



where  
**science** meets **humanity**<sup>TM</sup>

**2020** Year in Review  
OUR COMMITMENT TO CORPORATE RESPONSIBILITY



# TABLE OF CONTENTS

13



03 2020 Highlights  
04 CEO Letter

## OUR PURPOSE

- 13 Highlights
- 15 ESG Governance and Strategy
- 16 Principles, Policies & Positions
- 16 Responsible and Ethical Supply Chain
- 19 Recognition

34



## PATIENTS

- 34 Highlights
- 35 Advancing Health Access
- 38 Striving for Health Equity
- 41 Caring for Patient Health
- 44 Pioneering Digital Health Solutions

47



## OUR PEOPLE

- 47 Highlights
- 48 Prioritizing Health and Well-being During the Pandemic
- 49 Our Culture
- 51 Diversity, Equity & Inclusion
- 57 Employee Engagement
- 60 Workplace Health and Safety

61



## ENVIRONMENT

- 61 Highlights
- 63 Healthy Climate, Healthy Lives™
- 65 Progress Update
- 67 Sustainable Drug Development
- 69 Supplier Engagement
- 70 Scientific Collaboration and Advocacy
- 71 Employee Engagement
- 73 Additional Progress

75



## COMMUNITY

- 75 Highlights
- 76 Providing Pandemic Relief Globally
- 79 Caring Deeply: Corporate Community Engagement
- 85 Changing Lives: Biogen Foundation

88



## REPORTING

- 88 About this Report
- 90 ESG Materiality Assessment Process
- 92 Additional Resources
- 93 Safe Harbor
- 94 ESG Data Table
- 101 SASB Content Index
- 107 GRI Content Index



# 2020 HIGHLIGHTS



~**240,000**

patients treated with biosimilars<sup>1</sup>

100% score as Corporate Equality Index for the 8<sup>th</sup> time:

**BEST PLACES TO WORK** for LGBTQ Equality

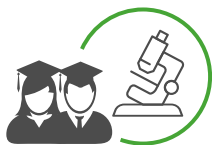


Biogen's anti-TNF biosimilars are estimated to have saved healthcare systems across Europe

**€2.4BN**

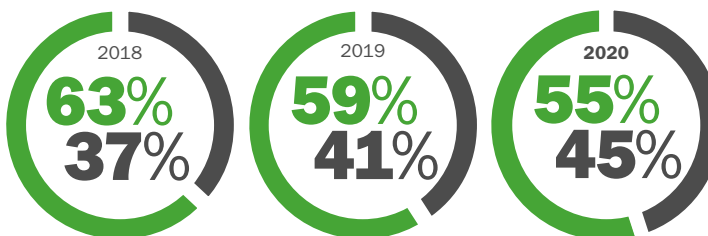
**57,000 STUDENTS**

engaged in our STEM Community Labs since 2002 with focus on underrepresented students

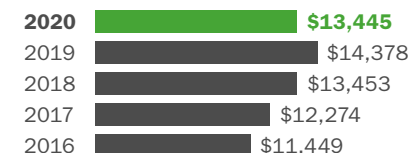


**Product Revenue by Region**  
(% of total product revenue)

● U.S. ● Rest of the world



**Total Revenue**  
(\$ in millions)

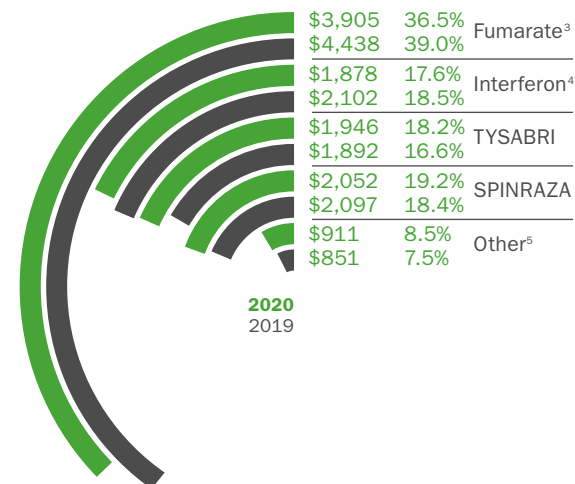


**\$18.9M**  
granted from Biogen Foundation to 100 organizations

Enhanced Diversity, Equity & Inclusion strategy aims to boost diversity<sup>2</sup> in U.S. manager positions and above by **30%**



**Product Revenue**  
(\$ in millions and % of total product revenue)



<sup>1</sup> Biogen data on file as of December 31, 2020.

<sup>2</sup> Percent of U.S. manager positions and above held by Black, African American and Latinx employees, as well as Asian employees where underrepresented by level and function; by year end 2021.

<sup>3</sup> Fumarate includes TECFIDERA and VUMERITY. VUMERITY became commercially available in the U.S. in November 2019.

<sup>4</sup> Interferon includes AVONEX and PLEGRIDY.

<sup>5</sup> For 2020 and 2019, Other includes product revenue from FAMPYRA, FUMADERM, BENEPALI, FLIXABI and IMRALDI.



## CEO LETTER

2020 was a year like no other. The COVID-19 pandemic stole millions of lives while throwing many others into economic hardship. Disasters escalated the urgency of our global climate crisis. And events throughout the year intensified the need for action in addressing persistent racial injustice within our communities. The impact of all of these will be with us for a long time.

At Biogen, these unprecedented challenges have strengthened our purpose to address science for the betterment of humanity. We found the resilience to deliver a strong operating performance and maintain global leadership across our core businesses. My dedicated colleagues, rather than being overcome by hardship and everyday challenges, continued to advance our pipeline and our strategy to build a multi-franchise portfolio leveraging the interconnectivity within neuroscience.

In 2020, we continued to carry out our Biogen FORWARD strategy that we have been building upon for the past four years. This strategy aims to leverage science and research to execute on our core business today while also developing and expanding our neuroscience portfolio to deliver for tomorrow. In doing so, we give hope to millions of patients as well as their loved ones and their caregivers, while positioning the company for what we believe will be a transformative 2021.

We now have 10 programs either in Phase 3 or filed with regulatory agencies, including in Alzheimer's disease, neuropsychiatry, amyotrophic lateral sclerosis (ALS) and ophthalmology. In 2020, we added or advanced 12 clinical programs, bolstering our early- and late-stage pipelines through both internal development and collaborations with leading neuroscience companies, including Sangamo Therapeutics, Inc. (Sangamo), Denali Therapeutics Inc.

“

**We are focused on advancing our broader purpose as an organization, as we aim to pioneer science for the betterment of humanity.”**

**Michel Vounatsos**  
CHIEF EXECUTIVE OFFICER





## 8

business development deals for a total value of approximately \$3 billion

(Denali) and Sage Therapeutics, Inc. (Sage). We believe we are well positioned for future growth with readouts expected in 2021 from eight clinical programs, of which four are pivotal readouts.

One of the most promising and near-term of these investigational therapies is aducanumab, which we are developing in collaboration with Eisai Co., Ltd. (Eisai). We completed regulatory filings of aducanumab in multiple geographies during 2020, and we remain ready to launch should our application be approved by the U.S. Food and Drug Administration (FDA). If approved, aducanumab would be the first therapy to meaningfully change the course of Alzheimer's disease.

We are focused on advancing our broader purpose as an organization, as we aim to pioneer science for the betterment of humanity. We strive to be leaders by taking meaningful action for the patients we serve, our employees, the environment and the community – including accelerating our efforts in diversity, equity and inclusion. We believe that taken together, all of these steps contribute to sustainable, long-term stockholder value.

### Financial Performance

I am proud of the more than 9,000 members of the Biogen team for their dedicated focus on day-to-day execution in order to serve all of our stakeholders. Despite the uncertainties and hardship caused by the COVID-19 pandemic for our society and our industry, full-year GAAP diluted earnings per share were \$24.80 and Non-GAAP diluted earnings per share were \$33.70. We generated \$13.4 billion in revenue, representing a 6% decrease versus the prior year. This decline was largely due to an erosion in U.S. TECFIDERA revenue.

We achieved multiple sclerosis (MS) product revenue in the U.S. of \$2.86 billion through June 30, 2020, the period before multiple, deeply discounted TECFIDERA generics entered the U.S. market. During the second half of 2020, MS product revenue in the U.S. was \$2.25 billion.

During 2020, Biogen generated approximately \$4.2 billion in net cash flow from operations and \$3.8 billion in free cash flow.

This cash flow generation continued to provide us with significant flexibility to allocate capital with the goal to maximize returns for our stockholders. As part of our capital allocation strategy, we also returned approximately \$6.7 billion to stockholders through share repurchases during the year.

We executed eight business development deals for a total value of approximately \$3 billion in 2020 and ended the year with \$3.4 billion in cash, cash equivalents and marketable securities.

We will continue to allocate capital efficiently, effectively and appropriately. As we have demonstrated in the past, we will always strive to have an optimal capital structure as well as aim for superior returns from the investments we make.

### Delivering on Our Core Business

Very few therapeutic areas have as much need or hold as much promise for medical breakthroughs as neuroscience. Our work over the years has centered on pursuing therapies that meaningfully slow or halt the progression of neurological and neurodegenerative diseases. That focus has resulted in our leadership in MS and spinal muscular atrophy (SMA).

While new entrants in these areas have pressured our market position, we have repeatedly demonstrated resilience with strong execution and a commitment to advancing treatment options for patients.

In addition, a key part of our Biogen FORWARD strategy is to unlock the potential of our biosimilars business. We believe biosimilars can lower healthcare system costs broadly, creating headroom for innovation. They can enable governments to potentially redirect savings to priorities such as increasing access to transformative therapies.

### Multiple Sclerosis

Globally, 2.8 million people suffer from MS. It is a progressive disease that causes damage to the central nervous system, resulting in physical disability as well as neurological dysfunctions involving movement, vision and cognition.

For nearly 25 years, we have led in the research and development of new therapies to treat this disease, and we remain focused on developing next-generation treatments. Our portfolio of 5 MS disease-modifying therapies has helped improve the lives of more than 1 million patients worldwide, and we have more than 25 active clinical trials.

Our entire MS portfolio, including royalties from OCREVUS®, generated \$8.7 billion in global revenue in 2020. We demonstrated our resilience through our continued dedication to providing efficacious therapies for patients and our strong execution, despite the entry of TECFIDERA generics that impacted our revenue beginning in the third quarter of 2020.

A critical part of our strategy as leaders in MS is, and will continue to be, investment in innovation to address continuing unmet need. In the first half of 2020, we filed for regulatory review of a subcutaneous formulation of TYSABRI in both the U.S. and the European Union (EU). This subcutaneous formulation was approved in the EU in March 2021 and offers a competitive, more convenient administration profile in the space for high-efficacy MS treatments. We also received approval in the U.S. and the EU for a new intramuscular administration for PLEGRIDY.

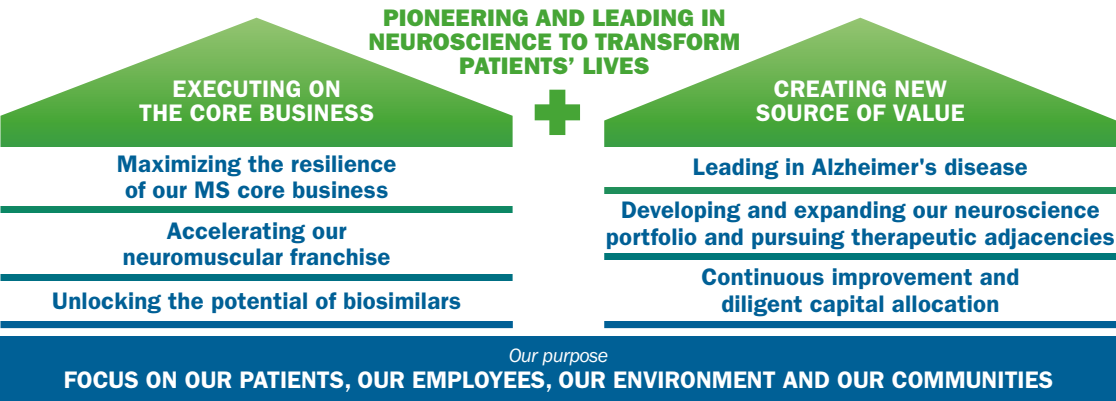
In addition, we continued to advance the potential use of extended interval dosing of TYSABRI. We presented new data demonstrating the reduced risk of progressive multifocal leukoencephalopathy (PML), a rare brain infection, through the use of extended interval dosing compared to the currently approved dosing.

