for reliability which includes: completeness (whether all relevant sources were captured); comparability (across locations and over time); and accuracy of calculations (including the use of appropriate formula, conversion factors, estimates and assumptions).</i></p> |
| <b>Reporting criteria used:</b>     | Biogen Carbon Neutral Methodology                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Assurance standard used:</b>     | ISO 14064-3:2006: Specification with guidance for the validation and verification of greenhouse gas assertions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Assurance level:</b>             | Limited assurance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Objectives</b>                   | To determine the extent of conformity of the GHG assertion with the reporting criteria, including the GHG information system and its controls/management; and to confirm whether the GHG assertion is reported without material discrepancy and whether the verification activities provide the level of assurance agreed to.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Respective responsibilities:</b> | Biogen is responsible for preparing the data reported in the <i>Committed to What Counts: 2014 Corporate Citizenship Report</i> and for the collection and presentation of the information.<br>ERM CVS's responsibility is to provide conclusions on the agreed scope based on the assurance activities performed and exercising our professional judgement.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

### Our conclusions

Based on our activities, nothing has come to our attention to indicate that Biogen's Net Zero Carbon Footprint assertion for the calendar year 2014 presented on page 52 of its *Committed to What Counts: 2014 Corporate Citizenship Report* is not appropriately presented according to the reporting criteria.

### Our assurance activities

We planned and performed our work to obtain all the information and explanations that we believe were necessary to provide a basis for our assurance conclusions.

A team of GHG and assurance specialists performed the following key activities:

- Confirming that Biogen's reported GHG Scope 1, 2 and 3 emissions were independently verified.
- Cross checking that the purchased Project Offsets, Renewable Energy Certificates and Guarantees of Origin were retired/managed according to Biogen's Carbon Neutral Methodology.
- A review of the calculations undertaken, including cross checking of the primary data.
- An analytical review of the consolidated year end data

### The limitations of our engagement

The reliability of the assured data is subject to inherent uncertainties, given the available methods for determining, calculating or estimating the underlying information.

Based on the work outlined above, we have provided Biogen with a separate, confidential report detailing our assessment of its Net Zero Carbon Footprint assertion for the reporting year 2014.

18 June 2015

Melanie Eddis, Partner

ERM Certification and Verification Services, Inc.

[www.ermcvs.com](http://www.ermcvs.com) email: [post@ermcvs.com](mailto:post@ermcvs.com)

**ERM CVS**  
Informed Assured