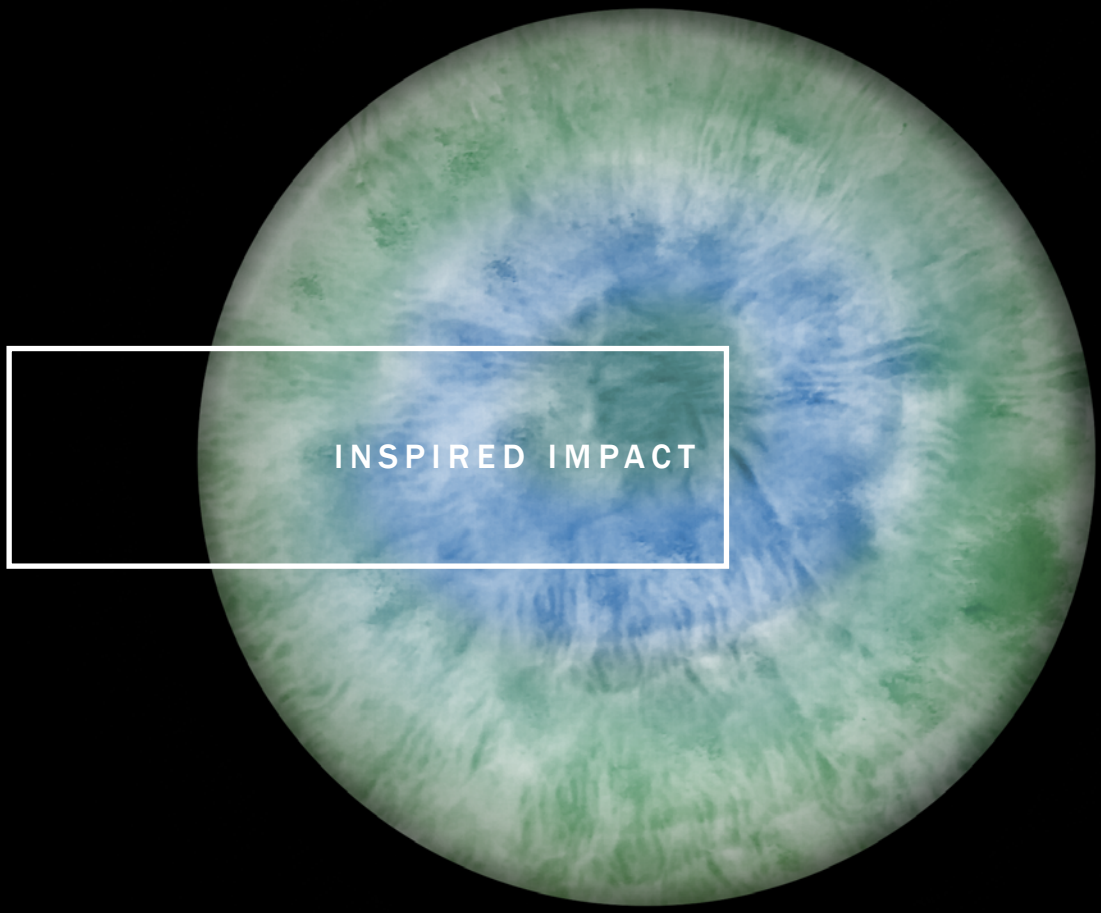

2015 CORPORATE CITIZENSHIP REPORT

Biogen

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LETTER FROM LEADERSHIP

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

At Biogen, we aspire to have the greatest impact on patients of any company in the history of our industry. Our work to develop transformative therapies for those suffering from devastating diseases builds upon decades of scientific research and a commitment to addressing some of medicine's most complex challenges. Over the past year, we have made decisions that sharpen our research focus to find effective treatments for neurologic diseases. We believe our approach, if successful, can have a profound impact on patients and society.

Working to solve difficult challenges is the foundation of both our research and our corporate responsibility.

In 2015, we took action on important issues: advancing our efforts to increase patient access to medicines; building a diverse and accepting culture that is inclusive of all backgrounds; creating innovative biotech-focused education programs and training; reducing our environmental impact and combating climate change through our commitment to carbon neutrality; and aligning our global business partners with our sustainability objectives.

"... we believe our approach, if successful, can have a profound impact on patients and society."

Over the past year we took several important steps to help patients around the world gain access to the therapies they need. We brought our first biosimilars to market, reducing cost barriers that can impede patient access to treatments for autoimmune diseases. And we produced and distributed 25 million international units of hemophilia therapy in countries across Africa, Asia and South America.

Our more than 7,000 Biogen employees around the globe bring unique experiences and perspectives that push us to expand our citizenship goals. As an extension of our work on diversity issues, our company last year initiated a major effort to better understand and improve health outcomes for underserved patient populations. Through data mining, awareness building and cultural competency, we are finding insights that are helping us reach these underserved communities, as we work to improve health information and increase engagement so we may better understand the challenges these communities face and achieve better results for patients.

We also marked our second year as a carbon neutral company, part of our focus on combating climate change and responsibly managing resources. Through efforts to reduce the carbon intensity of our operations and invest

in environmental projects, we have effectively neutralized all the carbon emissions associated with our business, including our supply chain. We are bringing innovation to biologics manufacturing by implementing new technologies and approaches that will provide a sustainable model for future plants. And we are launching new environmental programs that we expect will move us beyond our "net zero" pledge, as we work with a variety of industry consortia to demonstrate the vital role businesses can have in addressing global environmental issues.

Through the Biogen Foundation and our Community Lab program, we continued our support of science education with global initiatives focused on teacher training and increasing student interest in biotechnology, science and medicine. Across all of our locations, Biogen employees participated in hundreds of volunteer service projects throughout the year, culminating in our annual "Care Deeply Day." Our employees also personally donated millions of dollars to nonprofit organizations – all matched by Biogen – to provide resources for natural disaster relief, humanitarian aid and development of local communities.

It is a privilege to lead an organization that has a collective commitment to taking on some of the hardest challenges in medicine, and I am inspired by colleagues around the world who are finding new and innovative ways to extend that commitment to better our communities, our environment and society. We are all proud of the recognition received in 2015 for our sustainability leadership, though we know there remains much to do. At Biogen, we recognize that *inspired impact* extends beyond the therapies we make and to the world in which we live.

"I am inspired by colleagues around the world who are finding new and innovative ways ... to better our communities, our environment and society."

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

01 ABOUT BIOGEN

Breaking Wave anamorphic kinetic sculpture, Biogen headquarters lobby

Our mission to have the greatest impact on patients of any biotechnology company in the history of our industry inspires each of us to make a difference – for people living with serious disease, for our employees, in our communities and for the environment.

One of the pioneers in biotechnology, Biogen today has the leading portfolio of medicines to treat multiple sclerosis (MS) and is at the forefront of neurology research with a pipeline of potential groundbreaking medicines for conditions including Alzheimer's disease, Parkinson's disease, amyotrophic lateral sclerosis (ALS) and spinal muscular atrophy (SMA).

As we enter a transformative period in neurology, Biogen is driving a deeper understanding of disease biology and working to develop life-changing treatments for the millions of people suffering from these

BIOGEN AT A GLANCE

25M
IUs OF HEMOPHILIA THERAPY DISTRIBUTED OF THE
1 BILLION
PLEDGED IN PARTNERSHIP WITH SOBI OVER 10 YEARS

carbon neutrality
THROUGHOUT OUR VALUE CHAIN
SECOND CONSECUTIVE YEAR*

70 countries with product distribution

~25% of revenue reinvested in R&D over the past decade

HUMAN RIGHTS CAMPAIGN FOUNDATION
BEST PLACES TO WORK
2016 for LGBT Equality
100% CORPORATE EQUALITY INDEX

ROBECOSAM Sustainability Award Gold Class 2015

BIOTECH INDUSTRY LEADER: DOW JONES SUSTAINABILITY WORLD INDEX

*Biogen has neutralized the carbon footprint associated with its operations and throughout its value chain through greenhouse gas emissions reductions across operations and our supply chain and the purchase of offsets and renewable energy credits (RECs).

conditions. The company is also focused on developing therapies for rare genetic disorders and high-quality biosimilars for autoimmune conditions. In 2016, Biogen announced that it will spin out its leading portfolio of hemophilia assets into a new company dedicated to finding new treatments and potential cures for the disease.

Led by world-class research and development, Biogen uses novel science and leading-edge technologies to discover, develop, commercialize and manufacture transformative therapies for patients with few or no treatment options.

For nearly two decades Biogen has led in the research and development of new therapies to treat MS, including the most prescribed oral treatment in the world. We are now applying our neurological expertise to solve some of the most challenging and complex diseases of the brain, including Alzheimer's disease, Parkinson's disease and ALS.

To uncover new insights into human biology, Biogen employs cutting-edge technologies to discover potential treatments for rare and genetic disorders. These include efforts to transform care for hemophilia through treatments that provide prolonged protection from bleeds; create potentially life-changing therapies for infants and children with SMA; and explore entirely new ways to treat disease through gene therapy.

To ensure worldwide availability of treatments to the patients who count on them, Biogen is working to revolutionize biologics manufacturing, developing some of the industry's most advanced plants and processes. This expertise is used to produce both Biogen's own therapies and high-quality biosimilars that expand patient access to lower-cost medicines.

Key Locations

NASDAQ Global Select Market	BIIB
Global Headquarters	Cambridge, Massachusetts (MA) United States
International Headquarters	Zug, Switzerland
World-Class Manufacturing Facilities	Cambridge, MA, United States Hillerød, Denmark Research Triangle Park (RTP), North Carolina (NC), United States Solothurn, Switzerland (under construction)

Biogen offers therapies globally through direct affiliate presence in more than 30 countries and a network of distribution partners in more than 50 additional countries. See our website for a list of our global locations.

EXTERNAL RECOGNITION

Dow Jones Sustainability World Index
Biotech industry leader – Gold Class

Dow Jones Sustainability North America Index
Sixth consecutive year

Global 100
Named as one of the world's most sustainable companies by research firm, Corporate Knights

Newsweek
Ranked among world's top green companies on Green Rankings

Golden Peacock Award for Corporate Responsibility
Recognized for sustainability excellence by the Institute of Directors, India

100 Best Corporate Citizens
Named to 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 for LGBT equality

Women Corporate Directors: Visionary Award for Innovation in Shared Value
Honored for Biogen's Raising the Bar initiative

New York Stock Exchange: Corporate Champion Award
Second consecutive biannual recognition for leadership on women's inclusion in boards

Boston Globe
Named as one of 51 "game changers" changing the way we live and work

Triangle Business Journal
Life Sciences Award Winner 2015 – Public Company Category

50 Best Places to Work in America 2015
Named number 11 on the Business Insider/PayScale Annual Survey

Great Place to Work Institute*
European Union, Germany, Italy, Portugal, United Kingdom

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

BIOGEN MARKETED THERAPIES

(As of June 2016; See our website for information on our therapies)

Multiple Sclerosis		Hemophilia	Partnered Therapies	Biosimilars
AVONEX®	FAMPYRA®	ALPROLIX®	GAZYVA®	BENEPALI®
PLEGRIDY®	TECFIDERA®	ELOCTATE®	RITUXAN®	FLIXABI®
TYSABRI®	ZINBRYTA™			

The same determination that drives our science is reflected in our corporate citizenship and sustainability commitment. As a company, we are focused on enhancing access to therapies, improving science education, providing humanitarian relief, maintaining carbon neutrality, and creating a company where all employees can pursue their passion while making a difference in the lives of the patients we serve.

Citizenship Strategy: Oversight and Governance

As a leading biotechnology company with a focus on human health, we passionately believe that our commitment to improving lives and health outcomes goes beyond just the therapies we provide and extends to doing our part to help resolve critical social and environmental challenges that we face as a society. Considering all company activities through the lens of our citizenship principles is not only good for society and the environment, but also for our business, our patients, our employees and our investors.

With major initiatives to minimize our climate impact, leverage the power of diversity and inclusion, provide humanitarian assistance, promote science education and empower our employees, we are committed to helping lead the way in addressing some of the world's most pressing issues.

We have set greenhouse gas (GHG) reduction goals that align with broader global efforts to prevent the earth's average temperature from warming to dangerous levels, and we will be better aligning these goals with the **Science Based Targets Initiative** eligibility criteria. And we're exploring ways to integrate the 2030 **United Nations (UN) Sustainable Development Goals (SDGs)** into our citizenship strategy moving forward.

We have also formed an alliance with MIT's Sloan School of Management to help companies embed sustainability into their organizations and are looking to see how we, as the biopharmaceutical industry, can help respond to key sustainability challenges. To this end, in 2015, we developed a white paper examining the role of biopharma companies in long-term environmental sustainability: ***2030 Outlook on Sustainability in the Biopharma Industry***.

KEY BIOGEN POLICIES, PRINCIPLES AND POSITIONS

- Anti-Bribery and Anti-Corruption Policy
- Climate Change Position
- Clinical Trial Transparency and Data Sharing Policy
- Code of Business Conduct: *Values in Action*
- Corporate Governance Principles
- Environmental Health and Safety Policy
- Human Rights Position
- Political Contributions Policy
- Pricing Principles
- Sustainability Policy

Many of these documents are available on our website: www.biogen.com.

Biogen Board of Directors (As of June 2016)

11 Members	8 Men, 3 Women 10 Independent Directors, including the Chairman, plus Biogen CEO George Scangos
Sustainability Oversight	Risk Committee of the Board of Directors

For more information on our board and board committees, please see the Corporate Governance section of our website.

The paper is based on collaboration between Biogen and sustainability leaders from multiple sectors. Inspired by the SDGs, this work takes a long-term view in answering questions regarding the future of biopharma, its impact on the environment and the attendant risks and opportunities. We hope to utilize this as a way to begin conversations with others within biopharmaceutical companies.

We are also committed to having our data and progress against goals assured by respected third-party sources.

Guiding our Vision from the Top

The vision, commitment and oversight for corporate citizenship and sustainability at Biogen starts at the top. The **Risk Committee** of the Biogen Board of Directors oversees the company's risk governance framework and infrastructure. In 2015, this committee convened five times and discussed critical topics such as information technology, cybersecurity, environmental, health, sustainability and other material risks.

At the executive management level, citizenship and sustainability is overseen by the Citizenship Executive Council, which is chaired by our CFO and includes the CEO and several executive team members. Among other duties, the committee serves as a centralized, decision-making entity that encompasses all aspects of Biogen citizenship and sustainability efforts, including setting strategy, approving policies and positions, influencing and undertaking critical business actions, advancing leadership and cascading our commitment throughout the organization.

Our commitment is grounded in our Code of Business Conduct: *Values in Action*, the Biogen Sustainability Policy and other related policies and position statements. *Values in Action* sets forth our belief in ethical business conduct, compliance, accountability and transparency, 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 and maintain a long-term corporate citizenship strategy, including goals, objectives and targets, and an annual report on our progress. It also sets forth expectations for our suppliers, who are bound to the same business principles as Biogen.

"SHIFTING" BUSINESS TOWARD SUSTAINABILITY

Biogen and the **MIT Sloan School of Management** (MIT Sloan) have formed a new coalition with Valutus, CSRHub, MIT Sloan Management Review and MIT Press to make it easier for companies to integrate sustainability into their business. One of the ways this new alliance will advance organizational sustainability is through the development of an online platform known as SHIFT (Sustainability, Help, Information, Frameworks, and Tools). This platform will help consolidate and augment the fragmented and often lacking frameworks and tools that address corporate sustainability.

"We can make sustainability a lot easier," says Jason Jay, Senior Lecturer at MIT Sloan and Director of the Sustainability Initiative. "A key contribution to the field could come from thoughtful review and curation of the resources already developed, and investment in a few critical gaps. Our collaboration with a sustainability leader like Biogen will help to ensure these tools are vetted and validated, providing even further value and authenticity, and a test-bed for many of these concepts."

Biogen will serve as a catalyst and a living laboratory to help build analytical tools like SHIFT. We are also helping to build sustainability curriculum for the next generation of scientists and engineers, who currently may not be getting the same kind of grounding in the business of sustainability as their MBA counterparts.

Supporting Sustainable Development Goals

In September 2015, nearly 200 countries took a major step forward in addressing some of the world's most pressing and intractable challenges by signing on to the UN SDGs. The SDGs comprise 17 goals and 169 associated targets that incorporate the economic, social and environmental dimensions of sustainable development. They were developed through a years-long collaborative effort between business, NGOs and governments.

At Biogen, we recognize the powerful role of business in making the SDGs a reality. We support all 17 goals and encourage all businesses to consider how they can contribute. We are refining our own citizenship strategy to align with the SDGs that are most relevant to our business. We are already actively working toward many of these goals – particularly those highlighted below – by virtue of the programs and practices we already have in place. As we build out our strategy, we will look to the underlying targets of the SDGs to inform our approach. In refreshing our materiality assessment (see below), we considered the applicable SDGs.

Good Health and Well-being: In addition to our daily focus on improving lives and health outcomes, we also strive to make our therapies accessible to more people and safeguard the health, safety and well-being of our employees. Learn more on *Pages 17 and 50,* respectively.

Quality Education: As a science-based company, we continue to support science education through our Community Lab and other programs. Learn more on *Page 38.*

Gender Equality and Reduced Inequalities: Emphasizing our long-standing belief that thriving and innovative workplaces are built on a diversity of experiences and backgrounds, our CEO, **George Scangos recently spoke out** in opposition of policies that exclude LGBTQ people from anti-discrimination protections. Learn more about our commitment to diversity and inclusion on *Pages 23, 48 and 53.*

TAKING CLIMATE ACTION

Climate change is a global challenge that requires action from all stakeholders in the global economy. As a science-based company, we support the conclusions of the International Panel on Climate Change (IPCC) and what was agreed upon at the COP21 Paris Agreement in December 2015.

2015 marked our second consecutive year as a carbon neutral company throughout our value chain. We have achieved this by reducing our operational carbon footprint and working with suppliers to do the same, then investing in external projects that are adding clean energy capacity to offset the rest of the emissions associated with our business. See ***Pages 25-30*** for more details.

Climate Action: We have neutralized the greenhouse gas emissions from our operations and our supply chain through reduction measures and investments in emission-reducing initiatives that offset what we have not yet been able to eliminate. Learn more on *Page 26.*

Affordable and Clean Energy: We have committed to and achieved the RE100 goal of obtaining 100 percent of our electricity needs from renewable sources through the use of third-party verified renewable energy credits. Learn more on *Page 26.*

Industry Innovation and Infrastructure: We are building a new manufacturing facility in Switzerland that incorporates green and healthier building design and technology, as well as advanced bioprocesses for significantly more productive manufacturing, to substantially reduce the environmental impact of manufacturing our products. Learn more on *Page 28.*

Focusing on What is Material

To support the most effective utilization of our efforts and resources, we regularly perform a materiality analysis to identify and prioritize the issues most critical to Biogen's sustained growth and most important to our stakeholders. This analysis is informed by both internal and external stakeholders and sources. We use findings from this analysis to guide our strategy, inform and prioritize our business initiatives and establish meaningful metrics against which to measure our performance.

Some of the external sources and guidance we referenced include the UN SDGs; the Sustainability Accounting Standards Board (SASB) Biotechnology Sustainability Accounting Standard, which has its own rigorous materiality process; UN Global Compact's Ten Principles; The Ceres Roadmap for Sustainability; the Dow Jones Sustainability Indexes; and the reports of peers and other sustainability leaders. We also interviewed patient advocacy organizations and members of the investment community to further inform the assessment.