Biogen continued its U.S. launch of VUMERITY. By year end, despite challenges to bringing a new treatment to market during the pandemic, VUMERITY was the number two MS product and the number one MS oral in new prescriptions in the U.S.

Spinal Muscular Atrophy

SMA is a leading genetic cause of mortality in infants, affecting about 1 in every 11,000 babies born in the U.S. SMA has a devastating effect on voluntary muscle movement, leading inevitably to muscle atrophy. Tragically, without treatment,

BIOGEN FORWARD  
Our approach to deliver sustainable value



most infants with the most severe type of SMA die within two years. Children with other types of the disease experience lasting mobility and quality of life issues throughout their teen and adult lives.

SPINRAZA (nusinersen) generated full-year global revenues of \$2.1 billion in 2020. Outside of the U.S., full-year revenue increased 9% versus the prior year with continued growth in sales volumes. Biogen ended 2020 with roughly 11,000 patients on SPINRAZA, including through our clinical studies and expanded access program.

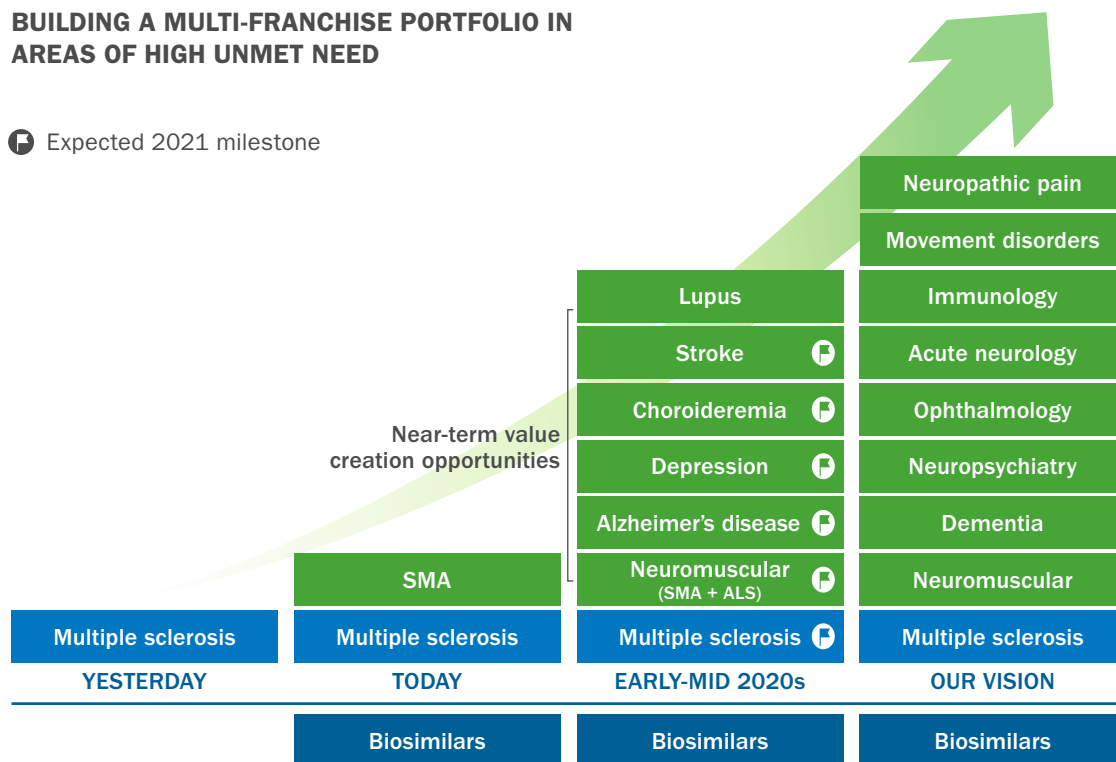
In the face of increasing competition in the SMA market, we believe that the proven efficacy and well-established safety profile of SPINRAZA makes it a foundation of care for patients.

We continued to generate additional data in 2020, including from NURTURE, which is the longest-running study in the industry examining pre-symptomatic patients with SMA. The data showed that patients being treated with SPINRAZA continued to maintain and make progressive gains in motor function compared to the natural course of the disease.



## BUILDING A MULTI-FRANCHISE PORTFOLIO IN AREAS OF HIGH UNMET NEED

Expected 2021 milestone



We continue to advance research in the field, exploring how SPINRAZA could create better outcomes for patients that still have unmet need – including after being treated with other therapies on the market. During the year, we started DEVOTE, a Phase 2/3 study to determine whether a higher dose of nusinersen could provide even greater efficacy. We also began RESPOND, a Phase 4 study evaluating the benefit of nusinersen in patients treated with the gene therapy Zolgensma® who display a suboptimal clinical response to Zolgensma.

### Biosimilars

Our biosimilars business grew in both revenue and the number of patients on therapy through year end. The business

generated \$796 million in full-year revenue, with approximately 240,000 patients relying on our leading portfolio of anti-TNF biosimilars. And through the end of 2020, we have now shipped more than 19 million doses to patients in 30 European countries.

Our product differentiation, ongoing commitment to leading science and customer focus enabled our biosimilars business to generate an estimated savings of approximately €2.4 billion for healthcare systems across Europe in 2020.

We believe that the foundation of our biosimilars business is robust and that there is more growth opportunity possible through commercializing additional biosimilar products.

We notably made progress in ophthalmology, where we have commercialization rights for two potential biosimilar products from Samsung Bioepis Co., Ltd. (Samsung Bioepis):

- SB11, a proposed ranibizumab biosimilar referencing LUCENTIS®
- SB15, a proposed aflibercept biosimilar referencing EYLEA®

SB11 is under regulatory review in the U.S. and in the EU. In June 2020, a Phase 3 study was initiated to compare SB15 and the reference product (EYLEA). Global sales of both reference products were more than \$11 billion<sup>1</sup> in 2020.

### The Promise of Our Pipeline

We pride ourselves on not being afraid to go where others will not in order to achieve our mission to pioneer in neuroscience in order to transform lives. We know that the opportunity to address the unmet need is tremendous, and our determination has allowed us to advance breakthrough science.

In 2020, we made significant strides in diversifying and building a multi-franchise portfolio, propelled by our internal research efforts and by a number of licensing deals and collaborations. We now have 33 clinical programs, many of which were added in the last three years. We believe our pipeline represents one of our most significant value-creation opportunities, spanning a matrix of disease areas and modalities.

### Alzheimer's Disease

Worldwide approximately 50 million people suffer from Alzheimer's disease or dementia, presenting a significant burden on patients, caregivers and society at large. Alzheimer's disease remains one of the top-10 causes of death in the U.S., affecting about 1 in 10 people over the age of 65. Projections suggest that, over the next 30 years, the number of people living with Alzheimer's disease will triple.

With such a grim reality facing Alzheimer's disease patients, Biogen has developed a pipeline of potential therapeutics that could slow disease progression. Aducanumab is our most advanced investigational asset. Preparing and filing the complex data packages supporting potential regulatory approval of aducanumab in the U.S., the EU and Japan were among our proudest moments in 2020.

We are committed to working with the FDA as it completes its review of our application, and we continue to stand behind our clinical data. We believe our results support approval; the Prescription Drug User Fee Act (PDUFA) action date for aducanumab is expected on June 7, 2021.

In preparation for the potential launch, we have continued to evaluate a wide spectrum of system readiness factors. We believe there are several hundred sites in the U.S. that are ready to start treating patients with aducanumab, if approved.

Another key component of our Alzheimer's franchise is BAN2401, which is an anti-amyloid beta antibody also being developed in collaboration with Eisai. BAN2401 is currently in the pivotal Phase 3 Clarity AD study examining patients with symptomatic early Alzheimer's disease. In 2020, the AHEAD 3-45 Study of BAN2401 was initiated to focus on individuals with preclinical Alzheimer's disease who have intermediate or elevated levels of amyloid in their brains. This study is evaluating whether early administration of BAN2401 can potentially prevent cognitive decline in the earliest stages of the disease.

We are encouraged by our new global collaboration with Sangamo that leverages its zinc finger protein technology to modulate the expression of key genes involved in neurological diseases. Our aim is to develop gene regulation therapies for Alzheimer's disease and more.

We also made progress on a number of other molecules in our early clinical and preclinical Alzheimer's disease and dementia portfolio. Notably, we announced positive Phase 1 data for BIIB080 (anti-tau ASO), which may reduce production of the tau protein and its accumulation in brain cells, and which we believe may have the potential to slow the progress of Alzheimer's disease.

At the start of 2021, we announced a collaboration with Apple with the aim to develop digital biomarkers for cognitive health. A new virtual research study that we expect to begin during the second half of 2021 will leverage the technology of the Apple Watch and iPhone to develop digital biomarkers that could help a person monitor their cognitive health and screen for early stages of cognitive decline, including mild cognitive impairment.

### Neuropsychiatry

In 2020, we entered into a collaboration with Sage that brought us a late-stage asset in depression that could address a significant unmet need. In the U.S. alone, 17 million people suffer from depression. Depression also is a common co-morbidity of multiple neurological disorders in our therapeutic portfolio. Despite its common occurrence, 50% of patients with major depressive disorder experience no relief from existing medications.

Through our collaboration with Sage, we will jointly develop and commercialize zuranolone (BIIB125) for the potential treatment of major depressive disorder and postpartum depression. Zuranolone is being evaluated as a potential first-in-class, two-week, once-daily oral therapy currently in multiple Phase 3 studies. Zuranolone may also have potential in other psychiatric disorders including treatment-resistant depression, bipolar depression and generalized anxiety disorder.

## €2.4 BN

estimated savings for healthcare systems across Europe in 2020 through our biosimilars business



## 10

programs either in Phase 3 or filed with regulatory agencies

### Amyotrophic Lateral Sclerosis

ALS is a fatal, progressive neurodegenerative disease with significant unmet medical need. People with ALS may experience a gradual weakening of muscles, causing them to lose their strength and ability to speak, move and eventually breathe. To date, no treatment has offered patients an option to fully mitigate the inevitable and devastating effects of this disease.

Leading our ALS portfolio is tofersen (BIIB067), which is currently being investigated in the Phase 3 VALOR study of *SOD1* ALS, a subtype of familial ALS. In 2020, we also dosed our first patient in the Phase 1 study of BIIB105 (ataxin-2 ASO)<sup>2</sup>, which has the potential to slow disease progression for the broad ALS population.

### Lupus

Systemic lupus erythematosus (SLE) is an autoimmune disease that affects multiple organ systems and is unpredictable in disease severity, with periods of illness or flares alternating with periods of remission. A hallmark of SLE is the production of autoantibodies to a variety of nuclear antigens that account for some of the pathological manifestations and ultimately, organ damage.

In August 2020, the first patient was dosed in the Phase 3 PHOENYCS GO study of dapirolizumab pegol (anti-CD40L). This study, developed in collaboration with UCB Pharma S.A., targets patients with active SLE despite being treated by standard of care therapies. We also presented positive results from the Phase 2 LILAC study evaluating the efficacy and safety of BIIB059 (anti-BDCA2) in individuals with lupus.

### Ophthalmology

Adding to our work with investigational ophthalmological biosimilars, we are investigating the use of gene therapies to combat inherited retinal diseases. This includes BIIB111 (timrepigene emparvovec) for choroideremia, a condition of progressive vision loss, and BIIB112 (cotoretigene toliparvovec) for another vision loss disorder known as X-linked retinitis pigmentosa. Currently, neither disease has an approved treatment, and both lead to progressive vision loss and potential blindness by mid-life.

### Parkinson's Disease and Movement Disorders

Parkinson's disease, the second-most common among neurodegenerative illnesses, is a progressive disorder of the central nervous system that causes nerve cell damage associated with tremors, stiffness and difficulty with balance and coordination.

Despite having discontinued BIIB054 (cinpanemab) following unsuccessful Phase 2 results, Biogen remains committed to advancing treatments for movement disorders. We believe two collaborations position us to lead in addressing these disorders. First, we are working with Denali to co-develop and co-commercialize BIIB122 (DNL151), a small molecule inhibitor of leucine-rich repeat kinase (LRRK2) for Parkinson's disease. Second, we entered into a collaboration with Sage for joint development and commercialization of BIIB124 (SAGE-324), a Phase 2 asset for essential tremor with potential in other neurological conditions such as epilepsy.

### Environment, Social and Governance Leadership

We are working to change lives not just through our science, but through our actions on climate and health as well as diversity, equity and inclusion. Our longstanding leadership in corporate responsibility is built upon transparent and clear disclosure of our policies and performance across environmental, social and governance (ESG) issues. As part of our commitment to these critical issues, we have tied a portion of our employees' and executive officers' 2021 compensation to advancing our ESG strategy.

The COVID-19 pandemic has provided a clear reminder of just how interrelated health, climate and equity are, and events throughout the year highlighted dramatic disparities that exist on each of these fronts. We took further action in 2020 that underscores our belief that the most successful corporations are those that consider a broad array of stakeholder needs in operating their businesses. We embarked on ambitious goals to augment diversity among our leadership. We also initiated a program to eliminate fossil fuels across our footprint – something we believe will help us realize long-term operational savings.



In addition, we continued to build on our priorities for health equity and access, collaborating with a range of stakeholders to promote this shared goal. For example, SPINRAZA is approved in more than 50 countries, including low- and middle-income countries, and our policy to promote access for SPINRAZA will help inform our approach to our broader portfolio of therapies.

We have long been recognized for our corporate responsibility leadership. In 2020, we were named the #1 biotechnology company on the Dow Jones Sustainability World Index – for an industry-record fifth time. Our corporate responsibility reporting meets multiple guidelines set by organizations at the forefront of ESG disclosures. We are proud of these achievements, but we know there is more to be done. We encourage you to read our **Year in Review: Our Commitment to Corporate Responsibility** report for more detail.

**Climate, Health and Equity**

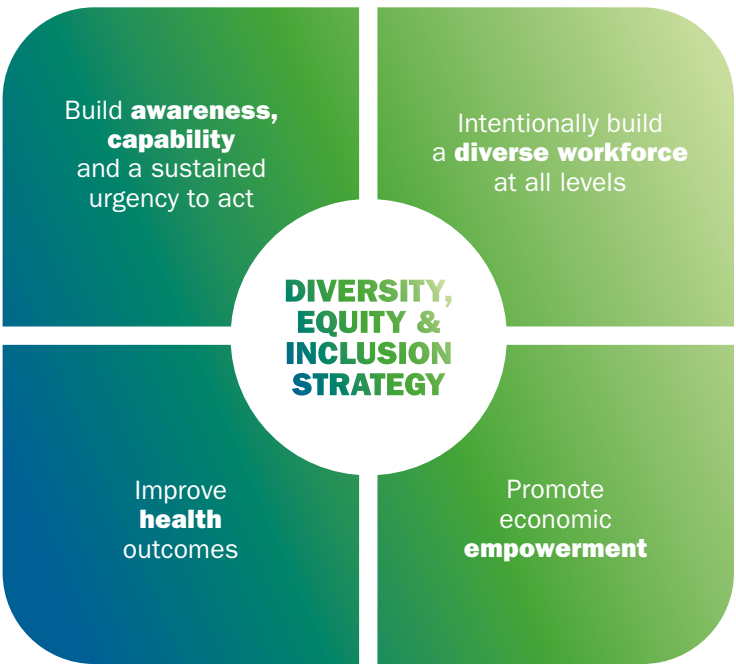
The paradox of the pharma and biotech industries is that we cannot truly lead in human health without mitigating our operational impact on the environment. We believe it is imperative for Biogen to make the fight against climate change part of our long-term strategy and investment in our future.

In September 2020, we launched Healthy Climate, Healthy Lives, a \$250 million, 20-year initiative to eliminate fossil fuels across our operations by 2040 and improve public health. We are the first *Fortune 500* company to make such a bold commitment, which goes far beyond net zero. Collaborations related to this effort, including with MIT and the Harvard T.H. Chan School of Public Health, aim to advance the science around how fossil fuel-related air pollution may impact brain health, and will help under-resourced healthcare centers prepare for climate risks and improve health outcomes for the vulnerable populations they serve.

**Diversity, Equity & Inclusion**

We believe that diversity drives innovation and that different backgrounds, cultures and perspectives make us stronger as an organization. Biogen took actions in 2020 to further reinforce our view that prejudice, racism and intolerance are unacceptable.

**ENHANCED DIVERSITY, EQUITY & INCLUSION STRATEGY**



After holding several listening sessions throughout the organization, we introduced an enhanced Diversity, Equity & Inclusion (DE&I) strategy that outlines actionable steps to deepen our commitment from an already strong foundation.

We aim to increase diversity<sup>3</sup> in U.S. manager positions and above by 30% by the end of 2021 – and, globally, to increase women in director-and-higher positions by the same percentage and in the same timeframe.

To transparently report our progress, we have publicly disclosed our EEO-1 (Equal Employment Opportunity) data on our website and shared the results of a global pay equity analysis with our employees.





We are intent on improving health outcomes for underserved and underrepresented patients. We presented research at MSVirtual2020, the eighth joint meeting of ACTRIMS-ECTRIMS, that showed that ethnic and racial disparities exist related to occupation, income status, MS-related disability and type of treatment used. Furthermore, Biogen is committed to increasing the diversity of our clinical trials to improve minority representation over time. For example, we are collaborating with Tufts University, considering both study design and patient recruitment.

Finally, economic empowerment is a critical aspect of our work in addressing systemic racism and inequity. We deposited \$10 million with OneUnited Bank, the largest Black-owned bank in America, to support its focus on Black economic empowerment. In addition, we are continuing our efforts to expand sourcing with minority-owned businesses.

### Looking Ahead

Undeniably, 2020 was a challenging year. But resilience matters, as does a commitment to execution. We are proud that we deepened our pipeline, broadened our global footprint and delivered strong operating results. We believe we are well positioned to build on our strong record of execution, going beyond our current core businesses in an acceleration of our multi-franchise portfolio strategy.

As we explore promising therapies that could benefit patients, we are expanding the definition of what is possible – while aiming to address significant unmet needs. I am looking forward to our many expected readouts on the horizon in 2021 as well as upcoming regulatory decisions.

We also aim to be at the forefront of neurotechnology. We anticipate that the rapid pace of innovation in digital health and data sciences can be harnessed to enhance our patient services and engagement. We believe this will allow us to have a more holistic approach to detecting and managing neurological diseases.

While we believe 2021 will be a reset year for the company financially, we also believe it has the potential to be transformative for Biogen. We are confident in our ability to meet the needs of patients who look to us for therapeutic options, to deliver results for our stockholders – and to expand the definition of what is possible in neuroscience.

We remain driven by a shared purpose in everything we do at Biogen: advancing science for the benefit of humanity. Together, we are undertaking a deeply human mission with profound implications for the millions of people awaiting life-changing therapies. The vision is for a healthier, more sustainable and equitable world.

Biogen has been able to execute against this vision due to my extraordinary colleagues, the trust of our stockholders and deep relationships with our stakeholders. I am grateful to all who have been part of this journey.

If 2020 was a year that required resilience and courage, I believe that 2021 will be a year of transformation – one that has the potential to bring great hope to patients worldwide.

**Michel Vounatsos**  
Chief Executive Officer

1 Company reported sales, EvaluatePharma.

2 Subject to an option agreement with Ionis Pharmaceuticals Inc.

3 Percent of U.S. manager positions and above held by Black, African American, and Latinx employees as well as Asian employees where underrepresented.

## 2020 MILESTONES

### MARCH

Acquired **BIIB118 (CK1 inhibitor)** from **Pfizer** for the potential treatment of irregular sleep wake rhythm disorder in Parkinson's and sundowning in Alzheimer's

**Completed regulatory submission to the EMA** for a subcutaneous formulation of TYSABRI

**First patient dosed in EMBARK**, the aducanumab re-dosing study

**First patient dosed in DEVOTE**, a study of nusinersen when administered at a higher dose

### MAY

**Primary endpoints were met in the Phase 3 study of SB11**, a proposed ranibizumab biosimilar referencing LUCENTIS

### JULY

**Positive results from the Phase 1/2 study of tofersen** demonstrating proof of biology and proof of concept for the potential treatment of SOD1 ALS were published in *The New England Journal of Medicine*

**First patient dosed in the Phase 1 study of BIIB101 (ION464)** in multiple system atrophy<sup>1</sup>

### SEPTEMBER

Launched **Healthy Climate, Healthy Lives**, a \$250 million, 20-year initiative to eliminate fossil fuels across our operations

**First patient dosed in the AHEAD 3-45 study of BAN2401** in Alzheimer's disease

**First patient dosed in the Phase 1 study of BIIB105** in ALS

### NOVEMBER

Named the **#1 biotechnology company** on the **Dow Jones Sustainability World Index** for the fifth time

**FDA accepted for review** the regulatory submission for SB11

### APRIL

Entered into a **global collaboration with Sangamo** to develop potential gene regulation therapies for Alzheimer's, Parkinson's, neuromuscular and other neurological diseases

### JUNE

**Completed regulatory submission to the FDA** for a subcutaneous formulation of TYSABRI

**Announced new results from NURTURE**, the longest study of pre-symptomatic patients treated with SPINRAZA

**Phase 3 study for SB15**, a proposed aflibercept biosimilar referencing EYLEA, was initiated

### AUGUST

**FDA accepted for review** the regulatory submission for aducanumab

**First patient dosed in a Phase 3 study of dapirolizumab pegol** in SLE

### OCTOBER

Entered into a **global collaboration with Denali** on LRRK2 program for Parkinson's and certain transport vehicle platform-enabled programs for neurodegenerative diseases

**EMA accepted for review** the regulatory submission for aducanumab

**EMA accepted for review** the regulatory submission for SB11

### DECEMBER

Ministry of Health, Labor and Welfare **accepted for review the Japanese New Drug Application** for aducanumab

Entered into a **global collaboration with Sage** for potential breakthrough therapies in depression and movement disorders

**EMA approved a new intramuscular injection route of administration** for PLEGRIDY in the EU

**EMA accepted the regulatory submission** for VUMERITY

<sup>1</sup> Option agreement.

# OUR PURPOSE

**\$15M**



allocated to  
emergency relief and care to  
support Biogen employees  
during the pandemic

1<sup>st</sup> Fortune 500  
company to commit  
to go

**FOSSIL  
FUEL FREE**



across operations **by 2040**



2020 ranking on  
Gartner's Healthcare  
Supply Chain

**TOP 25**



**Nº1 BIOTECH**

Leader on the Dow Jones  
Sustainability World Index  
for 5<sup>th</sup> time

**>100  
COUNTRIES**

receive our products



**\$2.5M**

matched employee  
donations from the  
Biogen Foundation  
in 2020



**Lauren Work**, living with MS, is on a mission to change the narrative of MS  
and improve health outcomes for underrepresented women.





# OUR PURPOSE

Biogen is a purpose-driven company that pioneers science for the benefit of humanity. Our steadfast commitment to caring deeply, working fearlessly and changing lives defines every action we take, and inspires us to go where others won't.

We work to improve patients' lives and care deeply about making a difference in our society through science that may have the potential to, among other things, improve brain health, mobility and vision. We focus on science that seeks to solve societal problems and create access to innovation. We strive to be leaders by taking meaningful action for the patients we serve, our employees, the environment and the community – including accelerating our efforts in diversity, equity and inclusion. We work with purpose to advance science to address the urgent and long-term challenges facing humanity.

In 2020 we continued to take action to underscore our belief that the most successful organizations consider a broad array of stakeholder needs as part of their corporate strategy and operations. We are responding to stakeholder interests through increasing transparency across our environmental, social and governance (ESG) efforts, including aligning this report with evolving reporting frameworks such as Sustainability Accounting Standards Board (SASB), Task Force on Climate-related Financial Disclosures (TCFD) and Stakeholder Capitalism Metrics, among others. For example, Biogen has disclosed our U.S. EEO-1 (Equal Employment Opportunity) data, one of just 6.3% of top companies to do so.<sup>1</sup>

[SEE OUR REPORTING SECTION FOR MORE DETAILS](#)

We acknowledge the call from investors to better understand climate-related financial risks, and have published our first [TCFD report](#) aligned with TCFD recommendations. This report, combined with our [2020 CDP Climate Change disclosure](#), outlines our findings and approach to projected climate-related financial risks and opportunities.