In 2015-2016, we updated our materiality analysis with internal stakeholders, which confirmed that the three issues most material to Biogen and its stakeholders are:

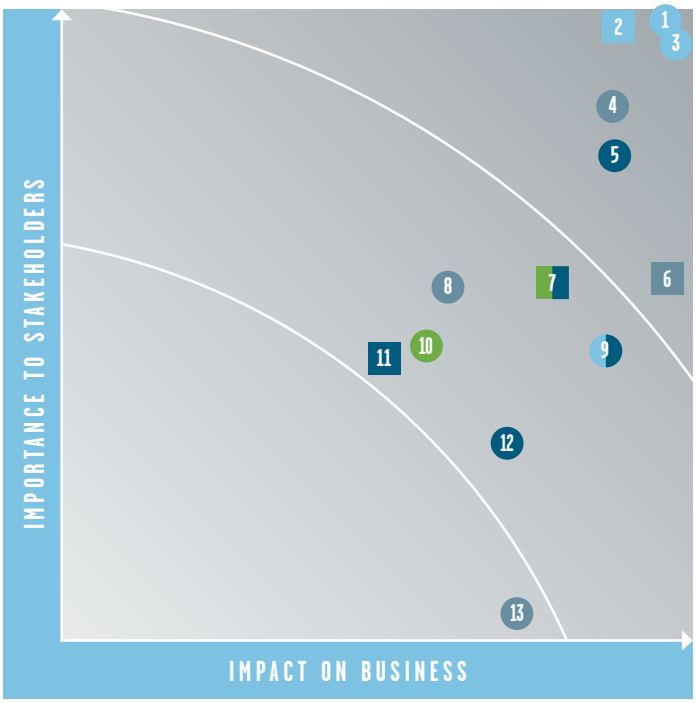
Research and Development (R&D) and Innovation – As a company committed to visionary science and new therapies for diseases with few or no treatment options, R&D is central to everything we do. Our focused approach and commitment to R&D – where we annually invest around 20 percent of revenue – aims at meeting the critical needs of patients and society as we work to tackle some of the most challenging and debilitating diseases.

Patient Health Outcomes – Our company's success is ultimately determined by the health outcomes realized by the patients on our therapies. This includes evaluating the benefits of the therapies and the services we provide, managing potential side effects, product safety and labeling, and product security. The benefits of our treatments may include improving 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.

Access to Treatment/Pricing/Healthcare-System Cost Burdens – 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 in countries around the world; educating physicians; adhering to a pricing philosophy that balances the needs of all stakeholders and society; demonstrating product efficacy and societal value to payers; offering patient financial assistance and helping patients find the healthcare providers they need; and considering compassionate use of therapies prior to approval.

These top issues are interdependent, with each activity impacting the other. See our 2015 Materiality Matrix below for a visualization of the relation between each of our material issues. The topics included in this report have been affirmed by our Citizenship Executive Council (see *Page 10*) as being our most material issues.

2015 MATERIALITY MATRIX

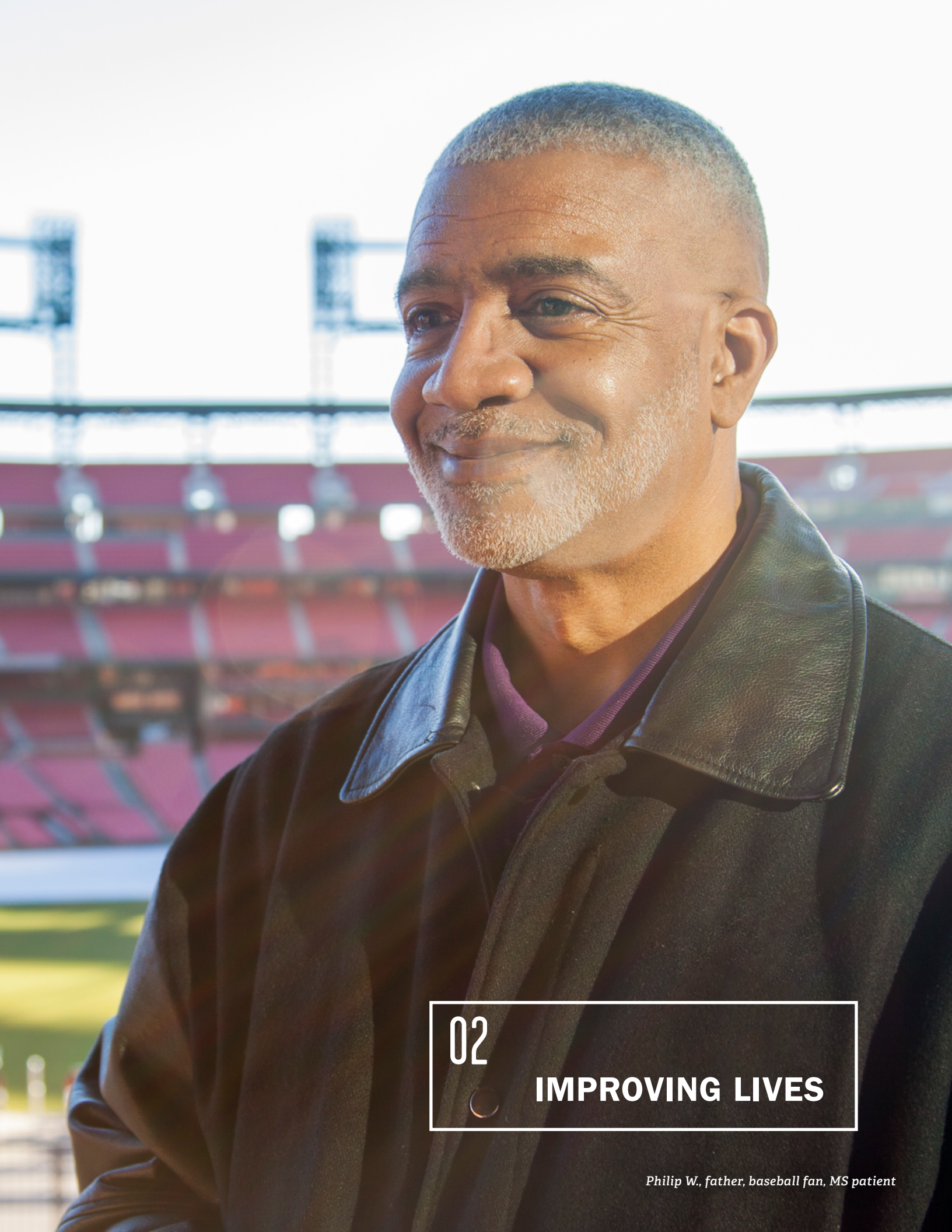


CONTROL OR INFLUENCE ○ High □ Medium

1 Patient Health Outcomes (E)
2 Access to Treatment/Pricing/ Healthcare-System Cost Burdens (E)
3 R&D/Innovation (I/E)
4 Stakeholder Engagement (E)
5 Ethics/Governance (I/E)
6 Intellectual Property (I/E)
7 Supply Chain ESG (E)
8 Corporate & Foundation Giving/ Community Engagement (I/E)
9 Diversity and Inclusion (I/E)
10 Environmental Impacts (E)
11 Regulatory/Legal (I/E)
12 Talent Management/Workplace Culture/Health & Safety (I)
13 Employee Volunteerism (E)

WHERE IMPACT OCCURS I = Internal E = External I/E = Internal/External

Improving Lives
Rethinking Resources
Driving Engagement
Acting Responsibly



02 IMPROVING LIVES

Philip W., father, baseball fan, MS patient

The passion of Biogen employees is seen at work in the lab and in improving the lives of patients. Through cutting-edge research and development, initiatives to enhance access to treatment, and dedicated patient advocacy and services, we strive to have an impact on patients suffering from devastating diseases, their families and caregivers.

Research & Development

Our researchers believe in the power of scientific understanding to tackle diseases for which there are few or inadequate treatments, working to develop novel medicines that can transform the lives of patients.

As we enter what we anticipate will be a transformative era in drug discovery and development, our commitment to groundbreaking research is expected to yield important results for these patients. Today we have a better understanding of disease biology as we focus on genetically-validated targets and use biomarkers and advanced imaging to evaluate whether compounds are having the desired biological effects. Combined, we believe these techniques significantly increase the possibility of drastically impacting the day-to-day lives of patients and their caregivers for the better.

We are building upon our unique experience from two decades in MS to expand into new areas of neurodegeneration – Alzheimer's disease, Parkinson's disease and ALS. In the next few years, we hope to see therapies emerge for many of these conditions previously thought impossible to treat – continuing our ongoing commitment to solving some of the most challenging diseases in medicine. We have numerous studies underway focused on areas where we have the potential to make a real impact for not just thousands but potentially millions of patients – slowing the progress of Alzheimer's disease, and potentially repairing the damage caused by multiple sclerosis.

We invest significantly in the therapies we create. In the past decade nearly 25 percent of our revenues have been invested in R&D.

Advancing Our Pipeline

This past year was a remarkable one for our R&D organization. We believe that our pipeline and our organization are stronger than they have ever been, and our neurology research is as advanced as any in industry or academia. Michael Ehlers, our new executive vice president of R&D, appointed in 2016, is a renowned neuroscientist who will bring increased focus in the discovery of new targets and developing new therapies for neurological and neurodegenerative disorders.

In 2015, we advanced the next wave of potential medicines through our pipeline, added important assets through business development, and bolstered efforts with innovative industry and academic partnerships and consortia.

Leveraging Information Technology (IT) for R&D

For many companies, IT is primarily an operational support function. At Biogen we are working at the cross-section of R&D and patient health outcomes by advancing the way computer technology is applied in the biopharma industry.

We are looking to not only find more sources of information, but better connect the dots between the data to reveal correlations that have the potential to help with faster drug discovery, better design of clinical trials and improved outcomes for patients.

High Priority Pipeline Programs

Alzheimer's disease	**Aducanumab (Aβ mAb)** - Antibody that binds to and may reduce amyloid plaques from the brain, potentially slowing the progress of the disease
Multiple Sclerosis	**Opicinumab (anti-LINGO)** - Remyelinating agent
	BIIB061 - Oral remyelinating agent
Spinal Muscular Atrophy	**Nusinersen** - Developed in collaboration with Ionis Pharmaceuticals
Neuropathic Pain	**BIIB074 (Nav1.7 inhibitor)** - Oral small molecule that aims to block a key receptor in the modulation of pain with potential indications for trigeminal neuralgia and sciatica
Inflammatory Bowel Disease	**Amiselimod (MT-1303)** - Potential indications for ulcerative colitis and Crohn's - In-licensed from Mitsubishi Tanabe Pharma Corporation

Visit our website for an overview of our entire current R&D pipeline

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.

The impact of this new approach is already paying dividends. In 2015, we mined vast amounts of public data to conduct an analysis of all of our current and potential U.S. patient recruitment sites. The ability to measure and compare the availability of patients, key investigators and properly equipped facilities enables us to accelerate patient enrollment for late-stage clinical programs.

We are also partnering with various organizations, such as **Open Targets**, a pre-competitive partnership based in Cambridge, U.K., to improve our success rate for discovering new medicines. Participating in these types of deep, ongoing interactions between academic institutions and industry organizations is helping us develop new and open approaches to drug development. We are able to leverage advances in genetic research and computational biology to more clearly define the role that specific drug targets may play in a disease, a key initial phase of drug discovery.

ADVANCING SCIENTIFIC RESEARCH IN DEVELOPING NATIONS

Seeding Labs aims to support scientists worldwide to fight global diseases, feed our growing population and protect the planet. The organization channels donations of equipment, time and talent where they will have the greatest global impact. Biogen was among Seeding Labs' earliest corporate supporters and, as of 2015, we ranked as their ninth largest donor, donating approximately 2.5 tons of equipment valued at more than $110,000.

Supporting Seeding Labs helps us empower researchers around the world with the tools they need, giving those scientists access to resources that may have otherwise been unavailable. In 2015, the Biology Department at Gulu University in Uganda and the School of Natural Sciences and Mathematics at Chinhoyi University of Technology in Zimbabwe both received shipments from Seeding Labs.

At Biogen, we go beyond the traditional view of IT as merely an operational enabler, harnessing both emerging technologies and vast bodies of ever-increasing data to discover correlations and extract insights that will ultimately transform our ability to deliver live-changing therapies to our patients.

Collaborating to Make an Impact

Biogen is committed to bringing novel therapies to market, focusing on hard-to-treat disease areas with significant unmet medical needs. But, we realize the challenges of taking on this task are bigger than any one company. That creates a critical need for collaboration and finding the right partners between research institutions, the public and private sectors, and across industries.

Biogen not only provides funding to leading research institutions, but our researchers work with them hand in hand to further understand the underlying causes and potential treatments for complex diseases. This unique approach ensures a diversity of ideas, perspectives and data, to tackle challenges that one company might not be able to solve on its own.

New Collaborations (2015-2016)

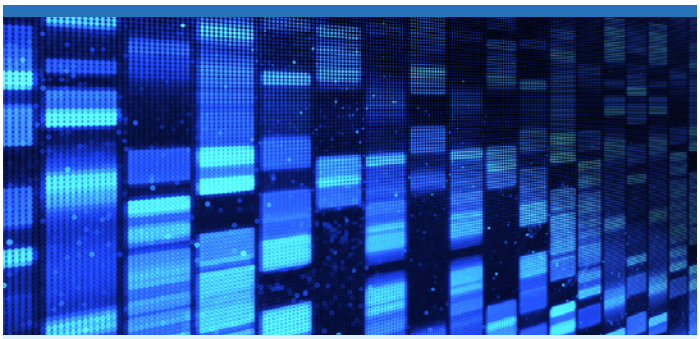
In addition to ongoing industry and academic collaborations, we introduced four new collaborations in 2015 and the first half of 2016, with Applied Genetic Technologies Corporation (AGTC), Centre for Therapeutic Target Validation (CTTV), Telethon Institute for Gene Therapy (TIGET) and the University of Pennsylvania. See our website for information on our **ongoing corporate and academic collaborations.**

AGTC – Biogen and **AGTC** announced a broad collaboration and license agreement to develop gene-based therapies for multiple ophthalmic diseases in July 2015. The collaboration focuses on the development of a portfolio of AGTC's therapeutic programs, including both a clinical stage candidate and a preclinical candidate for orphan diseases of the retina that can lead to blindness in children and adults. The agreement also includes options for early stage discovery programs in two ophthalmic diseases and one non-ophthalmic condition.

CTTV – In 2016, Biogen joined the **CTTV** in a pioneering public-private collaboration to improve the success rate for discovering new medicines. CTTV fosters deep, ongoing interactions between academic and industry members for the purpose of developing open, transformative approaches to selecting and validating novel targets in drug development. Biogen's membership followed the launch of the new CTTV Target Validation Platform, which helps researchers identify therapeutic targets for new medicines.

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.

University of Pennsylvania – In May 2016, Biogen announced a broad, multiyear collaboration with the **University of Pennsylvania** to advance gene therapy and gene editing technologies that focus on therapeutic approaches that target the eye, skeletal muscle and the central nervous system. This alliance will also explore next-generation gene transfer technology and genome editing as a potential therapeutic platform.



NEW ALS GENE IDENTIFIED

In collaboration with Columbia University Medical Center and Hudson Alpha Institute for Biotechnology, we identified a new gene 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 were previously implicated in the disease.

Since launching this collaboration less than three years ago, we screened the largest number of ALS patients in a single study, illustrating the power of our approach to focused collaborations with true pioneers in the academic community.

Helping Ensure Patient Access to Treatment

The creation of breakthrough medicines requires billions of dollars in research and large teams of people – often working for decades – to bring them to patients. But even with these significant investments, the odds are against successfully bringing a new drug to market. By some estimates, only **one in 5,000 compounds** that begin preclinical testing ever gain regulatory approval for use.

However, regulatory approval does not necessarily equate to patient access to treatment. Securing access involves complex negotiations with governments, regulatory agencies, third-party payers, pharmaceutical benefit managers, pharmacies and hospitals throughout the world. And it requires demonstrating to physicians and payers the benefits and value of our treatments. For newly introduced products, we must show that they offer sufficient benefits over current treatments and, in many cases, that the cost of the new treatment is consistent with the value it is bringing to patients and healthcare systems.

We continue to seek access to treatment for more patients and have increased transparency around our drug pricing principles.

"Several years ago, the reimbursement situation in Poland was challenging. Only 755 patients were getting reimbursed out of 50,000 applicants. Supported by a number of pharma companies, EMSP facilitated the development of the Polish MS Society from a small self-help group of volunteers to a professionally acting patient advocacy group. Through several awareness campaigns being supported by the media and members of the Polish Parliament, the Polish MS Society managed to remove some of the key hurdles that were limiting wider access to reimbursement."

CHRISTOPH T.
VICE CEO AND DIRECTOR OF EXTERNAL AFFAIRS, EUROPE MS PLATFORM

Developing and Publishing our Pricing Principles – In 2015, Biogen issued and published to our website a set of drug pricing considerations that strive to achieve an appropriate balance among the following three key principles:

- **Clinical Value:** We must understand the intrinsic clinical value of the product and what it is able to provide to patients in terms of altering the course of disease, generating positive health outcomes and improving quality of life.
- **System Impact:** We must evaluate the impact a therapy has on the entirety of the healthcare system, including the financial implications on payers and patients.
- **Stakeholder Returns:** We must recognize the need to fund Biogen's entire research enterprise at all levels – from basic research that advances scientific understanding to clinical development of new treatments – while at the same time providing sufficient returns to those shareholders who have invested in us and recognize the importance of groundbreaking research, even if it never results in a treatment.

For more information, see the **Pricing Principles** section of our website.

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

Conducting Comparative Effectiveness Studies – Ensuring and maintaining patient access to our treatments requires demonstrating to payers and physicians the efficacy and value of our products over other available treatments. It is also important to payers that want to control overall healthcare costs. While a given drug may cost more than a competitive product, its superior efficacy may reduce hospitalizations, emergency room visits and other costly activities.

In 2015, we developed an in-house analytics team dedicated to mining pharmacy and medical payment claims data and other sources to gather and analyze real-world data and issue comparative effectiveness studies. Such studies characterize the performance of our products in routine clinical practice and complement our clinical trial programs.

We reported on one of these studies in April 2016 at the 68th annual meeting of the American Academy of Neurology. This study drew upon a claims database and past clinical trials to confirm TECFIDERA's strong and sustained efficacy and effectiveness in newly diagnosed MS patients in both a real-world and clinical setting, demonstrating significantly lower annualized relapse rates relative to multiple other disease modifying therapies. Ultimately this information will be made widely available to payers, physicians, patients and patient advocacy groups.

Commissioning a Landmark MS Study in Europe – In Europe, governments are the primary payers of healthcare. With finite resources, these governments must balance what they spend on healthcare with myriad other obligations. In 2015, we commissioned a study that explored the direct and indirect costs of MS in nearly a dozen European countries and its impact on economies, employers and healthcare systems and on the quality of life of patients and caregivers.

We anticipate that the study will underscore the need for effective MS treatments to improve patient lives and reduce the burden of the disease on the healthcare system and the economy. We expect to report on the study at the annual congress of the European Committee for Treatment and Research in MS (ECTRIMS) in the fall of 2016.

Engaging Health Technology Assessment (HTA) Authorities in Clinical Trial Designs – Increasingly, we are initiating conversations with payers and HTA* authorities early in the drug development process. These formal

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

scientific advice programs have yielded great insights into the perceived value of the products in our development pipeline and the types of evidence needed to help increase their potential for reimbursement.