With this Year in Review, we are pleased to report on our purpose-driven performance on material ESG issues and 2020 highlights across our key priorities:

- Pioneering Science
- Our People
- Patients
- Environment
- Community
- Reporting

Our ESG strategy guides our work in these and other areas.

<sup>1</sup> Kavya, "A Small Fraction of Corporations Share Diversity Data, but Disclosure is Rapidly on the Rise." JUSTCapital 2021 January 19, 2021.





# ESG GOVERNANCE AND STRATEGY

Guided by our purpose, Biogen has long been committed to leadership in various aspects of corporate responsibility. We provide updates to our Board of Directors on relevant ESG efforts.

Our Board regularly reviews its composition to ensure it includes directors with the experience, skills and diversity necessary for effective, independent Board oversight. The skills matrix for Directors includes diversity of personal background and ESG experience and competence.

Our Board understands the importance of ESG performance and disclosure and meets with internal and external stakeholders on key issues. Our Board discusses material ESG issues, and the Audit Committee receives a quarterly report on our compliance, IT/cyber and internal audit programs.

In 2021, as part of our commitment, we have tied a portion of our employees’ and executive officers’ 2021 compensation to advancing our ESG strategy.

Our commitment is grounded in our mission to transform patients’ lives by pioneering and leading in neuroscience. Working strategically and ethically, we seek to unlock promising scientific breakthroughs that have the potential to impact the lives of patients around the world, through a variety of initiatives designed to promote health access and equity and to reduce our operational impact on the environment. We believe our governance structures and processes, including our ESG materiality assessment, can strengthen stakeholder relations and help ensure accountability.



# PRINCIPLES, POLICIES & POSITIONS

We work to create advances in healthcare through pioneering research and global development, manufacturing and commercial capabilities, and upholding our commitment to ethical conduct and overall corporate responsibility.

This commitment is grounded in our [Code of Business Conduct](#), which applies to all employees, agents and consultants acting on behalf of Biogen and affiliates worldwide.

We also are guided by a range of principles, policies and positions, including our [Global Sustainability Policy](#) and other statements on ethical business conduct, compliance, accountability and transparency, among other topics.

To review the full list of our commitments, visit our [Principles, Policies & Positions](#), which cover the following topics:

## PURPOSE AND GOVERNANCE

- [Code of Business Conduct](#)
- [Comprehensive Compliance Program](#)
- [Corporate Governance Principles](#)
- [Political Contributions Policy](#)
- [Transparency & Reporting](#)
- [UK Tax Strategy](#)

## PIONEERING SCIENCE

- [Clinical Research and Bioethics](#)
- [Stem Cells](#)
- [Animal Welfare](#)
- [Clinical Trial Transparency and Data Sharing](#)
- [Research Collaborations](#)
- [Product Stewardship](#)
- [Supply Chain Responsibility](#)
- [Supplier Diversity](#)

## PATIENTS

- [Access Programs](#)
- [Pricing Principles](#)
- [Patient Safety](#)
- [Global Privacy Program](#)
- [Payments to Healthcare Professionals](#)

## PEOPLE

- [Elements of Our Culture](#)
- [Pay Equity](#)
- [Environmental Health and Safety Policy](#)
- [Human Rights Position Statement](#)
- [Anti-Slavery and Human Trafficking Statement](#)

## ENVIRONMENT

- [Climate Strategy](#)
- [Climate Change Position Statement](#)
- [Biodiversity](#)
- [Global Sustainability Policy](#)

# RESPONSIBLE AND ETHICAL SUPPLY CHAIN

We take seriously our commitment to responsibility in the way our products are sourced, packaged and delivered.

All of our suppliers are governed by our [Code of Business Conduct](#) and our Anti-Discrimination and Anti-Harassment Policy (see our [Principles, Policies & Positions](#)). In 2020 we committed to developing a Responsible Supplier Program that will enhance our supplier assessment and due diligence processes and help evaluate the maturity of our suppliers' ESG efforts such as

climate and human rights. We believe this program will enable us to support our suppliers to continue to adopt best practices and increase transparency in reporting across a range of responsibility efforts, and expect to launch it in 2022.

## Supplier Environmental & Social Assessments

Our stakeholders expect that we understand and take steps to manage the ESG-related risks and impacts across our supply chain. We developed evaluation processes to fulfill this



expectation with the objective of identifying any potential at-risk suppliers that could warrant further evaluation. Overall, Biogen has a low ESG-related risk profile due to the geographical spread of suppliers and the nature of the goods and services purchased.

Our evaluation processes include:

- ESG risk screens for critical supplier sites.
- Water risk basin-level screen for a subset of critical supplier sites.
- Human rights country-level risk screen against our entire procurement spend.
- Monitored compliance with new requirements around the world (e.g., human trafficking legislation).

Critical suppliers are defined as approved Good Manufacturing Practice (GMP) supplier sites that supply products and services directly related to the safety and integrity of our products. High-volume and any non-substitutable suppliers are often GMP suppliers.

Human Rights Risk Screen

In 2020 we evaluated 99.9% of procurement spend against the country-level risk profiles developed by the U.S. State Department’s 2020 Trafficking in Persons Report. Our procurement system registered a total of 10,713 unique supplier country-level locations (i.e., Biogen may purchase goods or services from a single supplier in multiple countries, where each is included in the screen) with aggregate purchases equal to or greater than \$1,000:

- 8,398 unique supplier locations (79% of spend) were in Tier 1 countries.
- 2,017 unique supplier locations (15% of spend) were in Tier 2 countries.
- 102 unique supplier locations (6% of spend) were in Tier 2 Watch List countries.
- 201 unique supplier locations (0.3% of spend) were in Tier 3 countries.

The supplier locations in Tier 2 Watch List and Tier 3 countries, excluding Ireland locations, were further evaluated in a similar manner as described in the ESG risk screen below. The evaluation determined up to one supplier location may present high risk and will be prioritized for review upon launch of our Responsible Supplier Program, which is currently in development.

ESG Risk Screen

In 2020 we evaluated 1,141 critical supplier sites: 976 Tier I supplier sites representing 82% of total procurement spend and 165 Tier II supplier sites. This evaluation assessed each supplier against five factors: criticality of the service or good being supplied; the level of financial spend; the social risk profile; the environmental risk profile; and the governance risk profile, including potential for corruption.

Twelve Tier I supplier sites and six Tier II supplier sites were screened as potentially higher risk, requiring further internal evaluation of the supplier’s practices and service/goods provided. The conclusion of the internal evaluation deemed up to two supplier sites may present high risk and will be prioritized for review upon launch of our in-development Responsible Supplier Program.

To support the continual improvement of our ability to assess risk within our supply chain, Biogen set two targets:

1. Expand ESG risk screening of Tier I suppliers to 75% of spend by 2020.
2. Expand ESG risk screening of Tier II supplier sites to 500 sites by 2020. Biogen intends to establish new ESG targets for our supply chain upon launch of our enhanced Responsible Supplier Program, currently in development.

 [READ MORE ON OUR COMMITMENT TO ENVIRONMENTAL RESPONSIBILITY THROUGHOUT OUR VALUE CHAIN](#)



### Supplier Diversity

Biogen's Supplier Diversity Program ensures that small and diverse business enterprises have an equitable opportunity to compete for Biogen's business, with supplier diversity integrated into our procurement procedures. We look to work with small and diverse suppliers that offer a high standard of service and quality products as well as demonstrate ethics and integrity.

Our Supplier Diversity Program includes minority-, women-, veteran-, service-disabled veteran-, lesbian-, gay-, bisexual-, transgender- and disability-owned business enterprises and small businesses as defined by the U.S. Small Business Administration. Working with small and diverse suppliers supports economic growth, fosters innovation and enables us to achieve a competitive advantage globally.

We are working to significantly enhance our Supplier Diversity Program. One of the ways we aim to accomplish this is by increasing our U.S. minority-owned business spend by 50–100% by 2023, a goal we set as part of our enhanced DE&I strategy in 2021. In 2020 our overall diversity spend increased 7.8% over 2019, with our spend with traditionally underrepresented business owners alone having increased 9 times over 2019.

In 2020 we made a commitment to the U.S. government to spend a set amount with small businesses through our Small Business Program, which launched in 2019. Our 2020 overall small business spend goal was 5%, which we exceeded at 8.51%. For 2021 we set a spend goal of 7%.

Biogen is affiliated with the following organizations that provide access to small and diverse suppliers:

- Center for Women & Enterprise
- Diversity Alliance for Science
- U.S. Small Business Association

Potential suppliers who meet the diversity criteria are subject to the same application process as all other vendors.





# RECOGNITION



We are honored by the recognition we receive and inspired to continue to accelerate our leadership on ESG issues with the aim to catalyze positive change.

In 2020 Biogen was named the #1 biotechnology company on the Dow Jones Sustainability World Index (DJSI World Index) – for an industry-record fifth time. The DJSI World Index recognizes the top 10% of companies in the S&P Global Broad Market Index for performance on ESG issues, which S&P Global considers key to generating long-term stakeholder value.

We are honored by the recognition we receive and inspired to continue to accelerate our leadership on ESG issues with the aim to catalyze positive change.

In 2020 Biogen was named the #1 biotechnology company on the Dow Jones Sustainability World Index (DJSI World Index) – for an industry-record fifth time. The DJSI World Index recognizes the top 10% of companies in the S&P Global Broad Market Index for performance on ESG issues, which S&P Global considers key to generating long-term stakeholder value.

The DJSI World Index ranking results from our outstanding performance on multiple dimensions of corporate responsibility, including an ongoing focus on health equity and access; ethical marketing practices; and human capital development with a strong focus on DE&I. It also reflects our emphasis on transparency and expanded public reporting on emerging risks, employee benefits and philanthropic contributions, among other issues.

In 2013 Biogen was the first U.S.-based biotech company to appear on the DJSI World Index, making 2020 the eighth consecutive year we have been listed among top corporate performers.

We are equally proud of the numerous other awards, rankings and recognitions we received in 2020, including:

- 100 Best Corporate Citizens, 3BL Media, including the No. 1 biotechnology company on climate change
- Best Place to Work for Disability Inclusion: 100% on the Disability Equality Index
- Best Place to Work for LGBTQ Equality: 100% on the Human Rights Campaign's Corporate Equality Index
- **CDP Supplier Engagement Leader: A- rating**
- **CDP Climate: B rating**
- **CDP Water: B rating**
- Diversity & Inclusion North Carolina Employer Award
- Environmental League of Massachusetts 2020 Commonwealth Environmental Leadership Award
- FTSE4Good Index
- ISS ESG Prime Rating
- JUST Capital's America's Most JUST Companies, top 10 pharmaceutical companies
- MSCI ESG: A rating with a consistent rank in the top 20%
- Newsweek America's Most Responsible Companies
- S&P Global SAM Gold Class Award in 2021 Sustainability Yearbook
- Sustainalytics: top 7%

# PIONEERING SCIENCE



**Laurent Martarello**, Head of Biogen's Research and Early Development Imaging group, helps to monitor ASO (antisense oligonucleotide) delivery and whether it leads to clinical benefits for patients.



**10 PROGRAMS**

either in Phase 3 or filed with regulatory agencies

**263,000  
LITERS**



of bioreactor  
capacity worldwide<sup>1</sup>

**>100  
COUNTRIES**



receive our products

Neurodiem™ voted a

**TOP2**

neuroscience  
information  
platform<sup>2</sup> with  
13,000 users



**\$200M**

announced for  
state-of-the-art  
gene therapy  
manufacturing facility



<sup>1</sup> Includes anticipated capacity of Solothurn, Switzerland.

<sup>2</sup> Pascaleo survey of 600+ neurologists in 9 countries, November 2020.

# PURSuing BREAKTHROUGH SCIENCE

Neurological diseases are the leading cause of disability and the second leading cause of death worldwide. We believe no other disease area holds as much need or as much promise for medical breakthroughs.

Co-founded by two Nobel Prize-winning scientists, innovation is in Biogen's DNA. We're not afraid to go where others won't. We are advancing scientific innovation that takes us deep into the body's nervous system with the potential to deliver new treatments that transform the lives of those who suffer from neurological and neurodegenerative disorders. We are inspired to pioneer therapeutic innovations where limited treatment options exist.

We now have 10 programs either in Phase 3 or filed with regulatory agencies, including in Alzheimer's disease, neuropsychiatry, amyotrophic lateral sclerosis (ALS) and ophthalmology.

We aim to further expand our multi-franchise portfolio by leveraging the interconnectivity in neuroscience. We believe that the pathways of neurological diseases are interrelated, and so too are the potential approaches for treating them. We believe that knowledge gained from one program has the potential to resonate across our pipeline. This unique perspective is one of our key strengths and helps to drive us forward.

#### Our core growth areas include:

- Multiple Sclerosis (MS) and neuroimmunology
- Alzheimer's disease and dementia
- Neuromuscular disorders
- Movement disorders
- Ophthalmology
- Neuropsychiatry
- Immunology
- Acute neurology
- Neuropathic pain



## INNOVATING FOR PATIENTS

Neurological diseases can affect every aspect of a patient's life. Memory and cognition can deteriorate, and so can a person's ability to speak, control their movements, or move at all.

Biogen works fearlessly to innovate and find solutions to help address these challenges, grounded in the perspective of patients and caregivers. We see engagement with patients and patient advocacy organizations as key to our ability to develop and deliver potentially life-changing treatments to patients with unmet needs.

Regulatory health authorities have evolving expectations around the importance of the patient perspective in early research and development. Regulators within the U.S. Food and Drug Administration (FDA) and European Medicines Agency (EMA), among others, are making the patient perspective a critical part of the drug approval process, and Biogen is committed to working with key stakeholders at every step in the process of discovering and commercializing potentially life-changing therapies.

In 2020 we hosted multiple patient advocacy roundtables, furthering our commitment to early, ongoing and systematic patient involvement across each therapeutic area and within our investigational clinical settings.

[➤ LEARN MORE ABOUT OUR COMMITMENT TO PATIENTS](#)





**SPOTLIGHT**

## Collaborating with MIT to Find Faster, More Efficient Processes

Biogen became one of the first contributors to Massachusetts Institute of Technology's (MIT) collaboration, The AltHost Consortium, in 2020. AltHost, composed of leading organizations in biopharmaceuticals and vaccines, works to advance the speed and productivity of alternative host cell research and manufacturing. By sharing knowledge, practices and efficiencies, AltHost members explore innovative ways to produce biologics and vaccines for clinical usage in diseases from diabetes to cancer.

With global health concerns such as Alzheimer's disease escalating worldwide demand for biologic drugs, AltHost aims to meet industry needs through improved product quality and increased volumetric productivity.

For patients and healthcare systems, this holds potential for improved access, a more nimble and scalable manufacturing process and lower costs.



*Collaboration is a cornerstone of Biogen's approach to scientific innovation.*

## BUILDING DEPTH IN OUR PIPELINE

At Biogen, we believe neuroscience is the next frontier. Few other areas hold as much need or as much promise for medical breakthroughs as neuroscience.

Our success in MS gives our researchers insight into other disease areas, such as neuroprotection and axonal health, with potential applications in Alzheimer's disease, Parkinson's disease, ALS, stroke and neuropathic pain.

We believe that the emergence of promising modalities, including antisense oligonucleotide (ASOs) and gene therapy, and advancements in biologics and small molecules, are opening new target spaces for potential therapeutic interventions. Our pursuit of multiple modalities may have the ability to prevent, halt or cure the progression of neurological diseases.

Biogen's core research platforms are designed to predict drug concentrations in blood and tissues using physiologic-based pharmacokinetic modeling approaches, and linking these concentrations to drug effects using biomarker, imaging, safety and clinical endpoints. Our core research platforms are:

- Biomarkers and Translational Biology
- Drug Metabolism and Pharmacokinetics
- Clinical Pharmacology and Pharmacometrics
- Safety Sciences

We continuously engage with external researchers in a number of therapeutic areas, including specialty medicines and rare diseases.

Biogen's Clinical Trial Transparency and Data Sharing Policy aligns with global legal requirements, industry trade association principles and internal company policies. It conveys our commitment to sharing information about our clinical research with patients and researchers to enhance public health.

[➤ READ OUR CLINICAL TRIAL TRANSPARENCY AND DATA SHARING POLICY](#)

### Collaborating with Amazon Web Services to Advance Research

At Biogen, we constantly search for new ways to better understand neurological diseases so we can identify potential new disease interventions and find new targets.

Through a long-term study of 500,000 individuals spanning more than 30 years, the UK Biobank has collected massive amounts of medical data – ranging from exome sequencing (protein-coding gene regions) to plasma biomarkers and biographic information. Until recently, there was no effective way for researchers to analyze this extraordinary dataset.

In 2020 Biogen collaborated with [Databricks](#), an Amazon Web Services (AWS) [Advanced Technology Partner](#) in the [AWS Partner Network](#) (APN) and an [AWS Life Sciences Competency Partner](#), to design a software solution stack that harnessed AWS to analyze the data efficiently and securely.

With insights realized through processed data, we have further uncovered important understandings of the biological basis of neurodegenerative diseases like Alzheimer's and Parkinson's.

### Adapting Our Open Neurology Platform During COVID-19

Neurology is a rapidly developing space, and the COVID-19 pandemic presented challenges to traditional approaches to collaboration. Biogen sponsors the open online platform, Neurodiem™, which aggregates high-quality scientific content across 18 neurology topics, and in 2020 was adapted to include COVID-19 resources.



- Last year, with specialized publishers and content providers, the platform added:
- Insights, commentaries and recommendations from key experts in neurology on COVID-19 and caring for patients with neurological disorders.
  - Highlights from sessions related to COVID-19 in international neurology conferences.
  - Summaries of virtual conferences and submitted posters on COVID-19.

In 2020, 600 neurologists across 9 countries voted Neurodiem the No. 2 preferred neuroscience information platform.<sup>3</sup> It boasts registrations of more than 13,000 neurology healthcare professionals and is available in 16 countries worldwide, with additional launches planned for 2021.

[➤ LEARN MORE ABOUT NEURODIEM](#)

Working with Vir to Address COVID-19

In May 2020 we finalized a process development and manufacturing agreement with Vir Biotechnology Inc. to perform process development activities and specified manufacturing and process transfer services to enable, if approved, commercial supply of Vir’s SARS-CoV-2 monoclonal antibodies. As part of the agreement, Biogen will conduct cGMP clinical manufacturing in the U.S. and provide technical support to facilitate rapid process transfer to Samsung Biologics Co., Ltd., and potentially other large-scale biomanufacturing facilities in the U.S. and all other regions of the globe, to provide a reliable supply of a potential commercial product.

Pharmaceutical Operations & Technology

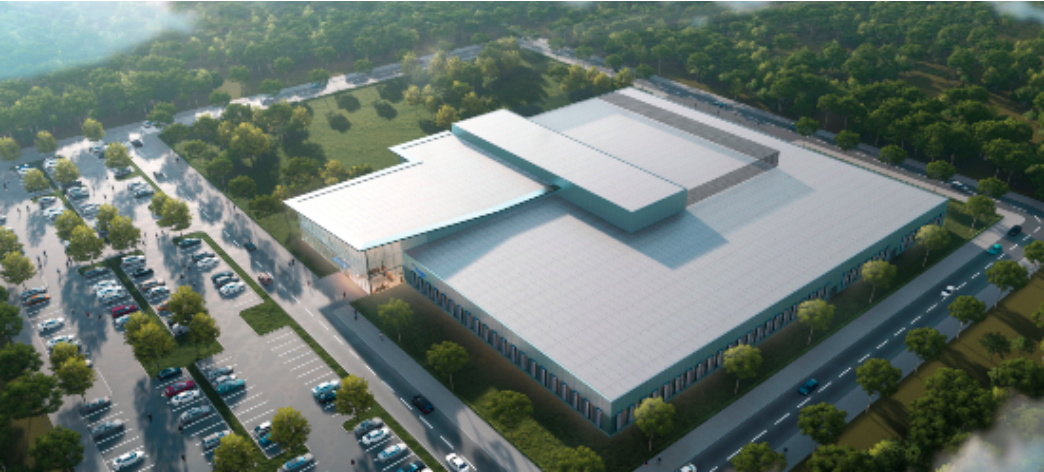
We take seriously our responsibility to create, safeguard and supply quality medicine. Our commitment to improving the lives of patients guides every aspect of our [manufacturing operations](#), which together total 263,000 liters of bioreactor capacity, one of the largest among biotech companies worldwide.<sup>4</sup>

For more than two decades, we have successfully manufactured large molecule therapies. In recent years, we extended our

SPOTLIGHT  
BUILDING A NEW STATE-OF-THE ART GENE THERAPY  
MANUFACTURING FACILITY

We recently announced a \$200 million investment to build a [new gene therapy manufacturing facility](#) at our Research Triangle Park (RTP) manufacturing campus in North Carolina. This reflects our commitment to advancing our gene therapy portfolio across multiple therapeutic areas, complemented by a differentiated, sustainable and advanced

manufacturing capabilities to deliver a reliable supply of high-quality medicines to the patients we serve. The site will be 175,000 square feet and designed in compliance with the most advanced sustainability standards regarding energy use, waste management and water consumption. The facility is expected to be operational by 2023.



Artist rendering of our new gene therapy manufacturing facility that we will be building in Research Triangle Park in North Carolina.

expertise to the production of small molecule therapies and have fully integrated an oral solid dose facility into our manufacturing infrastructure. Looking ahead, Biogen is investing to build advanced manufacturing technologies with the goal of accelerating our efforts in gene therapy.

3 Pascaleo survey of 600+ neurologists in 9 countries, November 2020.  
4 Includes anticipated capacity of Solothurn, Switzerland.



Our process development team advances our understanding of the biology and the process technologies that are critical to improving our capabilities and output. Advanced engineering teams strive to equip our manufacturing plants with cutting-edge technologies to meet demand for our existing therapies, clinical trials and opportunities in biosimilars.

Our world-class manufacturing teams are the key to efficient and reliable operations. Thorough business continuity planning provides appropriate redundancy on a global level in an effort to maintain product availability. Together, these teams create systems that help minimize our impact on the environment by limiting waste and using resources efficiently.

The quality team manages compliance and supervises consistent and dependable production of our therapies, while

our supply chain group works to make sure that we are able to get our therapies to patients, when and where they need them. The combination of these skills and focuses enables us to manufacture and supply medicines to patients in more than 90 countries.

In 2020 we advanced construction of a state-of-the-art facility in Solothurn, Switzerland. We anticipate that the Solothurn facility, once fully operational, will have the capacity to produce up to 10 metric tons of antibodies per year. At our North Carolina facility, we use an innovative process for early-stage clinical products that increases the flexibility and speed of supplying drugs for clinical studies, and reduces the environmental impacts of the manufacturing process.

[➤ LEARN MORE ABOUT OUR PHARMACEUTICAL OPERATIONS & TECHNOLOGY](#)

## ADVANCING OUR PORTFOLIO

We are proud of our work to develop and expand our multi-franchise portfolio and deliver on our core business areas of MS and spinal muscular atrophy (SMA). Our hope is to improve patient health by offering therapies that may slow, halt or cure the progression of neurological and neurodegenerative diseases.

### Multiple Sclerosis

Globally, 2.8 million people suffer from MS. For nearly 25 years, we have led in the research and development of new therapies to treat this disease. Our portfolio of six therapies, including five MS disease modifying therapies, have helped improve the lives of more than one million patients worldwide and today have more than 25 active clinical trials.

MS is at the core of our multi-franchise portfolio, and in 2020 we continued our U.S. launch of VUMERITY® (diroximel fumarate) despite the challenges of bringing a new therapeutic to market during the COVID-19 pandemic. At the end of 2020, [VUMERITY](#)

was the number two relapsing MS product and the number one new relapsing MS oral prescription in the U.S.