In 2015, we conducted a number of scientific advice programs. For example, we met with the G-BA, the health authority in Germany, to discuss Aducanumab, our drug candidate for treating Alzheimer's disease. We also met with the National Institute for Health and Care Excellence (NICE) in the U.K. to discuss opicinumab (anti-LINGO) for MS. In both cases, input from these valuable exercises was fed back into our R&D program to help generate the right data to meet these payers' expectations.

Heralding a New Era of Patient Access: Biosimilars

Addressing high unmet medical needs is the cornerstone of our company. We have extended this mission by pursuing the development of biosimilars, with the aim of reducing treatment costs while increasing patient access.

Biosimilars are a group of biologic medicines that are similar to currently available biologic therapies known as originators. Now that some of these originator medicines have reached patent expiry, regulators across the world are creating pathways to allow for similar versions – biosimilars – of originator biologics to enter the market.

Biosimilars are not the same as generic therapies. The term "generic" has a precise meaning when it comes to medications – it is limited to small-molecule medications made from synthesized chemicals with a fixed number of atoms and a known chemical structure. Biosimilars are much larger molecules derived from living cells, making them challenging to develop and manufacture.

Having successfully delivered complex originator biologics for more than 30 years, today Biogen is one of only a handful of companies with the leading manufacturing capabilities and the deep scientific expertise needed to produce consistently high-quality biosimilars of advanced biologics.

Since 2012, Biogen and Samsung Biologics have collaborated through **Samsung Bioepis Co., Ltd.**, our joint venture, to develop, manufacture and market biosimilars.

DELIVERING ON THE POTENTIAL OF BIOSIMILAR MEDICINES

According to research released in March 2016 by the **IMS Institute for Healthcare Informatics**, "greater acceptance of biosimilar medicines is expected to deliver savings of as much as $110 billion to health systems across Europe and the United States through 2020. The prospect of more affordable biologic options that are safe and effective opens up opportunities for health systems to expand access to more patients, and frees up resources for investment in new areas." In fact, the study, **Delivering on the Potential of Biosimilar Medicines: The Role of Functioning Competitive Markets**, also indicates that patient access to biologic treatments has grown by as much as 100 percent following the availability of biosimilars across the EU.

Patient access to biologic treatments has grown by as much as 100 percent following the availability of biosimilars across the EU.

Approval in the European Union – In January 2016, **approval was granted from the European Commission (EC) for BENEPALI**, an etanercept biosimilar referencing Enbrel®. BENEPALI has been granted marketing authorization in the European Union for the treatment of adults with moderate to severe rheumatoid arthritis (RA), psoriatic arthritis, non-radiographic axial spondyloarthritis and plaque psoriasis.

ENGAGING WITH PATIENT ADVOCACY ORGANIZATIONS

We engage with independent, nonprofit patient advocacy organizations, which provide a critical link to real-world patient experiences. From collecting insights that help us shape R&D; to partnering to improve disease awareness and access; to engaging on policymaking that encourage research, innovation and access; they help us understand the patient's perspective and support equitable access to treatment.

MS IN EUROPE

Initiative: GLOBAL MS PATIENT ADVOCACY SUMMIT

Focus: Access to treatment and disease education

Description: We hosted the fifth annual Patient Advocacy Summit in October 2015 – which included advocacy leaders from the EU, U.S., Canada and Brazil – to build and enhance relationships, increase disease awareness and understanding, and support appropriate access to treatment and care.

With: European MS Platform

MS IN THE UNITED STATES

Initiative: RAISING AWARENESS FOR MS

Focus: Disease awareness

Description: In March, we celebrated MS Awareness Month with a variety of activities, including community events and fundraising campaigns to support key patient advocacy groups and a social media initiative honoring MS patient support partners.

With: National MS Society, MSWorld, MS Foundation, CanDoMS, and the Multiple Sclerosis Association of America

HEMOPHILIA IN THE UNITED STATES

Initiative: CREATING ALTERNATIVES TO LIMITING AND LACKING SERVICES (CALLS)

Focus: Access to treatment

Description: Designed to better equip the bleeding disorders community to advocate for themselves and drive change, this initiative aims to create a data driven picture of how changes in insurance company policies are impacting their care.

With: Hemophilia Federation of America (HFA)

ALZHEIMER'S IN THE UNITED STATES

Initiative: STRIVING TO ACCELERATE TREATMENTS

Focus: Clinical development

Description: At the Accelerating Cures and Treatments Coalition for Alzheimer's Disease (ACT-AD) annual meeting in 2015, we participated in an open and science-based dialogue with patient advocacy organizations, regulatory bodies and other industry partners to discuss the scientific and regulatory considerations for advancing preclinical Alzheimer's disease therapeutic development. This opportunity aims to advance the field and provides a valuable opportunity to share information with all stakeholders in the Alzheimer's disease drug development space.

With: Accelerate Cures and Treatments for Alzheimer's Disease

SMA IN THE UNITED STATES

Initiative: UNDERSTANDING THE ROLE OF CLINICAL TRIALS IN DRUG DEVELOPMENT

Focus: Process and policy education

Description: We participated in the development of an educational resource booklet for the SMA community, which provides an overview of the process and importance of clinical trials in drug development, pathways to regulatory approval, including accelerated, and practical resources for those considering participating in a clinical trial.

With: CureSMA

SMA IN JAPAN

Initiative: OUTREACH FOR DISEASE AWARENESS

Focus: Disease awareness

Description: We collaborated on a media seminar on SMA to promote education and awareness about the disease. An SMA patient speaker and mother of a patient shared their stories to provide a true account of the patient and caregiver perspective.

With: Network for SMA (NESMA)

A DONATION TO TRANSFORM THE MODEL OF HEMOPHILIA CARE

In 2015, we dramatically increased reliable access to hemophilia factor for patients in developing nations. Through the culmination of three years of collaborative effort with SOBI and the World Federation of Hemophilia (WFH), we produced and distributed 25 million international units of hemophilia therapy to 15 countries, predominantly in Africa, Asia and parts of South America. In 2016, we expect to add 20 more countries as part of our commitment to produce and donate 1 billion international units of hemophilia therapy over 10 years. We have provided the largest single donation of hemophilia factor ever, which has served as a catalyst for the expansion of the WFH's long-standing Humanitarian Aid Program.

In May 2016, **approval was granted from the EC for FLIXABI**, an infliximab biosimilar referencing Remicade®. FLIXABI is indicated for the treatment of adults with RA, Crohn's disease, ulcerative colitis, ankylosing spondylitis, psoriatic arthritis and psoriasis.

Please visit our website to view safety information for **BENEPALI** and **FLIXABI.**

For more information see the **biosimilars section** of our website.

Improving Patient Health Outcomes

Traditionally, the drug development process has been solely the domain of the R&D organization. Over the last several years, however, Biogen has undergone a shift toward integrating other functions into the process, including IT, market access and patient advocacy. This approach gives us important insights used to design better clinical trials and ensure patient access.

Serving the Whole Patient

Biogen has built world-class Patient Services programs. Where available, programs such as **Above MS**, **MyELOCTATE™** and **MyALPROLIX™** help patients navigate the informational, emotional and logistical considerations that accompany living with a chronic disease and offer lifestyle content and advice aimed at improving quality of life.

These programs also help patients get started on treatments and comply with drug regimens so they have better overall outcomes. Patients also receive assistance through nurse educators, peer groups and other means. For eligible patients, these programs provide copay assistance and other financial support. Our goal is for no patient to go untreated based on financial limitations or insurance status.

Where local regulations permit, we seek to ensure that every patient who is prescribed a Biogen therapy can take advantage of our Patient Services process. While it may not be possible to hit 100 percent, we are working to support as many patients as possible.

Bringing Value to Patients and Caregivers

While great strides have been made in MS care over the past decade, the current state of evaluating patient progress can still be subjective. In order to continually demonstrate the value of our products, we work to generate real-world clinical evidence.

Our efforts in this area focus on the development of innovative tools and technologies specifically designed to generate standardized high-quality data as part of routine care that can be aggregated into a learning health system, to generate standardized data from daily patient interactions in a clinical setting. We believe such an approach will enable the MS community to learn from every clinic visit, meaning data from thousands of patients globally can be used to generate new insights into MS.

Two of our key initiatives include:

MS Partners Advancing Technology and Health Solutions (MS PATHs) – MS PATHs is a network of MS treatment centers within academic settings that seek to improve MS outcomes through real-world data and insight generation. Participating sites have agreed to institute standardized protocols for measuring patient outcomes and to anonymize, pool and share the resultant data. The ultimate goal is to understand what patterns lead to better health outcomes for patients and potentially to understand why two people who have very similar initial diagnoses may experience very different impacts over the course of their diseases.

In the near-term, patients benefit because their physicians will have robust, real-time data from these standardized assessments, giving them great insight into how or whether a particular treatment may be working, and physicians will have access to real-world data. The program is brand agnostic, meaning that patients do not need to be on Biogen therapies to participate.

The first treatment center to join MS PATHs was the venerable Cleveland Clinic. The goal is to have 10 of these centers that encompass thousands of patients.

MS Performance Test (MSPT) – MSPT is a new approach to quantifying MS-related disability. The MSPT is an innovative iPad-based tool that takes advantage of advances in computer technology, information technology, biomechanics and clinical measurement science.

The MSPT is based on the MS Functional Composite (MSFC) and provides precise, quantitative data on walking speed, manual dexterity, visual function and cognitive processing speed that is self-administered by the patient during their regular clinic visit. The tool will permit visualization of clinical data at the point of care and enable comparison of patient clinical status to longitudinal and normative patient data.

This is a potentially transformative approach for collecting MS disability outcome data for patient care and research.

APPLYING TECHNOLOGY IN NEW WAYS

We are using patient insights to develop and deliver innovative services that complement our therapies and have introduced a variety of technology-based tools.

A recent study by PatientsLikeMe and Biogen monitored walking activity in people with MS. Participants were also surveyed about their experience with the study and attitudes about using a fitness tracker.

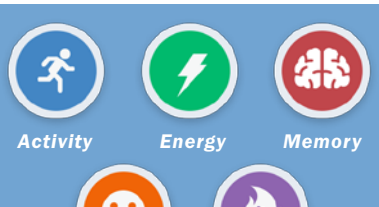
68% SAY THE DEVICE WOULD HELP THEM MANAGE AND TRACK THEIR MS

89% BELIEVE ACTIVITY TRACKING IS IMPORTANT FOR HEALTH MANAGEMENT

55% BELIEVE THAT THE DEVICE HELPED CHANGE THEIR HEALTH ROUTINE

47% HAD NEVER TRACKED THEIR ACTIVITY LEVELS

of 191 survey respondents



The MySidekick™ smart device app records mood, energy level and activities, helping MS patients track their health and prepare for conversations with their doctors.

Developed in collaboration with MicroHealth, a digital community for people with hemophilia, Micro8 helps connect patients, clinicians, caregivers, families, friends and other patients to share information and track infusions and patient progress via text, online and mobile.

micro8

MSPT – A potentially transformative iPad-based application for performing a series of tests that provides precise, quantitative data on walking speed, balance, manual dexterity, visual function and cognitive processing speed for MS patients.

Because the testing is computer-based, test performance can be analyzed and data can be directly entered into research or clinical databases. In the future, the MSPT could also be widely disseminated to clinicians in community practice settings who are not connected to clinical trial sites or to those who are practicing in rural settings, drastically improving access to standardized neurological assessment in MS. It represents a new paradigm for neuroperformance testing.

Supporting Underserved Patient Populations

A patient's background and culture can impact their access to information and therapies as well as their interactions with medical teams. We are collaborating with top healthcare providers to gain an understanding of the wide range of health disparities faced by patient populations worldwide and build our capacity to better serve all patients on Biogen therapies. This includes reducing need-based and educational disparities through data generation, partnering with patient advocacy groups to better reach and educate healthcare professionals and communities, and improving awareness of culturally competent approaches to enhance services to patients.

MS-UP (Underserved Populations) – We are committed to improving MS health outcomes among racial and ethnic minority populations in the U.S. through our MS-UP (Underserved Population) initiative. The goal of MS-UP is to improve access and raise the overall standard of care among underserved patient populations. Since 2015, Biogen has provided funding and support for a study published in *Neurology Clinical Practice* and hosted a visiting professor program in Cambridge on the unmet medical needs of minority patients living with MS in the United States.

In 2016, we are focusing efforts to develop a communication plan to support the National Minority Quality Forum's MS Health Index, and sponsoring projects to enhance understanding of the economic, philanthropic, and legislative opportunities to improve health outcomes for underserved minority patients.

Harvard/Massachusetts General Hospital (MGH) Disparities Leadership Program – Biogen leaders participated in the 2015-16 Disparities Leadership Program (DLP) conducted by Harvard Medical School and Massachusetts General Hospital to better understand the nuances of healthcare disparities. Biogen is the only biotech or pharmaceutical company to participate in the program, designed to help healthcare leaders understand and address healthcare gaps among diverse populations and achieve equity in a time of healthcare transformation around the world. The program focuses on providing strategies to help leaders identify and address these gaps, as well as the skills they need to implement these strategies and facilitate long-term organizational transformation. Since the program's launch in 2007, a total of 142 organizations from around the world have participated in the DLP's cutting edge leadership training.

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

For more information on our commitment to diversity and inclusion, see *Pages 48 and 53.*

03 RETHINKING RESOURCES

Realizing energy and water savings through manufacturing efficiencies in RTP

As Biogen continues to grow and provide access to treatment for patients, we remain committed to globally reducing our environmental footprint by maintaining our carbon neutral status and minimizing the amount of resources it takes to manufacture our therapies.

CARBON NEUTRALITY

72% REDUCTION IN CARBON INTENSITY

90% of goal met to reduce carbon intensity by 2020

69% REDUCTION IN WATER INTENSITY

86% of goal met to reduce water intensity by 2020

Carbon and water intensity goals based on 2006 baseline

ZERO WASTE TO LANDFILL

ISO 50001 certification

ACHIEVED FOR HILLERØD LOCATION

$1.2M+ in saved 2015 energy costs

DUE TO EQUIPMENT UPGRADES AT OUR CAMBRIDGE LOCATION

100% renewable electricity

THROUGH CERTIFICATES (RECS) FOR OUR U.S.-BASED FACILITIES AND GUARANTEES OF ORIGIN (GOs) FOR OUR HILLERØD FACILITY

61%

GLOBAL WASTE DIVERSION RATE

(composted, recycled, donated, or recovered for energy by anaerobic digestion)

20 SUPPLIERS ENGAGED ON CARBON REDUCTION

REPRESENTING

47% OF OUR SUPPLY CHAIN TOTAL GHG EMISSIONS

CARBON INTENSITY REDUCTION TARGET BASED ON

CONTEXT-BASED CARBON METRICS

METHODOLOGY

Biogen has neutralized the carbon footprint associated with our business and throughout our value chain through GHG reductions across operations and our supply chain and the purchase of offsets and renewable energy credits (RECs). Additionally, Biogen achieved and has maintained virtually zero waste to landfill for our manufacturing nonhazardous waste from our owned and operated facilities since early 2012.

Advancing Our Commitments

At Biogen, we have pledged to aggressively reduce our carbon, energy and water intensity by applying new and innovative approaches to our operations and manufacturing. We have neutralized our carbon footprint and joined forces with others leading the private sector on climate action. We are continuing to pursue zero waste to landfill. We have embraced and are implementing green and healthier building principles at our major facilities as we work to build the drug manufacturing plants of tomorrow.

We have set ambitious goals aimed at preserving and protecting the environment. Our GHG reduction goals, in particular, are science-based and align with broader global efforts to ensure that the earth's average temperature does not rise more than 2 degrees Celsius (that is the threshold at which scientists and the leaders of 195 nations in the COP21 Paris Agreement in December 2015 agree severe negative consequences will occur). In setting our carbon intensity reduction target, we used the Context-Based Carbon Metrics methodology developed by the **Center for Sustainable Organizations**. We are currently reviewing our target for improved alignment with the Science Based Targets Initiative eligibility criteria.

We are continuing to meet our year-over-year goal to remain a carbon neutral company throughout our value chain. And we are on track to meet our 2020 goals for carbon and water intensity, even though our intensities and absolute carbon emissions and water use increased slightly in 2015 due to integration of our newly acquired manufactured facility in RTP.

Leading the Way toward a Low Carbon Future

Climate change is a serious risk to human health and our business. The World Health Organization identifies climate change as "**the greatest threat to global health in the 21st century**." The direct and indirect impacts to health are already being felt around the world due to extreme weather events, the spread of infectious diseases and degradation of air quality.

Businesses must take responsibility for the GHG emissions from their operations and throughout their value chain. For us, this means implementing voluntary reductions

ACHIEVING CARBON NEUTRALITY

Biogen uses a three-pronged approach to maintaining carbon neutrality: measuring and continually improving the accuracy of emissions data, driving reductions internally and working with our suppliers, and investing in reputable renewable electricity instruments and carbon offsets.

In accordance with the GHG Protocol Corporate Standard, Scope 2 Guidance, we use the market-based approach to account for our climate impact associated with electricity, including the portion of our Scope 3 emissions associated with electricity consumption. The objective of this approach is to link purchasing decisions to impact, where the environmental benefit of renewable electricity is conveyed from a supplier to the customer. Since 2014, we have purchased renewable electricity certificates (RECs) for our U.S.-based facilities and guarantees of origin (GOs) for our Hillerød facility to cover 100 percent of our electricity needs. To mitigate against concerns of additionality, leakage and double counting, our purchases are certified against the Green-e® National Standard and European Energy Certificate System. In 2015, we purchased and retired these instruments from the following sources:

Wind in the United States, including:

- The KODE Novus I Wind Farm (Hansford County, Texas)
- Mesquite Wind Farm (Shackelford County, Texas)
- Horse Hollow II Wind Farm* (Taylor and Nolan Counties, Texas)
- Bull Creek Wind Farm* (Gail, Texas)
- Anholt Offshore Wind Farm (Denmark)
- Kraftwerk Gosgen Hydro Facility (Switzerland)

For our climate impact associated with combustion of fuels, including within our supply chain, business travel and employee commuting, we purchase a matching amount of carbon offsets certified against reputable standards such as the Verified Carbon Standard and American Carbon Registry. In 2015 we purchased and retired offsets from the following projects:

- New Bedford Landfill Gas (Massachusetts)
- Seneca Meadows Landfill Gas (New York)
- Johnston County and Gaston County Landfill Gas (North Carolina)
- Southtex Greenword Farms Landfill Gas (Texas)

* A portion of our investment 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.