We are actively investing in new innovations so that we can address the continued unmet need in MS. In 2020 we received U.S. approval and in 2021 EU approval for a new intramuscular administration for PLEGRIDY® (peginterferon beta-1a).

[➤ LEARN MORE ABOUT EU APPROVAL FOR PLEGRIDY INTRAMUSCULAR ADMINISTRATION](#)

In March 2021 we received EU approval for a subcutaneous formulation of TYSABRI® (natalizumab), which will offer a convenient administration profile in the space of high-efficacy MS treatments.

We are also advancing the potential use of extended interval dosing of TYSABRI in the EU and investigating in the U.S. We presented new data demonstrating the reduced risk of





Nicole, a rheumatoid arthritis patient in Germany.

progressive multifocal leukoencephalopathy (PML), a rare brain infection, through the use of extended interval dosing compared to the currently approved dosing. We provide broad access to the STRATIFY JCV™ Antibody ELISA testing service for those taking or considering treatment with TYSABRI. It tests for antibodies to the polyomavirus JC virus (JCV) for stratifying risk for PML. More than 90% of all neurologists across the globe now use the STRATIFY JCV service to manage their patients.

Most recently, in April 2021 China's National Medical Products Association approved the use of TECFIDERA® to treat relapsing MS.

[➤ FIND MORE INFORMATION ON BIOGEN'S MS PORTFOLIO](#)

### Spinal Muscular Atrophy

SMA is a leading genetic cause of mortality in infants, affecting approximately 1 in every 11,000 babies born in the U.S. SMA can have a devastating effect on voluntary muscle movement, leading inevitably to muscle atrophy. Tragically, without treatment the majority of infants with the most severe form of SMA die within two years.

Biogen introduced the first FDA-approved therapy to treat SMA, SPINRAZA® (nusinersen), in 2016. In 2020 there were more than 11,000 patients on SPINRAZA, including through our clinical studies and expanded access program.

Proudly, in 2020 we presented new results from NURTURE, the longest-running study in the industry of pre-symptomatic patients with SMA. The data demonstrated that patients maintained and made progressive gains in motor function compared to the natural course of the disease. As of February 2020, all 25, or 100% of children up to 4.8 years of age, were alive and remained free of permanent ventilation, with 88% walking independently and 96% able to walk with assistance.

[➤ READ MORE ABOUT NURTURE STUDY RESULTS](#)

Last year, we started **DEVOTE**, a Phase 2/3 study to determine whether a higher dose of nusinersen could provide greater efficacy. We also began RESPOND, a Phase 4 study evaluating the benefit of nusinersen in patients treated with the gene therapy Zolgensma® who displayed a suboptimal response to Zolgensma.

[➤ LEARN MORE ABOUT THE DEVOTE STUDY HERE](#)

We continue to advance research in the SMA field, including exploration of how SPINRAZA could create better outcomes for patients who do not respond well to other therapies on the market.

### Biosimilars

Biosimilars are a classification of biologic medicines that have demonstrated similar efficacy and safety to currently available biologic therapies known as originators, often at a much lower cost. Biosimilars expand options for patients and physicians to meet individual needs and can alleviate the burden on healthcare systems by offering cost savings and promoting sustainable access to therapies. We estimate that our biosimilars business generated approximately €2.4 billion in savings for healthcare systems across Europe in 2020.

Our portfolio of anti-Tumor Necrosis Factor (anti-TNF) therapies, which are biosimilars, treat inflammatory conditions such as rheumatoid arthritis, psoriatic arthritis, juvenile arthritis, inflammatory bowel disease (Crohn's and ulcerative colitis), ankylosing spondylitis and psoriasis. By targeting an inflammation-causing substance called TNF, the therapy reduces inflammation and stops disease progression.

Approximately 240,000 patients across 15 indications in over 25 countries relied on our anti-TNF biosimilars, available in the EU, in 2020, which presented patient growth of 15% year-over-year. Through the end of 2020, since the inception of our biosimilars unit, we have shipped over 20 million doses with uninterrupted product supply to patients in over 25 European countries.

[➤ LEARN MORE IN THE PATIENTS SECTION OF THIS REPORT](#)

We also realized progress with two new potential ophthalmology biosimilars - SB11, a proposed ranibizumab biosimilar referencing LUCENTIS®, and SB15, a proposed aflibercept biosimilar referencing EYLEA®. These proposed biosimilars, which have the potential to support millions of patients worldwide, are being developed by Samsung Bioepis and will be commercialized by Biogen. In 2020 the EMA and the FDA accepted for review the regulatory submissions for SB11. Also in 2020, Samsung Bioepis initiated a Phase 3 study for SB15 to compare referencing EYLEA on safety, efficacy, pharmacokinetics and immunogenicity.

In April 2021 we announced that we have entered into a commercialization and license agreement with Bio-Thera Solutions Ltd. to develop, manufacture and commercialize BAT1806, a proposed biosimilar referencing ACTEMRA®(tocilizumab). Closing of the transaction is contingent upon completion of review under antitrust laws, including the Hart-Scott-Rodino Antitrust Improvements Act of 1976 in the U.S.

[➤ LEARN MORE ABOUT THE BAT1806 AGREEMENT](#)

We are working to unlock the potential of our biosimilars portfolio worldwide, which provide health systems with viable, cost-effective alternatives and enable broader patient access to biologics therapies.

## STRENGTHENING OUR PIPELINE

Determined to make a meaningful difference, we work fearlessly to find potential disease-modifying therapies in complex areas that urgently need them. In 2020 we added or advanced 12 clinical programs, bolstering our early- and late-stage pipeline. We also continued to invest in internal capabilities and external collaborations that provide us with access to emerging science and cutting-edge platform technologies. We believe we are well positioned for growth with readouts from seven clinical programs expected in 2021, of which four are pivotal readouts.

[\*\*➤ LEARN ABOUT OUR ACQUISITION OF A NOVEL CLINICAL STAGE ASSET WITH POTENTIAL TO ADDRESS BEHAVIORAL AND NEUROLOGICAL SYMPTOMS ACROSS VARIOUS PSYCHIATRIC AND NEUROLOGICAL DISEASES\*\*](#)

### Alzheimer's Disease

Worldwide, approximately 50 million people suffer from Alzheimer's disease or dementia, presenting a significant burden on patients, caregivers and society at large. Alzheimer's disease remains in the top 10 causes of death in the U.S. Projections suggest that over the next 30 years, the number of people living with Alzheimer's disease will triple. We see promise in our pipeline of potential therapeutics that could slow the disease's progression.

One of the most promising and near-term investigational therapies is aducanumab, which we are developing in collaboration with Eisai Co., Ltd. (Eisai). We completed regulatory filings of aducanumab in multiple geographies during 2020, and we remain ready to launch aducanumab in the U.S. should our application be approved by the FDA. If approved, aducanumab would be the first therapy to meaningfully change the course of Alzheimer's disease.

Another key component of our Alzheimer's franchise is lecanemab (BAN2401), another collaboration with Eisai, which is currently in a pivotal Phase 3 study of patients with symptomatic early Alzheimer's disease.

[\*\*➤ LEARN MORE ABOUT THE PHASE 3 STUDY\*\*](#)



Our new global [collaboration with Sangamo Therapeutics, Inc. \(Sangamo\)](#) may enable us to further explore the promise of gene therapy. For example, we are leveraging Sangamo's proprietary zinc finger protein technology to modulate the expression of key genes involved in neurological diseases. Our ambition is to develop gene regulation therapies for Alzheimer's disease, Parkinson's disease, neuromuscular disorders and other neurological diseases, which could revolutionize the way diseases are treated.

We are pleased with the progress on a number of other molecules in our early clinical and preclinical Alzheimer's disease and dementia portfolio, primarily those that are related to tau proteins. Notably, in 2020 we announced positive Phase 1 data



EXPLORING  
MENTAL HEALTH

Depression is a common comorbidity of multiple neurological disorders in our core therapeutic areas. Biogen estimates that ~ 50% of patients with MS, ~ 40% of patients with Alzheimer's disease, ~ 50% of patients with Parkinson's disease, ~ 30% of patients with ALS and ~ 60% of SMA caregivers experience depression. Mental health issues, including depression, also can be a serious concern within the broader population. If approved, zuranolone could be a highly complementary treatment for major depressive disorder in several of Biogen's therapeutic focus areas.

[➤ READ ABOUT OUR COLLABORATION WITH SAGE TO COMMERCIALIZE ZURANOLONE](#)

for BIIB080 (anti-tau ASO), which may reduce production of the tau protein and its accumulation in brain cells, and which we believe may have the potential to slow the progress of Alzheimer's disease.

[➤ SEE HERE FOR INFORMATION ON OUR ALZHEIMER'S DISEASE PIPELINE INVESTIGATIONAL CANDIDATES](#)

Neuropsychiatry

In the U.S. alone, 17 million people suffer from depression. Depression also is a common comorbidity of multiple neurological disorders in our therapeutic portfolio. Despite its common occurrence, 50% of patients with major depressive disorder experience no relief from existing medications. In 2020 we entered into a collaboration with Sage Therapeutics, Inc. (Sage) that brought us late-stage assets in depression that could address significant unmet needs.

Through our collaboration with [Sage](#), we will jointly develop and commercialize BIIB125 (zuranolone) for the potential treatment of major depressive disorder and postpartum depression. Zuranolone (GABA<sub>A</sub> PAM) is being evaluated as a potential first-in-class, two-week, once-daily oral therapy in multiple Phase 3 studies. Zuranolone may also have potential in other psychiatric disorders, including treatment-resistant depression, bipolar depression and generalized anxiety disorder.

Amyotrophic Lateral Sclerosis

ALS is a fatal, progressive neurodegenerative disease that affects nerve cells, weakens muscles and severely compromises physical function.

Leading our ALS portfolio is tofersen (SOD1 ASO), which is being investigated in the Phase 3 VALOR study for SOD1 ALS, a subtype of familial ALS that accounts for approximately 2% of all ALS cases. In 2020 positive results from our Phase 1/2 study of tofersen were published in The New England Journal of Medicine.

In 2020 we also dosed the first patient in a Phase 1 study of BIIB105 (ataxin-2 ASO),<sup>5</sup> which has the potential to slow disease progression for the broad ALS population. Additionally, we entered into a collaboration with Scribe Therapeutics Inc. to develop and commercialize gene modifying-based therapies for potential treatments in this area.

Lupus

Lupus is a debilitating inflammatory disease that causes the immune system to mistakenly attack a person's healthy tissue.

In August 2020 the first patient was dosed in a Phase 3 study of dapirolizumab pegol (anti-CD40L), which aims to help patients with active systemic lupus erythematosus (SLE) despite being treated by standard of care therapies. Dapirolizumab pegol is being developed in collaboration with UCB Pharma S.A.

During the virtual 2020 European E-Congress of Rheumatology, we presented [positive results](#) from the Phase 2 LILAC study, which evaluates the efficacy and safety of BIIB059, a fully humanized IgG1 monoclonal antibody (mAb) targeting blood dendritic cell antigen 2 (BDCA2) expressed on plasmacytoid dendritic cells, in patients with lupus. The study demonstrated a statistically significant reduction in disease activity in patients with cutaneous lupus erythematosus and SLE who received BIIB059 compared to placebo.

[➤ LEARN MORE ABOUT PHASE 2 LILAC STUDY RESULTS](#)

5 Subject to an option agreement with Ionis Pharmaceuticals Inc.



### Ophthalmic Conditions/Disorders

Adding to our work with ophthalmological biosimilars, we are investigating the use of gene therapies to combat inherited retinal diseases. This includes BII111 (timrepigene emparvovec) for choroideremia, a condition of progressive vision loss, and BII112 (cotoretigene toliparvovec) for another vision loss disorder known as X-linked retinitis pigmentosa. Currently, neither disease has an approved treatment, and without therapies, these diseases lead to progressive vision loss and potential blindness by mid-life.

### Parkinson's Disease and Movement Disorders

Parkinson's disease, the second-most common among neurodegenerative illnesses, is a progressive disorder of the central nervous system that causes nerve cell damage associated with tremors, stiffness and difficulty with balance and coordination.