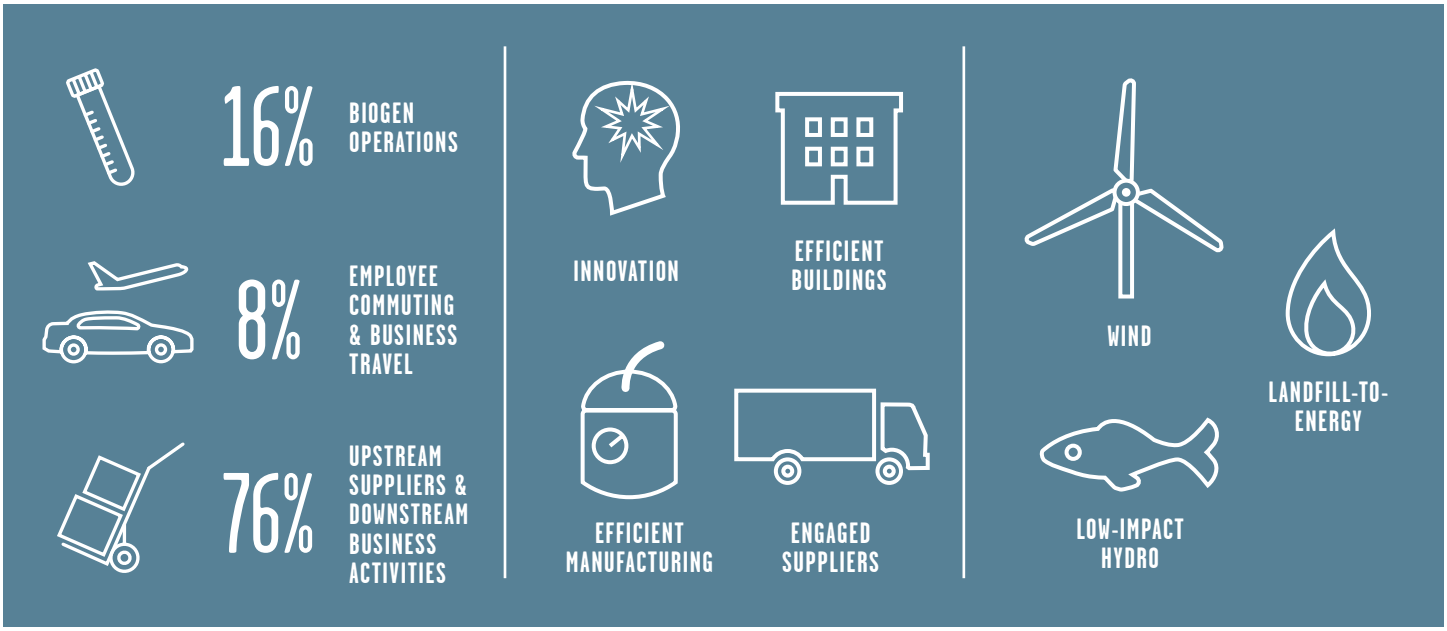
in GHG emissions by improving the energy efficiency of our operations and products, transitioning to low carbon energy and driving GHG reductions throughout our supply chain.

Maintaining Carbon Neutrality – Biogen became a carbon neutral company in 2014 and maintained that status in 2015 with a commitment to continue doing so moving forward. This is the result of a multiyear initiative that emphasizes measuring our emissions and improving data quality, reducing our operational carbon footprint, then working with suppliers to do the same. We then invest in environmental projects that offset the remaining carbon associated with our business – including our supply chain, business travel and employee commuting.

Our aggressive steps to reduce the carbon intensity of our operations are the result of: manufacturing innovation and process changes; generating our own cleaner energy and investing in green buildings; and advanced drug manufacturing. These investments have cut our operational carbon intensity by 72 percent since 2006. We continue to look for ways to reduce our reliance on purchasing offsets to maintain carbon neutrality. This includes exploring further opportunities to generate our own power through co-generation and renewable energy and continuing to support our employees with infrastructure that accommodates cleaner commuting such as driving electric cars and bicycling.

Starting in 2015 we began working closely with our suppliers to better understand their contribution to our carbon footprint and demonstrate our interest in their climate strategy. In 2016 we engaged with 20 suppliers, which collectively represented 45 percent of our supply chain carbon emissions. This initiative has resulted in more accurate accounting of our footprint, and an 8 percent decrease to our overall carbon footprint. In the future, we plan to expand our work with suppliers to focus on supporting their carbon footprint reductions through best practices sharing and identifying opportunities for improvement.

CARBON NEUTRALITY



MEASURE *our carbon footprint*

REDUCE *carbon emissions through internal innovation and supplier engagement*

NEUTRALIZE *remaining carbon footprint by funding credible renewable energy projects*

Carbon footprint of Biogen operations measured using the market-based approach.

We believe that leadership on climate change also means engaging stakeholders and being advocates for sustainable climate policies. To foster this, we are participating in advocacy initiatives with other like-minded businesses around the world to increase awareness that climate change is a business issue to be addressed. In 2015, we showed our support to a number of climate advocacy initiatives: RE100, the American Business Act on Climate Pledge, and We Mean Business coalition. We also joined the **EPA Green Power Partnership.** See *Page 38* for details. Moving forward, we are developing a comprehensive climate change strategy to generate a net positive impact for our business and society.

Manufacturing Innovation

A key focus within our manufacturing operation is to increase plant productivity while decreasing our environmental footprint – which we believe will provide major benefits in our continuing efforts to reduce the energy, carbon, water and waste impacts of producing our therapies. By successfully applying three-fold productivity improvements to two key candidates in the company's mid-stage pipeline, we have been able to produce more drug substance without increasing the company's water and energy consumption. We are exploring new approaches that have the potential to significantly decrease the water and energy resources needed to manufacture a dose of medicine. A third initiative linked to this goal is to decrease or eliminate the use of solvents in the manufacturing of a new class of drug compounds.

The centerpiece of this strategy is underway in Solothurn, Switzerland, where we are building a next-generation, large-scale biologics manufacturing facility. This facility will be one of the most advanced of its kind. When the facility is operational, we hope to produce 10 metric tons of antibodies per year, making it three times more productive than our other facilities currently in use.

Life Cycle Assessment – Through a screening life cycle assessment (LCA) to map and quantify the environmental impacts of the next-generation manufacturing process, we focused on the acquisition of material inputs, (e.g. water and energy) through the production of the drug substance that goes into our final products. Energy, carbon emissions and water were of particular interest to us during the evaluation.

The results of the assessment are very promising, indicating that the next generation manufacturing process is significantly less energy intensive per kilogram of output and is more water efficient. Based on the data and assumptions of projected energy demand for the new process, this screening LCA indicated that the next generation process may reduce energy demand by 79 percent, and GHG emissions by 83 percent per kilogram of output.

Based on the projections of water demand for the new process compared to the current process, the assessment indicated that the next generation process may be expected to use 44 percent less water per batch and 89 percent less water per kilogram of output.

Looking ahead, we will continue to update and refine the life cycle assessment to determine additional ways to drive efficiency and reduce the environmental impact of the new manufacturing process.

Innovative Design – We explored and adapted best practices from a number of different green and healthy international building and construction standards, including Leadership in Energy & Environmental Design (LEED), into all aspects of the Solothurn facility and site design.

We anticipate using a solar-powered heat recovery system, potentially providing the site's heating needs exclusive of the manufacturing process. It will recover heat from the chilled water cooling system and use that energy in the hot water

PLANNED SUSTAINABLE FEATURES AT SOLOTHURN

83% FEWER CARBON EMISSIONS

79% LESS ENERGY

89% LESS WATER

Per kilogram of output based on Life Cycle Assessment results


© Burckhardt+Partner AG

HEAT RECOVERY SYSTEM
fed by chilled water heat recovery supplemented by solar power

ELECTRICITY FROM WASTE-TO-ENERGY

Remediation of **FORMER BROWNFIELD SITE**

MODULAR BUILDING DESIGN *for adding future capacity*

Open manufacturing environment with **NATURAL LIGHTING**

ERGONOMIC DESIGN *to promote employee health and wellness*

system, reducing energy use and related carbon emissions. In addition, a solar panel array planned for the roof is specifically designed to match the energy demands of the heat recovery system, which are estimated to be 675,000 kWh per year.

Managing Energy Use and Efficiency

At each of our major facilities, we are implementing new technologies and best practices in energy efficiency and management. Our Hillerød facility became the first in our network to obtain **ISO 50001** certification in 2015. We are looking at opportunities to replicate this certification at our other major facilities as they consider steps to increase the energy efficiency of their operations. Our Cambridge and RTP sites conducted energy audits in the first half of 2016.

Adhering to the ISO 50001 standard reinforces the Hillerød team's commitment to ongoing energy reduction and demonstrates Biogen's continuous effort to elevate sustainability within its manufacturing operations. In 2016, our goals include raising the awareness of energy consumption across the organization and reducing our energy use, including the specific goal to reduce natural gas usage for steam production to no more than 22,000 cubic meters per batch.

At our Cambridge campus, we saved more than $1.2 million in 2015 from projects aimed at upgrading energy efficiency and the monthly outcomes of the Cogen Demand Response Program, which offers a financial incentive when we reduce our electricity use during peak times of demand. Most notably, 2015 marked the conclusion of a multiyear initiative to upgrade an airflow management system at one of our main

research buildings. Since 2010, the project progressively replaced large, inefficient fan units with a more efficient, modular array of smaller fans. Now complete, the system reduces the building's annual energy consumption by more than 1.6 million kWh and saves more than $230,000 per year in energy costs. Due to its success, the system will now be the standard approach for all air handling units in our laboratory and manufacturing facilities in Massachusetts, and we will work to expand that to other sites.

Our drug substance manufacturing facility in RTP undertook several initiatives to increase energy efficiency and reduce GHG emissions. From replacing air handling units in a clean room and lab with energy efficient equipment to a new chilled glycol plant and HVAC upgrades, these initiatives saved more than 1.8 million kWh of electricity per year and approximately $110,000 in energy costs.

Advancing Green and Healthier Buildings

Another component of our climate strategy is the pursuit of green and healthy buildings that follow key standards such as **LEED** and the international **WELL Building Standard®** or key equivalents. We currently operate in four LEED certified buildings, including two LEED Platinum buildings and two Gold certified buildings – the latter including our global headquarters in Cambridge. We are exploring opportunities for the WELL standard.

In 2015, our newly renovated office in Tokyo, Japan, was recognized by the local government for key sustainable design features:

- **Saving Energy:** Multilayered exterior glass acts as a barrier to heat in the summer and insulates in the winter. Eaves protect the exterior glass from direct heat contact, saving air conditioning energy. A combination of energy sources and a co-generation system are used to control water temperatures, resulting in maximum efficiency.
- **Conserving Water:** Rainwater, sink water and cooling water from boilers is purified and recycled and used in washrooms.
- **Employee Wellness:** Approximately 14,000 square feet of green space provides a relaxation area for employees and helps reduce heat island effect.

Getting to Zero Waste

In 2015, we maintained our zero manufacturing waste to landfill status at our owned locations, with the exception of our newly acquired manufacturing facility in RTP. Our goal is to continue our zero waste to landfill status for non-hazardous waste going forward at all of the major locations that we control. To do so, we will continue to leverage a suite of projects that help avoid, recycle and compost waste, and then divert the rest to create or recover energy.

In 2015, 61 percent of our waste was diverted (composted, recycled, donated or recovered for energy by anaerobic digestion), with the rest primarily going to waste-to-energy (WTE). We will strive to increase that diversion rate and reduce our reliance on WTE to achieve our goal. Our sites, and especially our employees, are key contributors to ensuring the success of meeting our goals. From beginning a Keurig K-cup recycling effort in Cambridge to the team initiating its own recycling program in Paris, below are just some of the ways we are working to do just that:

- In the latter part of 2015, we acquired a manufacturing facility in RTP and began working with leadership to achieve our goals. At the time of acquisition, the facility was disposing of all non-hazardous waste into landfills. Through engagement with vendors and employees, general waste is now sent to a WTE facility and a compost program has been launched. We anticipate the facility to achieve zero waste to landfill status by the end of 2016.

- As part of Earth Month, the RTP facility hosted a number of activities to reduce waste. Over 2,800 pounds of employee household hazardous waste and electronics were collected through a designated pickup day and 300 pounds of paper were shredded for recycling. For more information on employee engagement, see *Pages 35-36.*

Partnering with Suppliers – One of the ways we are minimizing our waste is through working with our key suppliers. A good example of this is our work with **Ricoh** over the past three years. Ricoh's Secure Print program helps reduce paper use and waste through managing print queues, cover sheets and the printing of unwanted pages. Since its implementation at Biogen in 2013, this program saved nearly 2 million sheets of paper and $150,000 in costs and kept nearly 120 metric tons of carbon from the environment. In 2015 alone, we saved 876,000 sheets of paper from being printed, equivalent to 4 metrics tons of paper, $71,000 in paper and toner, and 53 metric tons of life cycle carbon emissions.

Donating Used Furniture – In 2015, Biogen began working with **The Furniture Trust**, a Boston-based nonprofit organization dedicated to making a positive, community impact with used office furnishings, while providing the most economical and environmentally responsible solutions to local businesses. The Furniture Trust connects donated office furnishings in conjunction with local schools and nonprofits. In two years, Biogen has donated nearly 50 tons of furnishings, supplies, artwork and construction materials to The Furniture Trust.

While most materials are donated to schools and other local nonprofit organizations, some materials are also used in the Eco-Carpentry Challenge hosted by The Furniture Trust. The Eco-Carpentry Challenge promotes resourcefulness and recycling and provides an opportunity for high school students to develop their creative carpentry skills while upcycling unwanted items into new products. Biogen served as a judge to recognize several of the creations utilizing donated office furnishings and materials from Biogen.

UMASS COLLABORATION

For a second year in a row, Biogen has supported the UMass Boston Center for Sustainable Enterprise and Competitiveness (SERC) fellowship in Sustainability and Clean Energy. The SERC fellow, an MBA student, conducted research in the area of waste reduction and employee engagement. The study involved benchmarking of peers, identifying best practices and analyzing current Biogen practices in order to find opportunities to reduce non-hazardous waste through greater employee engagement.

Preserving Water Quality and Quantity

We use water to make our products, to sterilize and clean equipment, for irrigation, and elsewhere throughout our office and manufacturing operations. We consistently 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 to the environment.

In recent years, we completed key projects across our operations, including installing flexible volume manufacturing processes, HVAC water reclamation systems, a rainwater-harvesting cistern, clean-in-place process improvements and upgrades to our cooling towers to reduce the amount of water needed for our operations.

Our process engineers, facilities and environmental, health, safety and sustainability (EHS+S) staff also work continually to maintain and improve upon the high-quality water used in our processes. For example, our Hillerød facility completed an innovation fund project – funded through our Strategic Innovation office – addressing the reuse of process water. This project is being evaluated for implementation at other sites, including the new facility in Solothurn, Switzerland.

04 DRIVING ENGAGEMENT

Biogen Community Lab

As a responsible corporate citizen, it is incumbent upon us to engage with a range of internal and external stakeholders, be an active voice in public policy matters that impact patients and our business and work to better the communities where we work and live.

ACTIVE ENGAGEMENT WITH

50+ patient advocacy organizations & healthcare societies worldwide

CLIMATE ADVOCACY

WE MEAN BUSINESS

PROUD U.S. BUSINESS for CLIMATE ACTION

PUBLIC POLICY SUPPORTED IN 2015

- INTELLECTUAL PROPERTY (IP)
- CORPORATE TAX REFORM IN THE U.S.
- DRUG PRICING VALUATION
- 21ST CENTURY CURES INITIATIVE
- NEWBORN SCREENING TESTS
- WOMEN IN LEADERSHIP
- ANTI-DISCRIMINATION

U.S. EMPLOYEES DONATED NEARLY

$1.5M to nonprofits

WHICH WAS MATCHED 100% BY THE COMPANY

INTERNAL AWARDS

BIG Champions of Inclusion

Environmental, Health, Safety + Sustainability
Be Well. Be Safe. Be Sustainable.

World Biotech Tour
Powered by BIOGEN FOUNDATION & ASTC

THREE-YEAR PARTNERSHIP TO SUPPORT BIOTECHNOLOGY EDUCATION AT 12 SCIENCE CENTERS WORLDWIDE

BIOGEN COMMUNITY LAB

29,000+ STUDENTS
PARTICIPATED SINCE 2002 INCLUDING 4,200 IN 2015

78 TEACHERS
TRAINED IN BIOGEN'S PROFESSIONAL DEVELOPMENT COURSE IN 2015

264
BIOGEN SKILLS-BASED VOLUNTEERS INVESTED IN 2015

Stakeholder Engagement

Regular engagement is critical to helping us better understand our impact and take into account the needs of key stakeholders – from investors to patients to employees – to inform our strategy and drive innovation across our organization.

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. Our management and investor relations team engage regularly with both existing and prospective investors to ensure a proper understanding of our commercial business, pipeline, governance and sustainability initiatives. We regularly participate in investor conferences, one-on-one meetings with management, and more recently have coordinated shareholder engagement meetings directly with members of our board of directors to discuss corporate governance and sustainability issues.

For the past five years we have provided detailed information to RobecoSAM and the Dow Jones Sustainability Index (DJSI), which track and evaluate the performance of the world's leading companies against economic, environmental and social criteria.

We also acknowledge the importance of the work that the SASB is doing in the United States to introduce industry-specific environmental, social and governance disclosures into standard filings such as the Form 10-K. By serving on SASB's original healthcare working group, we helped inform SASB's first standard, the Biotechnology Sustainability Accounting Standard, released in 2013.

Engaging with Patients, Patient Groups and Healthcare Professionals – Biogen engages with patients and their caretakers one on one, indirectly through advocacy organizations 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 *Page 20* for more information.

Through ongoing dialogue and dedicated research, and through dialogue with advocacy groups, we work to support patients and work to address 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 patient engagement efforts, Biogen developed patient mentoring programs; made significant investments in R&D, both within our own organization and in collaboration with others; worked with regulators to consider options for accelerating drug approvals and expand access to treatment; and provided advocacy groups with both financial aid and capacity building.

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.

In 2015, we implemented a new strategy for gathering employee feedback called BioScan, which includes the use of short, mobile-enabled pulse surveys, as well as a redesigned annual employee survey. This new survey approach allows us to gain deeper, more frequent insights into the concerns of our employees and to track changes in opinion over time.

Two pulse surveys were conducted in 2015. In July, we asked employees to share their experiences in challenging the status quo. In November, a few weeks after the announcement of significant workforce changes, we asked employees whether Biogen was organized to effectively serve our stakeholders.

Launched in February 2016, our new "People Survey" assesses whether Biogen has the culture and capabilities necessary to support our top business priorities. Building on insights gained in our pulse surveys, this new survey

(L-R) Sameer Savkur, Tracy Germann, George Scangos, Tim McCormick, Parika Petaipimol, Carol Cheney

expands beyond typical tools that solely measure engagement, but instead assesses whether employee efforts, energy and optimism are aligned with company goals; measures the workforce's ability to sense, lead and adapt to change; and evaluates the prevalence of specific capabilities needed to support Biogen's strategic goals.

This first survey included a specific focus on drivers of innovation and stakeholder alignment and centricity – two areas that are critical to our business success. We had a 76 percent response rate and results were shared with leaders and teams in March 2016. Actions based on this feedback have begun to cascade throughout the organization. We anticipate that we will see meaningful improvement in key areas -- including efficient process management, effective communication and a strengthened culture of risk-taking and innovation – when we revisit these topics in future surveys.

Our employee resource networks advance inclusion among our employees (see *Page 53*). We drive educational and awareness campaigns to further engage employees in our citizenship and sustainability efforts, including key activities like celebrating Earth Month and recognizing global events such as Safety Month, World Water Day and others. These activities help employees understand how they make a positive impact at work or at home.

Recognizing Employee Contributions – The culture of excellence Biogen has cultivated over the years is manifest in the self-starting initiative of our employees. We encourage and reward these efforts through a variety of internal recognition. Two, in particular, are especially relevant to our citizenship commitment:

Biogen BIG Champions of Inclusion – Our BIG Champions of Inclusion Award recognizes and celebrates employees who embrace difference and support inclusion in the workplace. In 2015, we received 122 nominations and recognized five outstanding individuals:

- **Carol Cheney (RTP)**, honored for her role as the Women's Innovation Network (WIN) – RTP chapter co-chair and collaboration across departments and sites.
- **Tracy Germann (Cambridge)**, recognized for her role on ReachOUT, an employee resource network for LGBTQ employees and allies, and for acting inclusively in daily interactions.
- **Tim McCormick (Cambridge)**, honored for acting as the diversity and inclusion ambassador in Europe, focusing on building inclusive leadership practices and hosting the successful WIN conference in Zurich.
- **Parika Petaipimol (Cambridge)**, recognized as the WIN – MA chapter co-chair, making team members feel valued and partnering with universities to introduce students to Science, Technology, Engineering and Mathematics (STEM) career paths.
- **Sameer Savkur (Brazil)**, honored for living the values of diversity and inclusion through leadership of our Latin America Therapeutic Operations, sponsorship of women leaders and encouragement of employees to become agents of change.

Environmental, Health, Safety + Sustainability
Be Well. Be Safe. Be Sustainable.

EHS+S Awards – Our annual global EHS+S Awards recognize non-EHS+S employees who go beyond their regular duties to embrace and strengthen our commitment to sustainability, wellness and safety.

Global Winners

- **Jannik Nielsen (Hillerød)**, initiated a project that upgrades lighting to LED lights, potentially saving 12,000 kWh of energy and reducing energy costs $1,100 per year. The lighting upgrades focus on areas with the most activity inside our manufacturing facility. The site is now exploring additional opportunities to apply LEDs to drive further energy savings and contribute to its ISO 50001 efforts.

RTP Fearless Runners club

- **Yanni Lambropoulos (RTP)**, led the RTP Fearless Runners club, which organizes group runs and events. More than 200 employees participate in the team, and Yanni engaged family members in off-site events as well.
- **Anne Cheung (Cambridge)**, urged her colleagues to take ownership of lab safety, including organizing a two-person safety committee that rotates each month among team members.

Engaging with Industry – Biogen engages in several industry forums designed to further incorporate citizenship and sustainability. We are a member of the National Association for EHS and Sustainability Management (NAEM), a professional association that empowers corporate leaders to advance environmental stewardship, create safe and healthy workplaces, and promote global sustainability. 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.

In Cambridge, Biogen is a member of the Kendall Square EcoDistrict, which is working collaboratively to drive sustainability actions within the square and larger Cambridge community including district-scale energy projects and improved bike infrastructure. Biogen's Hillerød facility is collaborating through its Symbiosis network, where it has been working to address food waste, wastewater, safety and employee wellness efforts.

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

- Association of Corporate Citizenship Professionals (ACCP)
- BioPharma EHS Forum
- Biopharma Sustainability Roundtable
- Biotechnology Industry Organization (BIO)
- California Health Institute (CHI)
- Direct Employers Association
- Environmental League of Massachusetts (ELM)
- European Biotech Association (EuropaBio)
- European Confederation of Pharmaceutical Entrepreneurs (EUCOPE)
- European Federation of Pharmaceutical Industries and Associations (EFPIA)
- Massachusetts Biotech Council (MassBio)
- North Carolina Biosciences Organization (NCBIO)
- Pharmaceutical Research and Manufacturers of America (PhRMA)
- World Environment Center (WEC)

Engaging in Public Policy

By maintaining open dialogue with policymakers, we work to help advance policies that facilitate a healthy research environment and ensure patient access to new and improved treatments.

This is a complex and collaborative process that requires coordination with public and private organizations, as well as many internal Biogen functions, including government affairs, clinical development, medical affairs, regulatory, patient care, access and payments.

Through these functions, we build dialogue to advance policy to support ongoing engagement with patients, patient advocacy organizations, government agencies, industry and R&D organizations.

Public Policy Focus

Biogen focuses on policy issues areas that impact discovery, development and delivery of innovative biopharmaceutical products to improve the lives of patients.

"We ensure that the patient's voice is heard and collaborate with companies like Biogen to let regulators know what is important to patients and families when approval decisions come their way."

Kenneth H., President, CureSMA

In 2015, Biogen's areas of emphasis and activities included:

- **Intellectual Property (IP)**
  - > A stable and secure patent system is necessary for continued biomedical innovation and ongoing investment in research to fund new treatments and cures for patients facing the most challenging diseases. In 2015, Biogen worked with universities, venture capitalists, patient groups and select technology manufacturing companies to support a predictable legal framework that ensures strong IP protections.
- **Corporate Tax Reform in the United States**
  - > 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. See our website for more information on **our position on tax reform**.
- **Drug Pricing Valuation**
  - > In 2015, Biogen shared a comprehensive pricing philosophy that provides an overview for how we approach pricing our therapies and our broader pricing principles. See *Page 18* and our **website** for more information.

BIOGEN CEO ASSUMES PhRMA LEADERSHIP

"We stand on the cusp of an amazing era of new medicines, better health and more affordable healthcare that will be enabled by those medicines. To make this promise a reality, our industry must be a contributor to policy solutions that address the entire system of healthcare costs and the challenges faced by patients in accessing the care they need."

George Scangos

Biogen CEO George Scangos in 2016 assumed the role of chairman of the largest biopharmaceutical industry trade association in the United States – the Pharmaceutical Research and Manufacturers of America (PhRMA). In 2015, he served as chairman-elect on the leadership council of PhRMA, after serving as treasurer in 2014. PhRMA represents the country's leading innovative biopharmaceutical research companies, which are devoted to discovering and developing medicines that enable patients to live longer, healthier and more productive lives.

- **21st Century Cures Initiative**
  - > In 2015, Biogen actively engaged in the success of 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.
- **Newborn Screening Tests**
  - > Biogen continued to work with stakeholders including patient groups and policymakers to advance newborn screening, a pathway for SMA newborn screening if and when an effective treatment becomes available. The primary focus in 2015 was on establishing pilots to generate data necessary for the addition of SMA on the federal recommended newborn screening panel.
- **Women on Boards**
  - > Biogen leadership testified in front of the Joint Committee on Labor and Workforce Development at the Massachusetts State Senate, supporting non-binding **Resolution S-1007**, a mandate for more companies to add women on their boards, which is now approved.

- **Anti-Discrimination**
  - > Biogen leadership submitted testimony before the Commonwealth of Massachusetts Senate in support of the "**Freedom MA**" bill in support of extending anti-discrimination protections in public services and accommodations to transgender people, which was successfully passed in May 2016.
  - > Our CEO crafted an **op-ed against North Carolina's House Bill 2,** a proposed law excluding LGBT people from anti-discrimination protections.

In addition to our areas of emphasis in 2015, Biogen has an ongoing focus on:

- **Clinical Trials Data Transparency**
  - > Biogen is committed to advancing public health through responsible sharing of clinical trial data in a manner that is consistent with the following imperatives:
    - Safeguarding the privacy of patients
    - Preserving scientific rigor and trust in regulatory systems
    - Maintaining incentives for investments in biomedical research
- **Reauthorization of the Prescription Drug User Fee Act**
  - > The Prescription Drug User Fee Act (PDUFA), enacted in 1992, authorizes the U.S. Food and Drug Administration (FDA) to collect user fees from companies that develop prescription drugs. These fees are then used to fund the review and approval of new drugs by the FDA. PDUFA, which has been renewed every five years since it was first enacted, is up for reauthorization in 2017.

Advocating for Climate Action

In our second year as a carbon neutral company, we set out to do more than just lead by example. As a company recognized globally for its citizenship and sustainability performance, we believe that it is incumbent upon us to elevate our commitment and lead through advocacy as well. In 2015, we put our support behind two new initiatives that encourage climate action.

Last fall, Biogen became one of just 154 U.S. companies to sign the White House **American Business Act on Climate Pledge** to affirm our commitment to climate action and support a positive outcome from the December 2015 UN Framework Convention on Climate Change Conference in Paris (COP21). Our pledge reiterated Biogen's ongoing efforts to reduce our operational carbon emissions, while lending our voice to those calling for a clear climate action roadmap from COP21.

We also joined **RE100**, a collaborative, global initiative of **influential businesses** committed to 100 percent renewable electricity, working to increase corporate demand for renewable energy. The private sector accounts for around half of the world's electricity consumption and has the collective ability to transform the global energy market and speed the transition to a low carbon economy. Convened by **The Climate Group** in partnership with **CDP**, RE100 seeks to increase the number of companies relying on renewable energy and share best practices. Our investment in certified renewable energy credits as part of our commitment to carbon neutrality makes Biogen eligible for RE100 membership.

Improving Lives in Our Community

We care deeply for those around us and strive to not only serve the best interests of patients, but work to be model neighbors in the communities where we operate. Every day, this commitment is brought to life by our employees who passionately support causes that enhance communities where they work and live.

As a company focused on advancing life-changing science, we are committed to inspiring the next generation of innovators through effective hands-on education programs that cultivate a healthy curiosity in young learners. We strive to empower students to not only consider exciting careers in science, but also to contribute to society in innovative ways.

Biogen Foundation

The goal of the Biogen Foundation is to improve the quality of people's lives, while enhancing the vitality of the communities where we operate. We are also focused on promoting science literacy and encouraging young people to consider careers in science.

Our Foundation's mission can be summarized in one word: *access*. We aim to build strong communities by providing access to basic social needs, and we seek to expose students to high-quality science education experiences by ensuring that hands-on learning, teacher professional development opportunities and college support and readiness are accessible around the world. We are committed to investing in science education to empower future scientists to tackle the challenging issues of tomorrow.

In support of this vision, we've begun the process of restructuring our grant-giving programs to ensure our investments in STEM have a meaningful and long-term impact.

Community Lab

Our multiyear grant model supports our ongoing efforts to engage more young people in science disciplines, helping to build a pipeline of smart, enthusiastic scientists who could one day have careers in life science. These programs help improve opportunities and outcomes for students of all backgrounds and at all phases of their education in addition to supporting the professional development of STEM educators with the tools and resources necessary to inspire and teach future innovators and leaders.

U.S. Employee Matching Gifts Program – In 2015, our Employee Matching Gifts program grew nearly 82 percent, awarding nearly $1.5 million to more than 1,000 organizations across the United States. Employee participation in the program grew by more than 35 percent. The program allows Biogen employees to double their donations to the organizations they care about most – these range from disease organizations to camps for children with serious illnesses, to disaster relief efforts around the world.

Strong Communities – To support the communities where our employees live and work, the Biogen Foundation also provides grants for programs that address basic social needs, including combating homelessness and hunger and enhancing human services. Local U.S. partners include East End House, Cradles to Crayons, Food Bank of Central and Eastern North Carolina.

Science Education Initiatives

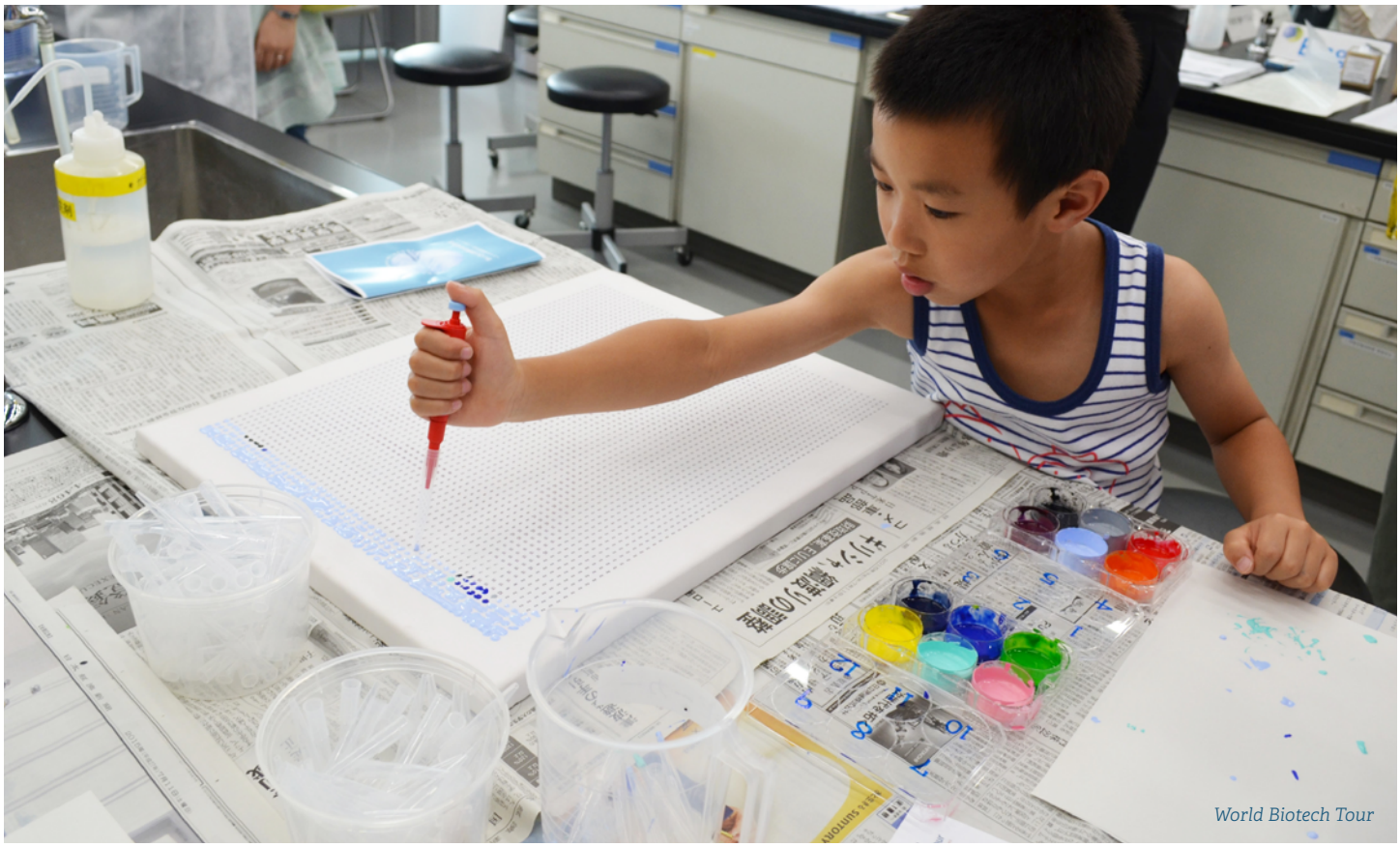
Community Lab – Our Community Labs in Cambridge and RTP are signature examples of our commitment to STEM education and serve as a catalyst for students to learn firsthand that there are countless careers in science and biotechnology. Thousands of students have experienced real laboratory science free of charge through the Community Lab.

The Community Lab runs single-day sessions for middle and high school students during the academic year and offers several one-week programs and a two-week advanced program over the summer. Approximately 3,000 students attend each year, including nearly all eighth-graders in Cambridge's public schools and every eighth- and ninth-grader attending public schools in Somerville, Massachusetts.

Last year marked the first full year of operation for our RTP Community Lab 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.

Swiss Science Center Technorama – Housing over 500 exhibits, experiment stations and lab facilities, the Swiss Science Center Technorama is one of the most renowned science centers in the world. With approximately 65,000 student visitors per year, it plays a vital role in encouraging interest in and enthusiasm for science and technology at an early age. To further these efforts, the Biogen Foundation has committed to providing more than $450,000 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, NC – 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. The Biogen Foundation recently committed more than $580,000 over three years to ensure the continuation of lab-based activities and programs, our largest grant to any North Carolina museum. In 2015, more than 33,000 visitors and students engaged 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.



World Biotech Tour

The World Biotech Tour – In 2015, the Biogen Foundation launched a three-year agreement with the Association of Science-Technology Centers (ASTC) to bring the World Biotech Tour (WBT) to 12 selected international science centers for three-day science festivals focused on the theme of biotechnology.

Each tour includes a series of engaging events designed to increase the impact and visibility of biotechnology to youth, the general public and underserved communities as part of a larger mission to promote science literacy worldwide. Science centers chosen to host the WBT receive $25,000 to fund culturally unique visitor activities and programs.

Ignite the Power of STEM – Originally launched by the Biogen Foundation in 2013 in Massachusetts and 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 $215,000 to more than 50 schools in Massachusetts and North Carolina in 2015.

Biomedical Science Careers Program (BSCP) – For the past 10 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.

Kinder-Universität Zürich – For the sixth straight year, Biogen has been the exclusive biotechnology sponsor of Kinder-Universität Zürich (Children's University of Zurich), a program that provides authentic university experiences, including lectures and 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.

CARING DEEPLY AROUND THE WORLD

Every year our global colleagues participate in Biogen's Care Deeply Volunteer Day, a worldwide project that enables employees to participate in meaningful community service projects and has a beneficial impact in every location where Biogen operates around the world.

NORTH CAROLINA

Kids Café is an afterschool program of the Food Bank of Central and Eastern North Carolina that offers tutoring, nutrition education, mentoring and nutritious meals to children at risk of hunger. Volunteers interacted with the children on projects, read and served food to them.

DENMARK

At the Frivilligecenter (volunteer center) not far from our Hillerød facility, Biogen volunteers accompanied blind citizens in a variety of activities including hiking, riding tandem bikes and serving as the "eyes" during a trip to the local museum by a group of blind women.

SWITZERLAND

In the hometown of our international headquarters in Zug, Switzerland, volunteers painted and beautified the Einstein Tueftellabor Zug center, which invites and encourages children to undertake "tinkering" projects that support science, design and technology acumen and promotes social and personal skills.

CZECH REPUBLIC

Employees from our Czech Republic affiliate spent some time planting seedlings to help replenish a nearby forest with native tree species such as beech and fir.

MASSACHUSETTS

Biogen volunteers helped beautify the Dimock Center, a community institution serving Boston's inner city neighborhoods. The center provides vital services to over 40,000 families per year and is a national model of integrated health and human services.

05 ACTING RESPONSIBLY

Implementing ergonomics in the lab

Acting responsibly includes everything from the way we source and manufacture our products, to the way we develop employees and embrace diversity and inclusion, to the way we conduct our business and work with our global stakeholders.

LAUNCHED IN 2015:
BIODIVERSITY FELLOWS PROGRAM
a first-of-its-kind leadership development program for Black and Latino mid-career professionals within the life sciences in collaboration with The Partnership Inc.

Diversity + Inclusion Employee Resource **5** Networks

LAUNCHED IN 2015:
CROSS-FUNCTIONAL GLOBAL WELLNESS INITIATIVE

5 EHS+S Training Hours Per Employee

~$196M
spent with small and diverse business enterprises
in 2015, representing about 9% of our U.S. procurement spend

774
suppliers analyzed for potential adverse human rights impacts

Driving Responsibility Across the Value Chain

At Biogen, our commitment to improving lives and caring deeply goes beyond the therapies we provide. It extends to the integrity with which they are developed and delivered to the patients who need them. The same care we take in improving the lives of patients applies to the health and vitality of our communities and the environment.

Our efforts aim to comply with all applicable regulations and minimize adverse health, safety, environmental and social impacts, while maximizing the benefits and value of our products throughout their full life cycle. We view this approach as both a responsibility and an opportunity for innovation and ongoing improvement. This requires us to make decisions and engage at every stage of the product life cycle to enhance benefits and reduce the potential adverse impacts of bringing our products to market.

The quality of our products and therapies and the safety and well-being of patients is a top priority at Biogen. Quality is part of our culture and is integrated into all critical business and decision-making processes. We maintain a demonstrable commitment to the quality, efficacy and safety of our products in compliance with all applicable global requirements regulating their development, manufacturing and distribution. All individuals involved in the development and manufacture of our medicines are accountable for the quality of our products.

The following initiatives are managed by functions within Biogen working collaboratively to meet our responsibility commitments. Central to realizing these commitments is how we manage and work with our suppliers, who are critical contributors throughout much of our business value chain.