Despite having discontinued BII054 (cinpanemab) following unsuccessful Phase 2 results, Biogen remains committed to advancing treatments for movement disorders. We believe two collaborations position us to lead in addressing these disorders. First, we are working with Denali Therapeutics Inc. (Denali) to co-develop and co-commercialize BII122 (DNL151), a small molecule inhibitor of leucine-rich repeat kinase (LRRK2) for Parkinson's disease. Second, we entered into a collaboration with Sage for joint development and commercialization of BII124 (SAGE-324), a Phase 2 asset for essential tremor with potential in other neurological conditions such as epilepsy.





## OPERATING RESPONSIBLY

### Drug Safety and Quality

Biogen is committed to the safety of our patients and the safe use of our products in all countries we serve. We support patients by monitoring the safety of Biogen investigational and marketed products, over the lifecycle of the products, through the science of Pharmacovigilance (PV).

PV refers to the monitoring, reviewing, evaluating and communicating of information on the safety of pharmaceutical products. PV is conducted through a comprehensive and rigorous set of activities focused on the detection, assessment, understanding and prevention of adverse effects or other product-related problems. PV activities are conducted in collaboration with team members located around the world, who provide expertise regarding regional and country-specific regulatory requirements.

In addition, with counterfeit, falsified drugs a global concern, our Product Security team proactively identifies, mitigates and manages illicit trade risks that could jeopardize the health and safety of patients who take our drugs. We also participate in industry-wide systems and processes utilizing serialization data. For example, in the EU each medication is verified against the list of serial numbers in circulation prior to dispensing. If the number isn't verified, the relevant National Medicines Verification Organization issues an alert, which we review and resolve.

[!\[\]\(f1c5da15572e3e09d343161be98f508d\_img.jpg\) LEARN MORE ABOUT OUR COMMITMENT TO PATIENT SAFETY](#)



### Bioethics

We are committed to the safe and ethical use of biotechnology to improve the quality of human life, and we recognize that all biotechnology companies must approach this continually advancing technology with a balance of vigilance, diligence and humility.

We comply with all applicable laws regarding biotechnology research and development, and our approach is informed by the Biotechnology Industry Organization's (BIO) guidance, including a respect for the potential significant benefits of biotechnology and a commitment to use it only for the benefit of humankind.

In the discovery, development and use of our products, we prioritize human health, safety and environmental sustainability. We are sensitive to the perspectives of various stakeholders, and we welcome reasoned dialogue and appropriate industry safeguards.

[\*\*➤ READ MORE ABOUT OUR CLINICAL RESEARCH AND BIOETHICS APPROACH WITHIN OUR PRINCIPLES, POLICIES & POSITIONS\*\*](#)



# PATIENTS

~**240,000**

patients treated  
with biosimilars<sup>1</sup>



2020 ranking on  
Gartner's Healthcare  
Supply Chain

**TOP 25**

SPINRAZA approval in

**50 COUNTRIES**



including low- and middle-income countries

In 2020 Biogen's anti-TNF biosimilars are  
estimated to have saved healthcare systems  
across Europe

**€2.4 BN**



Aby/Cleo voted the

**N°1 APP**

for people living  
with MS, and has  
>400,000 users<sup>2</sup>

SPINRAZA Home  
Sample Collection  
program piloted in

**13 U.S.  
CITIES**



*Landon and his sister both live with spinal muscular atrophy (SMA).*

[➔ LEARN ABOUT HIS MOTHER DANYELLE'S EXPERIENCES RAISING TWO CHILDREN IMPACTED BY SMA](#)

<sup>1</sup> Biogen data on file as of December 31, 2020.

<sup>2</sup> As ranked in a Pascaleo survey by more than 600 neurologists across 9 countries, November 2020. With more than 400,000 registered users worldwide, the app is available in 15 countries with additional launches planned in 2021.



# HELPING PEOPLE ACHIEVE BETTER HEALTH OUTCOMES

Passionate about improving lives and advancing health access and equity, we apply our pioneering spirit to find new ways to address patient needs and promote better health outcomes.

## ADVANCING HEALTH ACCESS

We are driven by a desire to help preserve what neurological diseases can take away – how we move, how we think, our very sense of self. Our commitment goes beyond scientific research and development, as we strive to advance health equity and access; work to increase diversity in clinical trials; and collaborate with providers, patient advocacy groups (PAGs) and others toward better health outcomes.

We continuously adapt our thinking and pioneer responsive approaches to health access. We strive to ensure broad access to our therapies through both public and private healthcare systems, and both before and after a therapy's potential regulatory approval. We run a wide range of [Access Programs](#), and for therapies such as SPINRAZA, we even have Biogen teams available to make home visits to provide personalized support for patients and their families.

### Clinical Trials

Before being made commercially available, investigational therapies must go through clinical trials and be approved by a regulatory authority, such as the U.S. Food and Drug Administration (FDA) or the European Medicines Agency (EMA), to ensure therapeutic benefits outweigh any potential risks for the intended patient population.

Clinical trials are an essential part of the drug development process, carefully designed to answer specific research questions related to the safety and efficacy of a potential drug. In most cases, the drugs being investigated in clinical trials are not yet approved by regulatory agencies. For most people, the

only way to access investigational therapies is to participate in a clinical trial. However, some people with serious or life-threatening diseases may not be eligible or able to participate in clinical trials, and their physicians may determine that they have no other appropriate treatment options.

Biogen regularly seeks guidance from patient advocacy organizations, regulators, clinical researchers, ethicists, physicians and communities, among others, to determine how best to address requests for access to investigational therapies in a way that is consistent with our patient-focused values and compliant with regulatory standards and protocols. People who meet specific criteria may have access to investigational therapies through clinical trials, Access Programs or compassionate use based on humanitarian grounds.

We are grateful to the patients, healthy volunteers, healthcare providers, hospitals and clinics that participate in testing our investigational therapies. All participants are encouraged to carefully consider the risks prior to enrollment.



Biogen's Clinical Trial and Transparency and Data Sharing Policy aligns with global legal requirements, industry trade association principles and internal company policies. It affirms our commitment to sharing information about our clinical research with patients and researchers to enhance public health.

[LEARN MORE ABOUT CLINICAL RESEARCH](#)

[LEARN MORE ABOUT PATIENT SAFETY](#)

[LEARN MORE ABOUT OUR APPROACH TO CLINICAL TRIALS](#)

### Access Programs

After pivotal clinical trials are completed, therapies with positive results must then be approved by a regulatory authority such

as the FDA or EMA. We comply with government regulations and engage with regulatory agencies and others to ensure that new and innovative therapies are commercially available to the patients who need them.

To provide patients with access to drugs that have not yet become commercially available, we have occasionally been able to offer Expanded Access Programs (EAPs).

[LEARN MORE ABOUT OUR ACCESS PROGRAMS](#)

Biogen also may offer financial assistance or help to secure reimbursement in public and private healthcare programs for





patients who are otherwise unable to access our medications. We also actively explore ways to remove other potential barriers to care.

In 2020 we completed a one-year pilot program in India to help expand access to SPINRAZA for individuals in need of treatment. The SPINRAZA Individual Patient Humanitarian Aid Access Program (SIPHAP) provided SPINRAZA free of charge to program participants, who were selected by an independent committee of medical experts.

Developed in collaboration with Direct Relief, SIPHAP was designed after months of considerable work including research, interviews, on-the-ground assessments of infrastructure and facilities and training for the clinicians participating in the program.

SIPHAP initially launched with 24 patients across 4 public hospitals in India, with 2020 expansion put on hold due to the COVID-19 pandemic. Despite challenges due to the pandemic, all patients received all recommended doses throughout 2020. We are currently exploring the potential for future expansion within India and other countries.

In the Biogen Intercontinental Region we have increased our treatment reach by 13%. In Brazil, for example, we were able to increase the number of patients treated with Biogen products in 2020, including an increase in the number of multiple sclerosis (MS) and spinal muscular atrophy (SMA) patients treated. We also expanded our geographical reach into the Baltic states, opening operations in Estonia, Latvia and Lithuania, enabling us to support MS and SMA patients there as well. And, in China, we worked with the China Primary Health Care Foundation to improve access to SPINRAZA.

As another example of an effort to address barriers to care, in 2020, in the U.S., we launched a transportation support program for SPINRAZA patients who live hours from their site of care. Prior to the program, some would have to fly or drive a significant distance, requiring overnight stays at a hotel. Recognizing this as a financial hardship for patients and families, the program helps cover travel expenses.

SPINRAZA is approved in more than 50 countries, including low- and middle-income countries, with formal reimbursement in 40 countries. [Our policy](#) to promote access to SPINRAZA will help inform our approach to our broader portfolio of therapies.

### Our Pricing Principles

We recognize that access and the price of our medicines are of interest to a variety of stakeholders, including patients, providers, payers and policy makers. We work collaboratively to help ensure that patients are not denied access to life-changing therapies, and we are guided by the following principles:

- Value to Patients
- Present and Future Benefit to Society
- Fulfilling our Commitment to Innovation
- Evolution Toward Value-Based Care
- Affordability and Sustainability

Prices of our currently marketed products reflect the unique advancements in improving patient health, quality of life, improvements in daily living and clinical outcomes.

In line with these principles, biosimilar products can benefit patients and help reduce costs. For example, we estimate that Biogen's anti-TNF biosimilars may have provided healthcare savings of approximately €2.4 billion in 2020 across Europe. These savings may provide headroom for new innovative therapies to come to market.

### [LEARN ABOUT EUROPE'S BIOSIMILAR HEALTHCARE REVOLUTION](#)

Biogen is engaging payers throughout the world to gain access for our therapies. In markets with low GDP per capita, we have engaged with innovative agreements to meet each market's individual needs. It is our strong belief that the decision to treat should be between the physician and the family, without budget concerns. As an example, we have entered into an agreement that removes the payer's incentive to control budget by limiting access. This innovative agreement separates budget from utilization, thus making the decision to treat with SPINRAZA solely between the physician and family.

For the first time, in 2020 Biogen made [Gartner's Healthcare Supply Chain Top 25](#) ranking, which recognizes companies across the healthcare value chain that advance healthcare by [improving patient outcomes](#) and controlling costs.

We regularly review our pricing strategy and prioritize patient access to our therapies. Value-based contracts we have engaged in are designed to align the price of our therapies to the value our therapies deliver to patients, providers and society and will maximize the benefit of our therapies. We are transparent about our [Pricing Principles](#), which are posted on our website, [www.biogen.com](http://www.biogen.com).



Kai, living with MS.

## STRIVING FOR HEALTH EQUITY

Biogen is committed to addressing inequities in accessing care for the disease areas we treat. To better meet the needs of underserved and underrepresented patients globally, including in low- and middle-income countries, we advance health equity goals for our clinical trials and maintain an Expanded Access Program to treat patients in more than 40 countries.

We take a multi-pronged approach to health equity, focusing on the following strategic pillars:

- Underserved and underrepresented patient engagement and education
- Increasing representation in clinical trials
- Expanding medical publications with data pertaining to underserved and underrepresented patients
- Engagement of key medical experts focused on meeting the needs of underserved and underrepresented patients
- Access to our therapies for underserved and underrepresented patients

We aim to translate our product information into different languages, and apply an understanding of how culture affects healthcare decisions to ensure access throughout the product lifecycle. We are intentional about connecting our efforts and focusing them to achieve our goals.



### Increasing Representation in Our Clinical Trials

Our goal is to exceed industry benchmarks for diversity in clinical trial participation. In 2020 more than 90% of our initiated studies included a plan to recruit participants from underrepresented communities to ensure the study population is representative of the intended treatment population.

In 2020 we conducted a [study](#) with the Center for Information and Study on [Clinical Research Participation \(CISCRP\)](#) and the [Tufts Center for the Study of Drug Development \(Tufts CSDD\)](#) to explore options that could help improve healthcare outcomes for diverse communities through their involvement in clinical trials.