Discovery, Development and Manufacturing

As we seek to discover and develop new treatments, we are committed to employing responsible research and manufacturing practices while protecting the safety of our employees, patient communities and environment. Learn more about the steps we are taking to minimize the environmental impact of our manufacturing processes in the Rethinking Resources section, *Pages 28-29,* and what we are doing to protect the health, safety and wellness of our employees on *Pages 50-52.*

Product Environmental and Safety Risk Assessments – Environmental risk assessments are conducted on products as required by regulations during the drug development phase through product launch, to understand and manage product impacts. We assess products in a manner consistent with the most stringent applicable global regulations.

Biogen is committed to protecting the health and safety of our own employees as well as the employees who manufacture and handle our products at other companies. We perform due diligence to determine whether potential contract manufacturers have the appropriate facilities to handle our products safely and in compliance with applicable regulations. We work directly with our technical counterparts at these companies to perform occupational/industrial hygiene risks assessments where necessary, share knowledge and experience, and discuss issues and concerns. This level of collaboration and partnership ensures that safety and health information is communicated throughout our supply chain to minimize the risk of negative events.

Materials Selection and Safety – Managing the chemical substances used in developing and manufacturing our therapies is an important part of mitigating risk to the environment. Governments across many of the regions where we operate have developed chemical management legislation, such as the European Union REACH regulation, which requires manufacturers and importers of chemicals to collect and register information about the chemicals they manufacture or use. Such regulations may also require replacing the most hazardous chemicals with safer alternatives when available. We continue to assess the impact of these new and emerging global chemical management regulations on substances we manufacture

and on our raw materials. We are committed to ensuring our facilities and supply chain remain in compliance with all relevant laws.

Green Chemistry – We are developing a green chemistry program and are already applying various green chemistry principles in our R&D and manufacturing activities. Environmental factors (E-factors) are currently tracked for key R&D processes. Our medicinal chemistry group has received training on green chemistry best practices. In manufacturing, we continually evaluate how to optimize the use of solvents, first by eliminating the use of solvents altogether, reduction and then reuse. For example, we are evaluating opportunities to reduce solvents used in the downstream and upstream manufacturing processes to produce oligonucleotides. We are eliminating organic solvents from the downstream purification process by transitioning to an aqueous system. Upstream, we are planning on reducing our solvent use by up to 20 percent.

Minimizing Manufacturing Impacts – We use information from our product environmental risk assessments and produce life cycle assessments to establish or revise compound-specific criteria and continually improve our procedures. One of our goals is to ensure that wastewater discharged from our facilities meets our permitting requirements and does not contain residual products that could present a risk to human health or the environment.

We carefully monitor scientific research on the issue of pharmaceuticals in the environment (PiE), which pertains to both manufacturing wastewater and the proper handling and disposal of unused medications, and we will continue to collaborate with regulatory, academic, healthcare and research organizations to identify additional data needs on the effects of pharmaceuticals in the environment.

Strategic innovation plays a big role in ensuring that our manufacturing processes are more efficient, especially as we deploy new approaches to manufacturing our therapies.

Packaging and Distribution

Another priority is our focus on the packaging and labeling of our products to ensure their security and integrity to reduce environmental impacts from the time they are manufactured and distributed through patient use and product disposition.

Packaging – Pharmaceutical packaging is highly regulated and must fulfill many functions, including protecting product integrity during transit and storage, providing information, and preventing tampering and counterfeiting. Our packaging design efforts also seek to minimize cost and waste. We are providing our development teams with sustainable packaging guidelines that help further reduce cost, waste and environmental impact. Guidelines to improve the sustainability performance of packaging include reducing the amount of material used, choosing less impactful and/or responsibly-sourced materials, increasing the amount of recycled content or the recyclability of the packaging material, and minimizing the amount of space required by the package. Examples of two small packaging changes that potentially reduce environmental impacts are the elimination of a Tyvek lidding material on a prefilled syringe kit and the change from a plastic tray to an all paperboard package for an auto injector pen.

Labeling, Product Security and Brand Protection – Counterfeits, adulterated and compromised drugs by their nature are of unknown safety and efficacy, thereby putting patients at risk. 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.

Worldwide markets for biopharmaceutical products like ours are generally well regulated for the secure delivery of medicines, and the implementation of medication security measures by government agencies and commercial distribution partners is a key part of maintaining the security and integrity of our products.

Biogen maintains our own internal product security and brand protection program that 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
- On-site, in-person auditing and monitoring of supply chain partners globally, specifically on product security
- Monitoring drug sales and potential threats to the supply chain with counterfeit or diverted product

To improve product traceability and patient safety, Biogen is investing in serialization technology. Serialization is the use of globally unique codes that are printed on individual packs and communicated to supply chain partners for the purpose of authentication, and in some cases improved product management, such as preventing dispensation of expired product. We are also investing in packaging operations, distribution sites and IT infrastructure across the supply chain to support serialization and assure compliance to serialization requirements in an increasing number of markets, including the United States and the EU.

Product Use and Disposition

We ensure product safety and quality and offer training and support so that patients get the best possible health outcomes. We are committed to the responsible management of any remaining product at the end of use by patients, guided by local, regional or national regulations and requirements. We also provide education and assistance to patients on proper disposal of treatments.

Safe Disposal of Medications and Sharps – We support policy decisions regarding the disposal of unused medicines and the education of patients and caregivers on proper disposal options. We are actively involved in the Pharmaceutical Product Stewardship Work Group (PPSWG), a U.S. membership association for drug manufacturers, affiliated marketers and sharps manufacturers formed to support compliance with U.S. household disposal regulations. We participate in government- or industry-managed end-of-use medicine return and disposal programs in other countries in which such programs are in place.

Pharmaceuticals in the Environment – In addition to our initiatives to minimize or eliminate emissions to water or substances of concern from our manufacturing processes, we also support science-based efforts to understand and reduce the impacts of pharmaceuticals entering the environment at end of use.

We are supportive of the joint Associations of European Self-Medication Industry (AESGP), the European Federation of Pharmaceutical Industries (EFPIA) and the European Generic and Biosimilar Medicines Association (EGA) position paper on PiE. This position paper recognizes and understands the concerns raised by stakeholders with regard to the presence of PiE.

For this reason, associations have come together to develop the Eco-Pharmaco-Stewardship (EPS) concept, a proposal that strives to protect patients' access to medicines while appropriately considering environmental impact.

The proposal looks at three areas where the industry can most effectively reduce the potential environmental risk that might result from its activities and throughout the medicinal product life cycle. The pillars are:

- Encouraging further research to assess the impact of PiE
- Manage pharmaceutical sites' effluents effectively
- Monitor environmental impact through extended environmental risk assessment

While research indicates that unused medications are a very small contributor to PiE, Biogen is committed to meeting all requirements and regulations regarding safe disposal of unused medications, to contribute to the reduction of this issue.

Supply Chain

Maintaining an active role in our supply chain is a critical part of delivering on our mission to improve patient outcomes and meet our citizenship commitments. We have dedicated internal policies, procedures and checks and balances to help manage our supply chain.

Biogen's Code of Business Conduct: *Values in Action*, establishes the principles and practices of ethical business to which we expect all of our suppliers, business partners and employees to adhere. The practices in our Code are based on leading international standards, or accepted good business practice where relevant standards do not exist. Learn more about our supplier engagement activities as part of our carbon neutrality strategy on *Page 27.*

We are tracking new requirements around the world regarding product stewardship and key topics such as the prevention of human trafficking in the supply chain. The United Kingdom recently enacted the Modern Slavery Act of 2015, the first law in Europe aimed at eliminating modern slavery and human trafficking from supply chains. The final guidance for this Act was issued in late 2015, and we anticipate publishing a compliance statement in the first half of 2017, as required by the Act. This statement will detail the steps taken to monitor and eliminate slavery and human trafficking in our supply chains.

Biogen's **Code of Business Conduct: *Values in Action***, sets standards and expectations for suppliers in the areas of:

- Labor Rights
- Health, Safety and Environment
- Bioethics/Animal Welfare
- Anti-Bribery and Fair Competition
- Data Privacy

DUE DILIGENCE PLAYBOOK

Among the most important components of our supply chain are the companies that we contract with to produce large quantities of our therapies. These companies enable us to quickly scale up from manufacturing drugs for our clinical trials to safely and cost-effectively mass producing therapies for the patients that need them once they are approved by regulatory agencies.

In 2015, we developed a due diligence playbook to establish and communicate technical guidance about potential external manufacturers to aid our sourcing team in their decision making. This process evaluates potential suppliers on hundreds of parameters related to technical ability, capacity, equipment, and environmental, health and safety performance.

Our Human Rights Position is in accordance with the United Nations' Universal Declaration of Human Rights, its Articles and principles. As a responsible organization, we respect the human rights of all people with whom we interact, including our patients, customers, employees and third parties who work as our external business partners. Biogen strives to uphold human rights in all our business activities.

Recently, we completed an analysis of our supply chain (as well as our own operations) for social risks, specifically the potential for adverse human rights impacts. This due diligence process consisted of screening the location of our operational sites and of our material Tier 1 suppliers, defined as the top 90 percent of our spend, against the 2015 U.S. Department of State's Trafficking in Persons report. Due to the high-tech nature of the pharmaceutical industry, nearly all our suppliers are located in developed countries with low risk to human rights issues.

Out of 774 suppliers and/or supplier parent companies analyzed (representing about 90 percent of Biogen's total spend), 15 were identified in countries with moderate risk (defined as Tier 2 or Tier 2 Watch List by the U.S. Department of State).

Zero suppliers were identified with high risk that would trigger our developing mitigation plans and taking action to reduce the potential for adverse human rights impacts. We identified freedom of association and collective bargaining as potential low material risk associated within our value chain but it will require additional research to confirm this conclusion.

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 have intensified our focus on implementing a proactive supply-chain assessment process. In 2015, we assessed approximately 400 of these suppliers. This annual process evaluates the risks associated with our critical supplier base from an environmental, social and governance perspective across multiple factors, including water risks. Through this rigorous process we have not identified any at-risk suppliers, but we will continue to monitor these risks annually.

Pharmaceutical Supply Chain Initiative (PSCI) – Biogen is an active member of PSCI, a healthcare industry group focused on responsible procurement, risk mitigation and supplier capacity building. As a member of PSCI, Biogen supports the organization's formal principles and guidelines for supplier agreements and its commitment to building supplier capacity to operate in a manner consistent with the organization's expectations. The PSCI Principles include five areas of focus: ethics, labor, health and safety, environmental protection and management systems.

PSCI's initiatives include a **shared audit program**, which yields transparent and valuable information about the supply chain, provides guidance for suppliers and streamlines the process for both pharmaceutical companies and their suppliers. All results are available through the PSCI Online Supplier Directory, which gives 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**.

Supplier Diversity – In 2015, Biogen hired a dedicated manager of supplier diversity to help build upon our global diversity and inclusion (D+I) initiative (see *Page 53*). Our supplier diversity program promotes a supplier base that is inclusive of minority, women, veteran, lesbian, gay, bisexual and transgender, and disability owned business enterprises as well as small businesses as defined by the U.S. Small Business Administration. We spent 9 percent, or close to $196 million, of our total U.S. procurement dollars with small and diverse business enterprises in 2015.

SUPPLIER DIVERSITY GOALS

- Train 100 percent of our global procurement category managers on our supplier diversity processes to enable them to deliver the specifics of the program to other employees.
- Implement a supplier registration tool that allows suppliers to manage their own profiles. The target is to register 100 percent of the small and diverse businesses working with Biogen.

We now have the resources to strengthen our partnerships among our diverse supplier network. We are focused on partnering with national and international certification agencies and nurturing our supplier partnerships globally.

Our vision is to build a best-in-class supplier diversity program that supports economic growth, fosters innovation, and enables us to achieve a competitive advantage globally.

Creating a Great Work Culture

Attracting, retaining and developing inspired and exceptional talent is the key to our future and to Biogen's mission of positively impacting patients' lives. To this end, we celebrate and embrace innovative thinking, diversity and inclusion, and a culture that protects the health, safety and wellness of our employees.

Developing Our Human Capital

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 are deeply inspired to positively impact patients we serve.

Today, the pharmaceutical industry is faced with ever increasing challenges. The dynamic of how we do business is changing. The goal of meeting unmet medical needs has grown more complex. In this period of change, human capital will differentiate us in an industry where expectations to perform keep rising.

PERFORMING AT OUR BEST: PHARMACEUTICAL OPERATIONS AND TECHNOLOGY

Our Pharmaceutical Operations and Technology (PO&T) group comprises approximately one-third of our global workforce. Its guiding mission is to produce quality therapies, delivered to patients where and when they need them. We set a high standard for operational excellence and empower our employees to be successful at every stage of the production process.

To that end, in 2015 we launched our PO&T Human Performance efforts. With six dynamic initiatives, we are striving to accelerate proactive improvement of our operations, including engaging our employees to understand what drives or hinders operational excellence and finding new ways to share information across the global Biogen network. The six Human Performance initiatives, targeted for launch in 2016, are designed to help company leaders and employees at all levels think differently about the work we perform daily to understand what factors enable our success:

- Work observation and risk conversations
- Open reporting
- Investigations improvement
- Human performance metrics
- Cross-site/cross-functional sharing
- Network training

We are continually evaluating and learning from processes of other high-risk industries, and adapting the most successful for Biogen. We are one of the first biotech companies to institute Human Performance initiatives into our PO&T operations.

Learning to Lead

Our enterprise learning steering committee is a group of senior leaders who are tasked with advising, funding and directing our overall approach for delivering learning inside the company. We have created a centralized learning function that can develop our employees more efficiently and effectively.

In late 2015, we selected new managers as our first target for leadership training, which included nearly 16 hours of training per person. We continue to develop and execute targeted programs for this critical audience of mid-level people managers, who combined manage 39 percent of our employees. Approximately 80 percent of new managers have completed manager training and 94 percent of them feel more confident in their jobs.

Leadership Development Programs – Our high potential employees, through projects sponsored by our executives, tackle significant business challenges designed to further elevate and enrich our company's mission, work environment and business outcomes. Projects in 2015 included Value Models to Support Underserved Patient Populations, Understanding the Emotional Barriers to Alzheimer's Diagnosis, and Cultural Competence in Healthcare.

In 2015, we continued our Women's Leadership Program, sponsored by our CEO and executive team to further our commitment to advancing the careers of women and to creating a more inclusive company. The program addresses the unique challenges women face as they rise in organizations and seeks to heighten both their professional and personal effectiveness. Women leaders who complete the program go on to infuse inclusive leadership practices and insights across the enterprise. Partnering with Babson College's Center for Women's Entrepreneurial Leadership and Executive Education teams, we have created a program based on cutting-edge academic research related to gender, influence and self-efficacy that has received acclaim from participants, their managers and sponsoring executives. Thirty-eight women graduated from the first two offerings in 2015, and two more cohorts will complete the program in 2016.

Attracting and Retaining the Very Best

Biogen offers both traditional and nontraditional benefits to help keep employees engaged, while also maintaining a healthy work-life balance. After six years of service to the company, Biogen employees are 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 employees who have participated in the program.

We also offer a long-term incentive program as a way to create an ownership mindset that aligns our interests with the interests of our shareholders while also rewarding our best employees for their performance and anticipated future contributions.

Rewarding Great Work

Biogen offers a comprehensive employee incentive program that features valuable protection so employees can focus on their careers. Generally speaking, the incentives are available to any Biogen employee who works 20 hours or more per week.

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 to service awards for continued commitment to the company.

Ensuring Employee Health and Safety

We are continually challenging ourselves to provide and foster a culture where health and safety are integrated into our business at every level, so we can focus on developing innovative therapies for patients. We are committed to providing a great place to work for our employees and contractors. As a growing, international company, we appreciate that our senior leadership teams across the company feel accountable for creating and maintaining a workplace that is focused on reducing risk and preventing significant adverse events from occurring. Putting the safety and health of our workforce first ensures we are able to deliver on our promise to patients and caregivers every day.

EHS+S Planning and Operating Strategy – A key element of the Biogen EHS+S Management System is our biennial risk assessment process. In 2015, we performed a comprehensive risk assessment of our laboratory, manufacturing and warehouse operations to identify and prioritize our most significant risks. The results of the risk assessment were used to define several of our key 2016 objectives and helped drive resourcing decisions.

Each year, the company reviews its long-term strategic EHS+S goals and incorporates changes based on current progress, emerging issues, and internal and external stakeholder feedback. In 2015, our five strategic goals continued to be relevant and remained largely unchanged. Annual objectives designed to meet these goals were integrated into corporatewide and facility-level EHS+S plans to create global alignment and focus. For more information on the environmental and product responsibility aspects of our strategy, please see *Pages 26-31 and 44-48,* respectively.

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 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.

In 2015, we enlisted a third-party consultancy to assess 11 of our 27 affiliate office locations for compliance with regulatory requirements, the Biogen EHS+S Affiliate Offices Guide and industry best practices. Through this baseline assessment, the global EHS+S team worked closely with the Affiliates to address issues and develop a sustainable process to monitor and track obligations at the sites going forward. Biogen plans to complete six additional assessments in 2016.

Safeguarding Employees and Contractors

Risk Assessment – Biogen's efforts to comply with external regulations address a number of EHS+S risks. Beyond compliance, we also systematically identify, understand, prioritize and manage all EHS+S risks to ensure that our employees go home safely, environmental impacts are minimized, property and communities are protected, and the continuity of our operations is maintained. The 2015 risk assessment identified the following top global EHS+S risks for our operations:

1. Injury from repetitive motion or material handling
2. Injury from walking or working surfaces in operations areas
3. Exposure to hazardous chemicals
4. Fall from heights
5. Exposure to hazardous energy

OUR FIVE STRATEGIC PRIORITIES (GOALS)

1 **MITIGATE OPERATIONAL RISK**
Focus EHS+S resources on identifying and mitigating risks that involve physical or health hazards with the potential to cause significant injuries, illnesses or death, or that that may significantly impact the environment or surrounding communities.

2 **LEVERAGE SUSTAINABILITY OPPORTUNITIES**
Identify and manage emerging sustainability related risks and opportunities to improve our environmental and social performance.

3 **IDENTIFY AND MANAGE "PRODUCT STEWARDSHIP" OBLIGATIONS**
Assess and mitigate social and environmental risks associated with the development, manufacturing and use of our products.

4 **PROMOTE A CULTURE OF SAFETY AND HEALTH**
Extend and improve existing safety culture through employee engagement and middle management ownership of roles and responsibilities. Positively impact employee lives through holistic and integrative wellness initiatives.

5 **IMPROVE THE EHS+S MANAGEMENT SYSTEM**
Improve the effectiveness and efficiency of the Global EHS+S function through smart investments in programs, initiatives and processes.

Another major element of Biogen's approach to preventing incidents and injuries and keeping people safe is encouraging and developing a culture of hazard reporting and speaking up when an unsafe condition or behavior exists. We set leading indicator targets for hazard reporting to ensure robust employee engagement around identifying and mitigating hazards.

Employees – Although we believe that the best way to reduce the number and severity of incidents is to identify and track leading indicators focused on prevention, we closely monitor and evaluate our occupational safety performance using both the Total Recordable Incident Rate (TRIR) and the Days Away Case Rate (DACR). We annually benchmark our DACR with peer companies in the biopharmaceutical industry and, although our rate has fluctuated slightly over the past few years, we have consistently performed better than the industry average. In 2015, our DACR was 0.16, which is 41 percent lower than our previous year. Given our consistently good performance in this area, we believe our goal to reduce our DACR by 80 percent by 2020 (compared to our 2006 baseline) is still relevant and achievable.

Contractors – Our commitment to a safe and healthy workplace most certainly includes the contractors working within our facilities. We believe they are an important extension of our workforce and must also work in a safe environment. We have dedicated programs and procedures in place to address the health and safety of contractors and track and investigate incidents that occur at our sites, in many instances. In 2015, our Type II Contractor DACR related to construction activities was 0.41 across our four major sites, with almost 1,500,000 subcontractor hours worked. This number stems from three Lost Time Injuries and a significant increase in work hours to support a large construction project at our Hillerød facility. This is a decrease of 58 percent compared to our 2014 DACR of 0.98, which is primarily the result of nearly tripling construction related work hours while maintaining a low number of lost time injuries.

*Days Away Case Rate (DACR) is defined as the number of work related incidents resulting in lost time in accordance with the U.S. Occupational Safety and Health Administration recordkeeping requirements at all Biogen locations.

Fleet – In 2015, our Accidents per Million Miles (APMM) rate was 12.3, which is 2.5 percent higher than our previous year. Benchmarking of Biogen's APMM indicates that our performance continues to be lower than fleets of similar sizes. 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 instructor-led online behind-the-wheel driver training, drive and maintain the vehicle in a safe operating condition at all times.

Promoting Employee Health and Well-being

Biogen's new global employee health initiative, "Be Well," promotes and enhances the spirit of well-being and a total worker health environment for all employees. The program embraces strategies that aim to enhance our employees' physical, mental, emotional and financial well-being.

An important part of cultivating a healthy workplace is investing in our employees' knowledge of their own health through strategies such as health screenings, education, fitness, nutritional counseling and emotional health offerings, as well as supporting community efforts such as volunteer activities. Biogen employees are encouraged to use an array of company supported offerings, including state-of-the-art fitness centers, cafes with healthy dining options, and advanced ergonomic work and lab stations.

Ergonomic assessments and instruction are provided to employees both in the United States and Hillerød. In the United States there is free on-site nutrition counseling.

U.S. employees also are encouraged to take a health risk assessment and receive biometric screenings that may help in identifying any risk factors. Employees are then encouraged to subscribe to programs that support behavioral changes that can potentially lower insurance costs. In 2015, there were 977 employees who took advantage of this screening.

Other important programs include:

- Occupational health and integrative nursing services on our Cambridge and RTP campuses including fitness for duty evaluations, ergonomic assessments, immunizations, on-site health services, massage and nutrition consults
- On-site health services including massage therapy and physiotherapy, and year-round health checks for employees in Denmark
- Access to a growing number of opportunities for Swiss employees, including fitness classes, clubs and stipends, access to healthy food and ergonomic workspaces
- All Biogen locations offer influenza vaccinations to employees

Embedding Diversity + Inclusion into Our Corporate Strategy

We are committed to advancing our global culture and harnessing the power of difference to achieve business success. Biogen's D+I strategy touches every facet of our business, focusing on three key components. In our workforce, we are implementing strategies to attract, retain and advance top talent from all backgrounds while fostering a globally inclusive work environment. We are using data generation to overcome information gaps and infuse cultural competency to improve health outcomes for underserved global patient populations. We are also committed to developing a sustainable, diverse supplier base.

This past year, we launched a new D+I strategic council, co-chaired by our executive vice president of technology and business solutions and our senior vice president of global supply chain. The group is made up of 10 members, representing various geographies, levels, functions and perspectives within Biogen. It represents the second generation of our D+I efforts and will advance our work to build our comprehensive global strategy of diversity and inclusion.

Employee Resource Networks (ERNs)

As part of our efforts to advance inclusion among our employees, we offer them the opportunity to participate in ERNs with others who share similar characteristics or life experiences. All supporters are also welcome to join any ERN to foster inclusion among all our employee groups. Each of our employees who participated in our ERNs in 2015 helped embed our D+I commitment throughout Biogen.

Access Ability – Launched in late 2015, Access Ability is Biogen's newest ERN. Its goal is to foster a culture of awareness, advocacy and inclusion to empower employees with disabilities, as well as those who care for them. The network highlights our commitment to employees with disabilities and enables us to better understand their needs, along with those of their caregivers and others who support them.

Biogen Veterans Employee Resource Network – This network provides U.S. veterans, members of military families and active duty military with a platform to connect and educate others about their unique background and experience. The group helps veterans translate their experience into the workforce and raise awareness within Biogen of how individuals with military backgrounds can enhance our teams. In 2015, the ERN formed a steering committee focused on external engagement, and internal talent development to help Biogen become a military employer of choice. Our commitment to active military employees, including its updated military leave policy, positions us as a best-in-class employer.

Women's Innovation Network (WIN) – Women make up just over half of our global workforce and about 40 percent of our management teams. We are committed to advancing leadership opportunities to continue to thrive and grow as a company and industry. WIN provides opportunities for women to develop their careers through mentorship, networking and career training. WIN proactively recruits and welcomes employees of all gender identities who wish to act as allies and support the careers and leadership of women.

ReachOUT – Biogen continues to embrace lesbian, gay, bisexual, transgender and questioning (LGBTQ) employees and their straight allies through ReachOUT. The organization helps support best-in-class policies and highlights our commitment to inclusion in the workforce and community.

PRIDE AND PREJUDICE 2016

In March 2016, Biogen participated as a Regional Ally in *The Economist's* Pride and Prejudice conference to advance the global discussion on LGBTQ diversity and inclusion. Held simultaneously in Hong Kong, London and New York over a 24-hour rolling period, Pride and Prejudice fostered fresh discussion on the human, business and economic costs of LGBTQ discrimination and the opportunities that lie in overcoming it. Biogen CEO George Scangos was a panelist at the New York event on the many challenges LGBTQ people face as they navigate the complicated U.S. healthcare system.

Through ReachOUT, we are also addressing the broader impacts of LGBTQ discrimination on a state, national and international level. Companies that value diversity and embrace inclusion, while working to remove barriers such as discrimination and prejudice, are in the best position to attract — and retain — top talent. In 2015, members of ReachOUT and our Talent Acquisition and Global D+I groups attended **Reaching Out MBA**, a national conference aimed at empowering top LGBTQ MBA students to become business professionals who will lead equality in the workplace. The company also celebrated U.S. Marriage Equality at our Massachusetts locations. In 2016, ReachOUT is focused on growing its global presence.

ADVANCING BLACK AND LATINO LEADERSHIP IN BIOTECHNOLOGY

In 2015, Biogen collaborated with The Partnership, Inc. to develop the BioDiversity Fellows Program, a first-of-its-kind leadership program for Black and Latino individuals within the life sciences. Biogen's senior director of global D+I advised on the program design, which resulted in a $100,000 grant from the Massachusetts State Life Sciences Center. A highlight of the new program was the event, "The New BioDiversity: Advancing Under-represented Professionals in Life Sciences," that included 15 leaders from Biogen, along with 55 local influencers from biotech, pharmaceutical and medical technology companies. The BioDiversity Fellows Program is focused on helping Black and Latino professionals develop their leadership capabilities for career advancement in the life sciences, and each participant works directly with their own executive coach. Four Biogen employees participated in the inaugural 2015 class.

Mosaic Employee Resource Network – Our Mosaic ERN provides opportunities for our employees to celebrate and learn from the rich tapestry of diversity at Biogen. The group fosters awareness, appreciation and collaboration by encouraging members to develop a deeper understanding of each other's cultural heritages and identities. Our U.S. chapters attract both immigrants and people who trace their American ancestry back generations, while our European chapters celebrate the diversity of the dozens of nations represented in a single worksite. Mosaic also sponsors global cultural events, such as the 2015 "Share Your Story" initiative, to highlight and celebrate the diverse backgrounds, cultural narratives and career paths of our leadership and employees.

Advancing Women's Leadership

Raising the Bar: Advancing Women on Boards – As we strive to grow and nurture women's leadership within Biogen, we're also looking outside our own company to build up and support high-potential women leaders in all industries. While there is an immense pool of talented women eager to help companies succeed at the highest level, women hold only about 18 percent of board roles in Fortune 500 companies and only about 10 percent of roles in biotech companies. Biogen is composed of 50 percent women, giving us a pipeline of qualified talent to close this gap.

In 2015, we continued to invest in and support a strong network of women leadership as part of the Raising the Bar: Advancing Women on Boards initiative. Launched in 2015, the program is designed to empower executive women to strengthen their contributions on corporate boards and within their organizations. Biogen leadership selected 11 candidates to attend a program at George Washington University, specifically designed to help women prepare for board positions. Within a year of participating in the program, most of the 11 participants had been placed on boards.

Women comprise about 50 percent of our global workforce and more than 40 percent of leaders at the director level or above.

Since its launch, this program has been adopted by Women in Bio, a leading industry organization that will now work to make the program a standard for biopharmaceutical companies.

Ensuring Ethical Business Practices

Bioethics

We are committed to the safe and ethical use of biotechnology to improve the quality of human life, and we recognize that we and other biotechnology companies must approach this continually advancing technology with a balance of vigilance, diligence and humility. Our approach is guided by the Biotechnology Industry Organization's (BIO) principles, including a respect for the potential significant benefits of biotechnology and a commitment to use it only for the benefit of humankind. We are sensitive to the perspectives of various stakeholders and welcome reasoned dialogue and appropriate industry safeguards for appropriate use of biotechnology.

Our highest priority in the discovery, development, and use of our products is human health, safety and environmental protection. We comply with all applicable laws regarding biotechnology research and development. We support and implement strong ethical practices in our clinical research, including strict informed consent procedures, strong protection of the confidentiality of medical and genetic information, and strict protocols for clinical study execution. Our clinical research and other ethical standards for our employees and business partners are included in our **Code of Business Conduct: *Values in Action***.

We are sensitive to the important social and ethical issues regarding stem cell research. We believe the science indicates the potential for significant human health benefits from the use of stem cells, justifying responsible research. Thus, we at times make use of stem cells in our research. In doing so, we adhere to related laws and regulations and where possible incorporate the guidelines of the **International Society for Stem Cell Research** in this research, and we expect contract organizations or research affiliates to adhere to these laws, regulations and guidelines as well. We oppose the use of stem cells for human reproductive cloning, and we oppose the use of any form of biotechnology for the purposes of harming humans, crops or livestock.

In fulfilling our mission to improve human health worldwide through the discovery of therapeutic compounds, and to ensure their efficacy and safety for human use, Biogen is at times required by standards of scientific best practice, or by government agencies charged with the protection of public health, to conduct or sponsor research that uses animals. When Biogen conducts or sponsors 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. For more information, view a **list of applicable regulations**.

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 clinical trial protocols. 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 make sure 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.

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. Employees receive applicable regular training and education programs regarding our marketing policies and practices.

We are guided by our Code of Business Conduct: *Values in Action*, as well as policies regarding product information and promotion, and interactions with healthcare professionals and organizations. All employees are required to take part in online and hands-on training, which uses real-world examples to help bring these principles 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.

06 ABOUT THIS REPORT

Scientists examine DNA gel used in genetics, medicine, biology and pharma research

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. Please refer to the GRI Index to view how we report against the relevant indicators, as well as how we track our efforts in alignment with the SDGs.

ERM CVS assured the 2015 data for a number of indicators including Scope 1, Scope 2 and Scope 3 GHG emissions, Biogen's Carbon Neutrality Methodology, and select environmental and social indicators. See the ERM CVS Assurance Statement on *Page 70* for full details of the assurance scope, assurance standards used, work undertaken and conclusions.

Data in this report covers our worldwide operations, including consolidated subsidiaries but excluding joint ventures, for calendar years 2006, 2013 and 2015, with an emphasis on 2015 activities. We use financial control to determine the boundary of our environmental data (e.g. carbon, energy, water and waste). Within the boundary are our three manufacturing sites located in Massachusetts, North Carolina and Denmark, and our commercial fleet operations. Some activities of note from 2016 are also covered.

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 **citizenship@biogen.com**.

DATA TABLE

The 2015 data indicated in **bold** form part of ERM CVS' assurance engagement. Their Assurance Statement can be found *here*.

	Units	2006 Baseline	2013	2014	2015
ABOUT BIOGEN					
Revenue	Million USD	2,683	6,932	9,703	10,764
R&D Spend	Million USD	718	1,444	1,893	2,013
No. of Employees [1]	FTEs	3,700	6,820	7,528	7,485
Corporate Equality Index [2]	%	N/A	85	100	100
CDP Rating (out of 100) [2]	–	N/A	92 B	81 B	96 C
Newsweek Green Rankings [2]	World Rank	N/A	N/A	8th	1st
Dow Jones Sustainability Index [2]	Score	N/A	78	80	79
Global 100 Index [2]	Rank	N/A	8th	2nd	1st
ENVIRONMENTAL PERFORMANCE					
CLIMATE					
Scope 1 (fuel sources only) [3]	Metric Tons (MT) CO_2e	38,928	49,750	50,880	**57,574**
Scope 2 Location-based method (electricity and steam)	$MTCO_2e$	47,752	32,070	35,207	**40,802**
Scope 2 Market-based method [4] (electricity and steam)	$MTCO_2e$	49,243	35,419	68	**70**
Scopes 1 and 2 Location	$MTCO_2e$	86,679	81,819	86,087	**98,376**
Scopes 1 and 2 Location Intensity	$MTCO_2e$ / million $ revenue	32.3	11.8	8.9	**9.1**
Scopes 1 and 2 Location Intensity Progress Against Target [5] (80% reduction by 2020 below 2006)	% Reduction	--	63	73	**72**
Scope 3 (Value Chain) [6]	$MTCO_2e$	8,325	234,694	338,580	**375,604**
Purchased goods and services (category 1) [6]	$MTCO_2e$	N/A	129,816	247,700	**242,700**
Capital goods (category 2) [7]	$MTCO_2e$	N/A	18,226	31,300	**75,700**
Fuel and energy related activities (not included in Scope 1 or 2 - category 3 Market-based method) [8]	$MTCO_2e$	N/A	30,640	9,427	**6,726**
Waste generated in operations (category 5)	$MTCO_2e$	N/A	53	78	**120**

	Units	2006 Baseline	2013	2014	2015
Business travel (category 6)	$MTCO_2e$	8,325	17,788	20,661	**21,511**
Employee commuting (category 7)	$MTCO_2e$	N/A	29,643	17,252	**13,832**
Upstream leased assets (category 8) [9]	$MTCO_2e$	N/A	8,528	5,262	**3,879**
End of life treatment, sold products (category 12)	$MTCO_2e$	N/A	N/A	6,900	**11,136**
CARBON NEUTRALITY					
Scopes 1, 2 (Market) and 3	$MTCO_2e$	96,495	319,863	389,529	**433,249**
Carbon Offsets	$MTCO_2e$	0	20,000	292,971	**314,493**
Renewable Energy Certificates [10]	$MTCO_2e$	0	0	104,204	**118,756**
Net Emissions (Scope 1, 2 and 3) [11]	$MTCO_2e$	96,459	299,863	-7,646	**0**
ENERGY					
Total Energy Use (gas, oil, steam, electricity and fleet)	MMBTUs	1,100,560	1,200,951	1,246,699	1,402,944
Energy Intensity	MMBTUs / million $ revenue	410	173	128	130
Electricity Use	MWh	92,788	85,456	94,252	107,643
Electricity Intensity	MWh / million $ revenue	34.6	12.3	9.7	10
Renewable Energy (% of Total Electricity)	%	0	0	100	100
Renewable Energy (% of Total Energy)	%	0	0	26	26
Fleet Efficiency [12]	g CO_2e / mile	461	396	396	299
WATER					
Potable Water Use	Cubic meters	671,871	660,856	701,377	**839,769**
Potable Water Intensity	Cubic meters / million $ revenue	250	95	72	**78**
Potable Water Intensity Progress Against Target (80% reduction by 2020 below 2006)	% Reduction	0	62	71	69
Non-potable Water Use (Recycled, grey water, and rain water)	Cubic meters	N/A	96,162	102,633	**87,705**
Reused/Recycled Water [13]	%	N/A	15	15	**10**

	Units	2006 Baseline	2013	2014	2015
Wastewater Discharge	Cubic meters	N/A	375,487	376,195	**450,546**
Wastewater Discharge Intensity	Cubic meters/ million $ revenue	N/A	54	39	**42**
WASTE					
Non-hazardous Waste Generated [14]	US Tons	N/A	4,001	3,705	**5,370**
Waste Composted	US Tons	N/A	1,562	1,505	**2,252**
Waste Recycled or Reused	US Tons	N/A	1,546	1,015	**1,002**
Energy Recovery via Anaerobic Digestion	US Tons	N/A	0	37	**48**
Waste to Energy	US Tons	N/A	875	1,140	**1,254**
Incineration	US Tons	N/A	0	0	**757**
Waste to Landfill [15]	US Tons	331	18	9	**57**
Waste to Landfill Offset [15]	US Tons	0	0	41	0
Waste to Landfill Diversion (Target is 100 percent)	%	N/A	100	100	99
Recovery & Recycling Rate (Reuse, Compost, Recycle)	%	N/A	78	69	**61**
Hazardous and Biohazardous Waste	US Tons	N/A	156	189	**245**
SOCIAL PERFORMANCE					
COMMUNITY GIVING					
Total Grants [16]	Million USD	N/A	4.4	6.2	5.2
Matching Gifts Program	Million USD	N/A	0.6	0.8	1.5
Care Deeply Day Volunteer Hours	Hrs	N/A	6,650	10,500	14,000
DIVERSITY & INCLUSION					
Total Supplier Diversity Spend [17]	Million USD	N/A	80	143	**196**
Total Supplier Diversity Spend of U.S. Spend [17]	%	N/A	6	8	9
Women in Workforce	%	N/A	51.5	51.5	**50.1**
Women in Management	%	N/A	40	41.2	**43.7**
Minorities in Management	%	N/A	20.4	20.9	**21.9**
Women on Executive Team	%	8	10	17	18
Women on Board of Directors	%	17	25	27	**27**

	Units	2006 Baseline	2013	2014	2015
EMPLOYEE DEVELOPMENT					
Employee Satisfaction [18]	%	N/A	97	N/A	89
Average EHS Training Hours per Employee	Hrs	N/A	N/A	N/A	5
HEALTH & SAFETY					
Total Recordable Incident Rate (TRIR) [19]	OSHA Recordables * 200,000/Hours	N/A	0.48	0.50	**0.30**
Days Away Case Rate [20] (DACR)	OSHA Recordable Lost Time Cases * 200,000/Hours	0.35	0.11	0.27	**0.16**
Contractor Days Away Case Rate (DACR)	Cases / 200,000 Hours	N/A	0.50	0.98	0.41
Number of Fatalities		N/A	0	0	0
Accidents per Million Miles [21] (US Commercial Fleet)	Claims / million miles	N/A	11.1	12.0	**12.3**

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

All years of environmental data was reassessed and adjusted, as warranted, to account for methodology (i.e. change in organization boundary, fleet inclusion in energy values) and organization changes (i.e. purchase of RTP-DP facility in August 2015)

1 | Value includes permanent and contracted employees.

2 | Year of the result is based on the ranking publication year, which may use data from other time periods per the publication's methodology.

3 | Scope 1 emissions exclude HFC/PFC refrigerant losses - these are being evaluated for potential inclusion in future Biogen GHG reporting.

4 | Renewable Energy Certificates (RECs) and Guarantees of Origin (GOs) are used in calculating the Scope 2 carbon emissions using the market-based method. 88,633 RECs and 19,011 GOs were applied to our electricity consumption in 2015.

5 | Biogen's carbon emission target is based on the Context-based Carbon Metrics methodology and exceeds the reduction amount necessary to achieve the global 2°C temperature target. Purchased RECs, GOs and carbon offsets are not utilized to achieve this target.

6 | Data reflects business travel only for 2006. In 2014 and 2015, a more robust Scope 3 methodology was utilized, resulting in a more complete assessment. Scope 3 categories 4, 9, 10, 11, 13, 14 and 15 were determined to not be relevant to our value chain or are aggregated into other categories.

7 | Carbon emissions are generated from both fossil fuel and electricity use based on Trucost's EEIO model and actual supplier data.

8 | The 2014 scope 3 category 3 value, previously calculated using the location-based method, was adjusted in accordance with the market-based method. No corresponding adjustment was made to the retirement of carbon offsets resulting in a carbon footprint of less than 0.

9 | Our office located in Weston, Massachusetts was reclassified as an affiliate office in 2015 resulting in relocation of its emissions from Scope 1 and 2 to Scope 3 category 8. Values for 2013 and 2014 were adjusted accordingly.

10 | RECs and GOs are purchased for the amount of electricity consumption associated with Scope 3 categories 1, 2, 3 and 8, as determined from actual data and Trucost's EEIO model. 187,725 RECs and 0 GOs were purchased and retired in 2014. 218,965 RECs and 1,141 GOs were purchased and retired in 2015.

11 | The 2014 scope 3 category 3 value, previously calculated using the location-based method, was adjusted in accordance with the market-based method. No corresponding adjustment was made to the retirement of carbon offsets resulting in a carbon footprint of less than 0.

12 | Data reflects only U.S. Fleet from 2006 to 2014. Data was expanded to include Canada and EU Fleets in 2015.

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

14 | 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.

15 | Biogen has a Zero Waste to Landfill Target. In 2014, Biogen offset the potential landfilling of 41.7 US Tons of waste from a neighboring pharmaceutical company in Boston. The 57 tons of landfilled waste in 2015 are from the newly purchased RTP manufacturing facility. We are working on transitioning that facility to Zero Waste to Landfill and anticipate achievement by the end of 2016.

16 | Includes all grants awarded by the Biogen Foundation exclusive of the Matching Gifts Program.

17 | 2015 diverse supplier spend and related percentage include direct Tier I and Tier II spend with suppliers.

18 | In 2014 we were in the middle of revamping our People Survey and did not perform a company-wide survey that year.

19 | Value includes permanent and contracted employees, but excludes affiliates.

20 | Value includes permanent and contracted employees.

21 | Prior accidents per million miles rates were adjusted to match the current accounting methodology for vehicle accident claims.

GRI G4 INDEX

GRI Indicator	Section and/or Description	Related SDGs*
	General Standard Disclosures	
Strategy and Analysis		
G4-1; G4-2	About Biogen, *Pages 3-4* (Letter From Leadership), *Pages 9-12* Rethinking Resources, *Page 25* Acting Responsibly, *Page 48* (2016 Supplier Diversity Goals); *Page 52* (Safeguarding Employees and Contractors [DACR Goal]) 2015 10-K (Item 1A Pages 32-43)	3, 4, 5, 7, 8, 9, 10, 12, 13
Organizational Profile		
G4-3	Biogen Inc.	
G4-4	About Biogen, *Page 9* (Biogen Marketed Therapies)	
G4-5	World headquarters: Cambridge, Mass., United States; International headquarters: Zug, Switzerland	
G4-6	Website: About Us	
G4-7	Publicly traded company listed on the NASDAQ Stock Exchange	
G4-8	About Biogen, *Pages 6-8* 2015 10-K (Item 1 Pages 5-8)	
G4-9	About Biogen, *Page 7* (Biogen at a Glance) 2015 10-K (Item 1 Page 5 – Marketed Products, Item 2 Page 44 – Properties, Item 6 Page 48 – Selected Financial Data)	
G4-10	About This Report, *Page 59* (Data Table), *Page 61* (Data Table)	
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	Acting Responsibly, *Page 47* (Supply Chain, Due Diligence Playbook)	
G4-13	On October 21, 2015, we announced a corporate restructuring, which includes the termination of certain pipeline programs and an 11 percent reduction in workforce. On August 24, 2015, we acquired the drug product manufacturing facility and supporting infrastructure of Eisai, Inc in Research Triangle Park, North Carolina. In December 2015, we acquired land in Solothurn, Switzerland, where we plan to build a biologics manufacturing facility in the Commune of Lterbach over the next several years.	

*We have included how we address specific SDGs throughout our report

GRI Indicator	Section and/or Description	Related SDGs
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	About Biogen, *Page 11* (Supporting Sustainable Development Goals); Improving Lives, *Page 20* (Engaging with Patient Advocacy Organizations); Rethinking Resources, *Page 28* (Maintaining Carbon Neutrality), *Page 30* (Advancing Green and Healthier Buildings); Driving Engagement, Page 36 (Engaging with Industry), *Page 38* (Advocating for Climate Action); Acting Responsibly, *Page 46* (Safe Disposal of Medications and Sharps, Pharmaceuticals in the Environment), *Pages 47-48* (Supply Chain), *Page 55* (Bioethics); GRI G4 Index, *Page 67* (Labor Practices and Decent Work)	ALL
G4-17	About This Report, *Page 58* 2015 10-K (Item 1 Page 1 – Overview, Pages F-21-F23 – Acquisitions)	
G4-18	About Biogen, *Pages 11-12* (Focusing on What is Material); About This Report, *Page 58*	ALL
Identified Material Aspects and Boundaries		
G4-19, G4-20, G4-21	About Biogen, *Pages 11-12* (Focusing on What is Material); About This Report, *Page 58*	
G4-22	We have restated some of our environmental, health and safety data, see About This Report, *Page 62* (Data Tables footnotes)	
G4-23	There have been no changes to Scope or Aspect boundaries.	
Stakeholder Engagement		
G4-24, G4-25, G4-26, G4-27	Driving Engagement, *Pages 34-36* (Stakeholder Engagement, Engaging in Public Policy, Advocating for Climate Action)	3, 4, 5, 7, 8, 9, 10, 13
Report Profile		
G4-28, G4-29, G4-30,	About This Report, *Page 58*	
G4-31, G4-32, G4-33	Biogen reports on its Corporate Citizenship commitment annually. Our most recent report prior to this report was released in June 2015.	
Governance		
	About Biogen, *Page 10* (Guiding our Vision from the Top)	
G4-34	Website: Committee Composition and Charters	
G4-35, G4-36	About Biogen, *Page 10* (Guiding our Vision from the Top)	
G4-37	Website: Contact the Board	
G4-38, G4-39	About Biogen, *Page 10* (Biogen Board of Directors) Website: Board of Directors 2016 Annual Meeting of Stockholders and Proxy Statement (Pages 7-17)	
G4-40	2016 Annual Meeting of Stockholders and Proxy Statement (Pages 8-9)	

GRI Indicator	Section and/or Description	Related SDGs
	Code of Business Conduct: *Values in Action* (Page 26)	
G4-41	2016 Annual Meeting of Stockholders and Proxy Statement (Page 55)	
	Corporate Governance Principles	
G4-42, G4-43	Website: Risk Committee Charter	
G4-45, G4-46, G4-47	2016 Annual Meeting of Stockholders and Proxy Statement (Pages 21-22) Website: Risk Committee Charter	
G4-48	Our Citizenship Executive Council, which is chaired by our CFO and includes the CEO and several executive team members, 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	Website: Contact the Board	
G4-51, G4-52, G4-53	2016 Annual Meeting of Stockholders and Proxy Statement (Page 26, 30-52)	
Ethics & Integrity		
G4-56	Code of Business Conduct: *Values in Action*	
G4-57, G4-58	Code of Business Conduct: *Values in Action* (Page 35)	

GRI Indicator	Section and/or Description	Assurance	Related SDGs
	Specific Standard Disclosures		
Economic			
	About Biogen, Page 7 (Biogen at a Glance)		
G4-EC1	2015 10-K (Page 48)		
G4-EC2	We have identified a number of potential risks associated with climate change, including: • Physical risk to property and employees, including increased droughts, hurricane severity, power or communications failures and flooding, which could affect our operations. • 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&D and manufacturing sites. We could also be impacted financially if sectors we source from become subject to greenhouse gas regulations. • Regulatory risks, including possible regulatory initiatives intended to reduce emissions that may increase energy costs in the United States, such as a direct tax (“carbon tax”) or mandatory emissions caps that could be imposed on businesses.		13

GRI Indicator	Section and/or Description	Assurance	Related SDGs
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-EC8	About Biogen, *Page 7* (Biogen at a Glance); Improving Lives, *Page 16* (Advancing Scientific Research in Developing Countries); Rethinking Resources, *Page 31* (Donating Used Furniture); Driving Engagement, *Page 33, Pages 38-40* (Improving Lives in Our Community), *Page 41* (Caring Deeply Around the World); Acting Responsibly, *Page 43, Page 48* (Supplier Diversity)		4, 5, 10
Environmental			
G4-EN1, G4-EN3, G4-EN4, G4-EN5, G4-EN6, G4-EN8, G4-EN9, G4-EN10, G4-EN15, G4-EN16, G4-EN17, G4-EN18, G4-EN19, G4-EN23, G4-EN26	About This Report, *Pages 58-62* (Data Table, Description of External Assurance) Note: All of our water is drawn from municipal sources. All of our generated wastewater is discharge to municipal sewers or hauled to an external treatment facility for management and disposal. We do not believe we significantly affect any water sources, but continue to work to reduce our water consumption.	Assurance Letter, *Page 70*	7, 9, 12, 13
G4-EN24	Biogen did not have any significant spills in 2015.		
G4-EN25	Rethinking Resources, *Page 30* (Getting to Zero Waste) We produce both chemical and medical waste, which is managed and disposed of properly in accordance with applicable local and federal regulations. We do not ship any waste internationally.	Assurance Letter, *Page 70*	9
G4-EN27	Acting Responsibly, *Page 45* (Packaging); *Page 46* (Product Use and Disposition)		12
G4-EN29	Biogen did not have any fines or significant noncompliance with environmental or safety laws and regulations in 2015. However, we received a Notice of Violation (NOV) for exceeding a mercury limit by a small margin for one sample result in 2015 from our RTP – Drug Product site.	Assurance Letter, *Page 70*	7, 13
G4-EN30	Rethinking Resources, *Page 27* (Maintaining Carbon Neutrality) About This Report, *Page 59-60* (Data Table) Biogen reports emissions of CO_2e associated with its value chain.	Assurance Letter, *Page 70*	7, 13
G4-EN33	Acting Responsibly, *Page 48* (Supply Chain)		5, 7, 10, 13

GRI Indicator	Section and/or Description	Assurance	Related SDGs
Labor Practices and Decent Work			
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: *Values in Action*. Employees are responsible for upholding the code. Suppliers are also subject to the code.			
G4-LA2	Acting Responsibly, *Page 50* (Rewarding Great Work), *Page 52* (Promoting Employee Health and Wellbeing)		3
G4-LA4	At our Hillerød, Denmark, facility, the minimum notice period is based on seniority and specified in the collective bargaining agreement.		
G4-LA6	About This Report, *Page 62* (Data Table); Acting Responsibly, *Page 52* (Employees, Contractors)	Assurance Letter, *Page 70* (Days Away Case Rate; Accidents per million miles [U.S. only])	3
G4-LA9	Acting Responsibly, *Page 43,* Page 49 (Learning to Lead)		4
G4-LA10	Acting Responsibly, *Page 49* (Learning to Lead), *Page 54* (Advancing Women's Leadership)		4
G4-LA11	All Biogen employees receive a performance and career development review, annually.		
	About This Report, *Page 61* (Data Table)		
G4-LA12	Website: Board of Directors		5, 10
G4-LA15	Acting Responsibly, *Pages 47-48* (Supply Chain)		5, 10
Human Rights			
G4-HR4, G4-HR5, G4-HR6	Acting Responsibly, *Pages 47-48* (Supply Chain) Code of Business Conduct: *Values in Action* (Page 15)		5, 10
G4-HR11	Acting Responsibly, *Pages 47-48* (Supply Chain)		5, 10
Society			
G4-SO1	All major locations have implemented local community engagement and impact assessments.		
G4-SO2	Many companies that engage in R&D and manufacturing have the potential for negative environmental implications on neighboring communities. For information on how we address these potential impacts, please review Rethinking Resources, starting on *Page 25*; and Acting Responsibly, *Pages 44-46.*		
	Code of Business Conduct: *Values in Action* (Page 29)		
G4-SO4	All employees are trained on our Code of Business Conduct.		
	Biogen Political Contributions Disclosures		
G4-SO6	Website: U.S. Federal Election Commission		
G4-SO8	Biogen did not have any fines or significant noncompliance with laws and regulations in 2015, except for what is referenced in G4-EN27, *Page 66*		

GRI Indicator	Section and/or Description	Assurance	Related SDGs
G4-S010	Acting Responsibly, *Pages 47-48* (Supply Chain)		5, 10
Product Responsibility			
G4-PR1	All of our products are assessed for health and safety impacts.		3
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 information for our marketed therapies: ALPROLIX, AVONEX, ELOCTATE, FAMPYRA, GAZYVA, PLEGRIDY, RITUXAN, TECFIDERA, TYSABRI, ZINBRYTA, BENEPALI, FLIXABI		3
G4-PR5	In 2014, Biogen engaged a third-party firm to conduct a Voice of the Customer survey to measure patient satisfaction with our TECFIDERA product. While the results were quite positive, we consider the results proprietary and, as such, do not publicly report them.		

Disclosures on Management Approach of Material Issues

Many of our most material issues are managed by multiple functions throughout the company, as referenced below.

GRI Indicator	Location and/or Description	Related SDGs
Research and Development (R&D) and Innovation	About Biogen, *Page 12* (Research and Development (R&D) and Innovation); Improving Lives, *Pages 14-16* (Research & Development, Collaborating to Make an Impact)	3
Patient Health Outcomes	About Biogen, *Page 12* (Patient Health Outcomes); Improving Lives, *Pages 21-23* (Improving Patient Health Outcomes, Supporting Underserved Patient Populations)	3
Access to Treatment/ Pricing / Healthcare-System Cost Burdens	About Biogen, *Page 12* (Access to Treatment/Pricing/Healthcare-System Cost Burdens); Improving Lives, *Pages 17-19* (Helping Ensure Patient Access to Treatment, Developing and Publishing our Pricing Principles, Heralding a New Era of Patient Access: Biosimilars)	3, 10
Stakeholder Engagement	Driving Engagement, *Pages 34-36* (Stakeholder Engagement) About Biogen, *Page 11-12* (Focusing on What is Material)	17
Ethics / Governance	Acting Responsibly, *Pages 55-56* (Ensuring Ethical Business Practices) Corporate Governance Principles	
Intellectual Property	Driving Engagement, *Page 37* (Intellectual Property) 2015 10-K (Item 1 Pages 8-11)	
Supply Chain ESG	Acting Responsibly, *Pages 47-48* (Supply Chain)	7, 9, 12, 13, 14, 15, 16
Diversity and Inclusion	Driving Engagement, *Pages 34-35* (Engaging with Employees); Acting Responsibly, *Page 43, Pages 53-54* (Embedding Diversity + Inclusion into Our Corporate Strategy)	5, 10
Corporate & Foundation Giving / Community Engagement	Driving Engagement, *Page 33, Pages 38-41* (Improving Lives in Our Community, Caring Deeply Around the World)	3, 4, 11, 17

GRI Indicator	Section and/or Description	Assurance	Related SDGs
Environmental Impacts	Rethinking Resources, *Pages 25-31*		7, 9, 12, 13, 14, 15, 16
Regulatory / Legal	2015 10-K (Item 1A, Page 39)		
Talent Management / Workplace Culture / Health & Safety	Driving Engagement, *Page 33, Pages 34-35* (Engaging with Employees) Acting Responsibly, *Page 48-52* (Creating a Great Work Culture)		5, 8, 10
Customer Relationship Management	See G4-PR5, *Page 68*		
Employee Volunteerism	Driving Engagement, *Page 41* (Caring Deeply Around the World)		3, 4, 11

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 selected 2015 data in Biogen's *2015 Corporate Citizenship Report: Inspired Impact (the Report)*.

Engagement Summary	
Scope:	Whether the 2015 data for the following indicators as identified with **bold** type on pages 59 to 62 of Biogen's *2015 Corporate Citizenship Report: Inspired Impact (the Report)* are fairly presented, in all material respects, in accordance with the reporting criteria: **ENVIRONMENT:** - Scope 1 (fuel-based only) and 2 GHG emissions (in CO_2e) and emission intensity (CO_2e / million $ revenue) - Scope 3 GHG emissions in categories 1,2,3, 5,7,8,12 - Biogen's Net Zero Carbon Footprint assertion - Total potable and non-potable water use (in m^3) and intensity (cubic meters / million $ revenue) - Water reused/recycled (%) - Non-hazardous waste generated, waste composted, waste recycled, waste to energy, waste to landfill (US tons) - Hazardous waste (US tons) **SAFETY:** - Employee days away case rate (global) and Accidents per million miles (US only) **DIVERSITY:** - Total Diversity Spend ($); women in Workforce (%); Women in Management (%); Minorities in Management (%); Women on Board of Directors (%)
Reporting criteria used:	Biogen's reporting criteria as described on page 58 of the Report, including the WBCSD/WRI GHG Protocol including the 2015 Scope 2 Guidance and Biogen's Value Chain Calculation Methodology for Scope 3 categories.
Assurance standards used:	ISAE 3000 International Standard for Assurance engagements and, for the GHG data ISO 14064-3:2006: Specification with guidance for the validation and verification of greenhouse gas assertions
Assurance level:	Limited assurance
Respective responsibilities:	Biogen is responsible for preparing the 2105 data for the selected indicators and for presentation of the information in the Report in accordance with their reporting criteria and definitions. 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 the 2015 data for the selected indicators as identified in bold on pages 59 to 62 of the Report are not fairly presented, in all material respects, in accordance with 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 sustainability, GHG and assurance specialists performed the following key activities:

- Interviews with relevant staff to understand Biogen's reporting criteria and internal reporting processes for the selected indicators, including the use of its GHG and Carbon Neutral methodologies and the various data management and reporting systems used for collecting, consolidating and reporting the data.
- A review of the calculations including conversion factors and emission factors used.
- Validating a risk-based selection of primary source data from corporate safety and employee databases as well as site level underlying data for the environmental indicators
- A visit to the Biogen headquarters in Cambridge, Massachusetts to interview Biogen personnel and review program documentation.
- Cross checking that the purchased Project Offsets, Renewable Energy Certificates and Guarantees of Origin were retired/managed according to Biogen's Carbon Neutral Methodology.
- 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. We did not independently verify the financial data used to calculate intensity indicators but relied on Biogen's audited financial accounts for 2015. We have not tested in detail the Trucost EEIO model used to perform the calculations for Categories 1, 2 and 12. Categories 3, 5, 7 and 8 are based on Biogen primary data calculated by Trucost. We have not independently verified the financial data used to calculate GHG intensity but relied on Biogen's audited accounts for 2015.

Commentary

We have provided Biogen with a separate, confidential report detailing our findings and making recommendations regarding its overall reporting processes and systems for its sustainability reporting. In particular we noted that the reported Scope 1 emission data do not include refrigerant (HFC and PFC) losses. We understand these emissions are being evaluated for potential inclusion in future GHG inventories.

ERM CVS
Informed Assured

28 June 2016

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