[➤ LEARN MORE ABOUT OUR WORK WITH TUFTS CSDD](#)

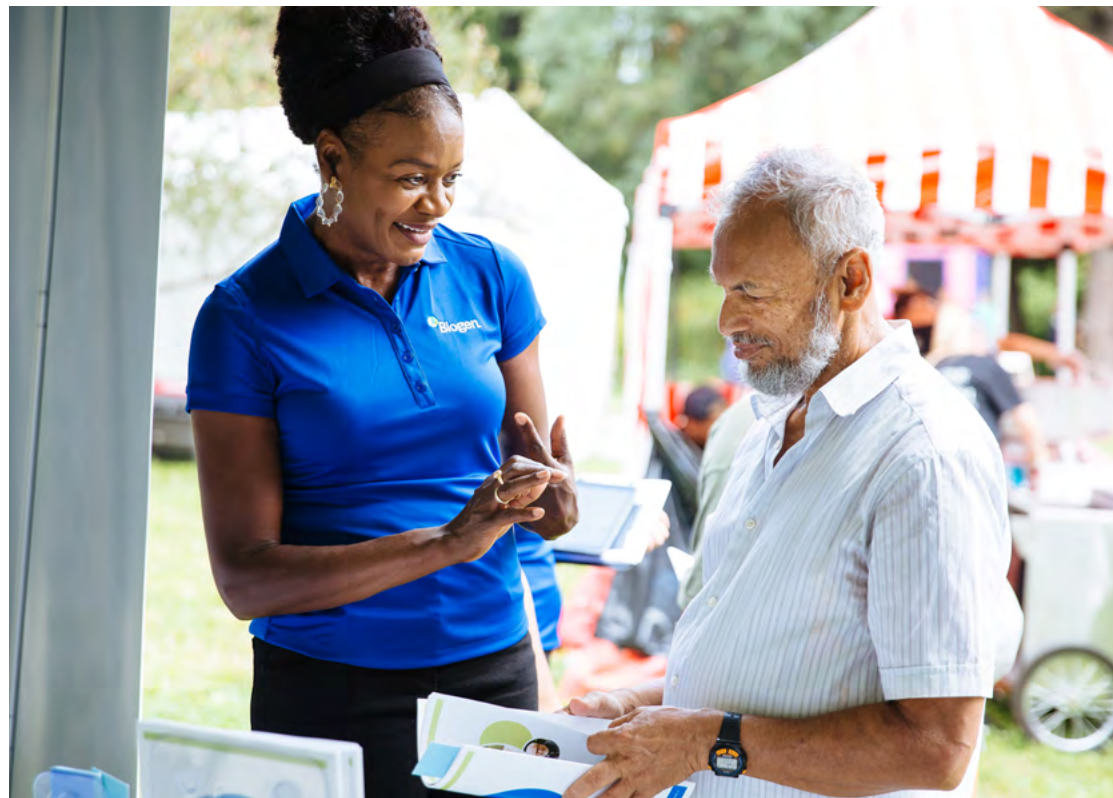
### Engaging Patients and Providers

In 2020 we expanded long-standing outreach efforts with community-focused underrepresented groups and other stakeholders, exploring ways to address barriers to clinical trial participation, diagnosis and affordability.

In 2020 we launched three Health Equity Advisory Boards – focused on access, clinical trials and policies – to better understand patient needs to improve access to our therapies; ensure clinical trials are reflective of the target population; and consider policies that support access and equity. We believe that our holistic approach to patient health, and our understanding of various patient journeys, including needs and barriers, better positions our patients for sustainable, long-term success.

Also, in 2020 we initiated health equity research, gap analyses and benchmarking in MS and Alzheimer's disease as well as research and gap analyses in lupus. We proactively engaged MS payer audiences globally via dozens of live presentations, webcasts and digital initiatives to educate them on health equity issues. We equipped our field teams with health equity payer information. And we launched policy advocacy activities at the local, state and federal levels and in global markets.

We expanded U.S. programming and content updates for Black/African American MS patients. After a successful 2019 pilot, we



expanded the program Take Charge and Learn More about MS in African Americans in 2020, achieving strong attendance and positive patient feedback. Our Spanish-language disease state education programming, Understanding Your MS en Español, launched in December 2020 and is set to be promoted across the U.S. in 2021.

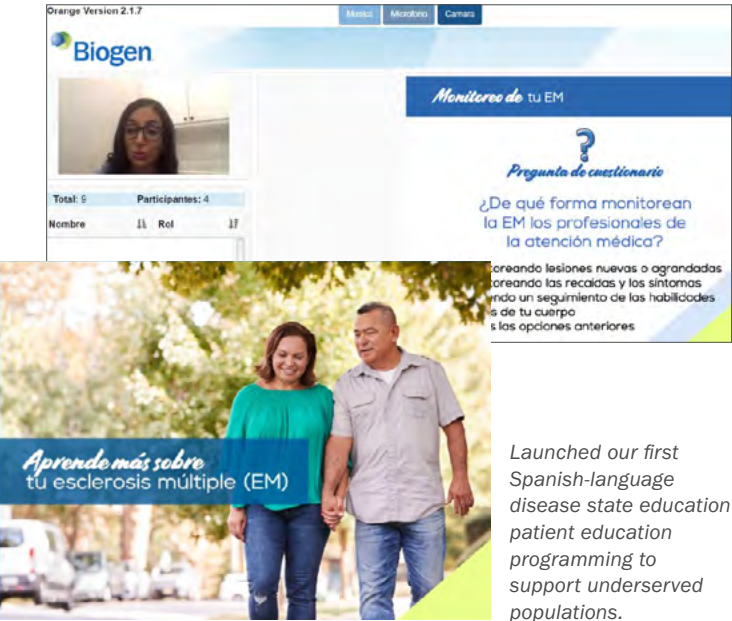
Unfortunately, too often, MS is misdiagnosed or treated with ineffective therapies, which is of particular concern in emerging markets. We are engaged in a number of activities to address this concern. For example, in China, disease education will be a major component of our efforts to further serve the needs of patients. In 2020, in a number of markets, we also accelerated our focus

on supporting greater understanding of TECFIDERA, one of the top prescribed oral relapsing MS medication worldwide.

These and other efforts enable our colleagues to continuously learn, share best practices, support health-literate patient populations and help create a more equitable healthcare system.

In 2020 we also began new programs to help strengthen healthcare systems. Collaborating with Harvard University's T.H. Chan School of Public Health's C-CHANGE (Harvard Chan C-CHANGE) program and Americares, we launched a first-of-its-kind program to help under-resourced healthcare clinics become more climate-resilient and improve measurable health outcomes. This critical work recognizes that climate change and human health are closely related, with people of color and marginalized communities disproportionately vulnerable to negative climate impacts.

[➤ LEARN MORE ABOUT OUR WORK WITH HARVARD CHAN C-CHANGE](#)



Launched our first Spanish-language disease state education patient education programming to support underserved populations.



Hazura Isilay, Biogen Associate Director, Product Complaints, lives with lupus.

[➤ READ HAZURA'S STORY OF LIVING WITH LUPUS](#)

Inspiring Awareness and Action in the Healthcare Sector

In 2020 we continued to conduct and share research on health disparities – both to advance Biogen's commitment to equity and to engage the broader healthcare sector around improving health outcomes for underserved and underrepresented patients.

At the MSVirtual2020, the eighth joint meeting of ACTRIMS-ECTRIMS, we presented data that highlighted ethnic and racial disparities related to occupation, income status, MS-related disability and type of treatment used. We spotlighted the fact that in the U.S. and Canada, despite comparable education levels, Black patients with MS were more likely to be unemployed and earn less annual income than white patients. This could impact access to quality healthcare. Researchers also found that, for a variety of reasons, including delayed and/or misdiagnosis, twice as many Black people with MS had substantial MS-related disability compared to their white counterparts – highlighting the importance of quality care.

[➤ READ LAUREN'S STORY OF BEING DIAGNOSED WITH MS, WHICH LED HER TO CO-FOUND A NONPROFIT ORGANIZATION DEDICATED TO SUPPORTING WOMEN OF COLOR WITH MS AND PROMOTING GREATER EQUITY IN CLINICAL TRIALS](#)

Similarly, a growing body of evidence suggests Alzheimer's disease disproportionately affects certain racial and ethnic communities, with elderly Black/ African American and Hispanic/ Latinx patients among those at greatest risk. While biological risk factors may account for some differences, social and cultural factors, such as a lack of adequate access to medical care, can delay accurate diagnosis, possibly contributing to more severe disease and poorer health outcomes.

By understanding the impact of socio-demographic and other contributing factors to clinical outcomes, Biogen, collaborators and others can better address awareness and promote health equity to better inform future treatment planning.

## SPOTLIGHT

# Collaborating to Keep MS Patient Treatment on Track

When Biogen's MS team learned that TYSABRI infusion sites in the U.S. might be impacted by the COVID-19 pandemic, we sprang into action. With many infusion sites operating at reduced capacities or even closing, and some patients hesitant to go to sites, MS patients feared waiting weeks or months for their infusion treatments, which could lead to increased risk of relapse.

Our Regulatory team worked closely with the FDA to enable Biogen to temporarily offer in-home TYSABRI infusions as an option during the public health emergency, while remaining compliant with the TYSABRI Outreach Unified Commitment to Health (TOUCH) Prescribing Program. Through TOUCH, Biogen provides integrated, comprehensive support and information about TYSABRI's specific safety profile to promote its safe use.

To make this temporary option a reality for patients, our teams worked tirelessly across multiple departments to operationalize the plan, developing communications materials, engaging payers, notifying physicians and more. As a result of this cross-functional collaboration, TYSABRI in-home infusions are now available for eligible U.S. patients during the COVID-19 pandemic, as determined by their prescribers.

In addition to this temporary option in the U.S., in Australia we expanded our existing in-home infusion availability to help more TYSABRI patients. We continue to explore options, including in-home treatment options in other Biogen geographies around the world, to help ensure patients have in-home access to our therapies during the pandemic and, as appropriate, even beyond.



Rosemary, living with MS.

## CARING FOR PATIENT HEALTH

Biogen takes a holistic approach to patient health, with efforts that extend beyond innovative treatments. We work to assist patients in times of crisis; bring their voices into our decision-making; support their providers and partners; and work to promote flexibility, convenience and choice in healthcare.

### Promoting Well-being During the Pandemic

In 2020 the COVID-19 pandemic created a range of new challenges and heightened concerns for people already living with disease. We were able to continue to operate our manufacturing facilities and supply our therapies for people around the world who are living with disease. We quickly mobilized response efforts tailored to help meet the needs of distinct patient populations.

We distributed hundreds of personal care packages, including gloves, masks, hand sanitizer and disinfectant wipes to the homes of people with SMA in the U.S. We also piloted a Home Samples Collection program, since lab work is required between each SPINRAZA treatment. Normally, this means patients visit the site of care around one week before the scheduled dose. With many patients concerned about COVID-19 exposure in clinics, we now provide professional phlebotomists who go to patient homes to draw blood. The Home Sample Collection program was introduced in 13 major U.S. cities in 2020 and became available nationwide in February 2021.

For MS patients, we worked with the FDA to be able to temporarily administer TYSABRI at patients' homes, which reduced patient concerns about going to infusion centers for treatment. We also activated a DocuSign and other digital solutions for patients to conveniently and safely initiate services.



### Patient Advocacy

Biogen's Patient Advocacy team ensures patients are at the center of everything we do and making their voices heard on critical issues such as affordability and access. We gather patient perspectives through our long-term, transparent relationships with PAGs.

Our Global Patient Advocacy Steering Committee, composed of nine PAG leaders, helps inform our Alzheimer's strategy based on community insights and feedback, and helps deepen relationships and build collaborations with and across these organizations. Our PAG Value Engagement Workstream was created to transparently share and gain feedback on value and access priorities.

Throughout 2020, we hosted 7 Alzheimer's Disease Readiness Briefings with over 70 Alzheimer's leaders from 60 PAGs to raise awareness and educate about strategic Alzheimer's topics and gather new insights to inform and understand unmet needs, potential challenges and identify opportunities for collaboration. We increased participation in leading scientific and patient group convenings, including at UsAgainstAlzheimer's National Alzheimer's Summit, The Balm in Gilead's Healthy Churches 2030 Conference and the Women's Alzheimer's Movement's Annual Summit.

We also advanced Alzheimer's education through social media, digital and traditional media, highlighting the unmet needs of Alzheimer's treatments and the challenges Alzheimer's caregivers face. In Brazil, for example, we hosted a public webinar, "Reshaping Alzheimer's Disease: Caring Today for a Better Future," which brought together a neurologist, PAG representative and aging expert in public policy, in collaboration with Estado, a top-tier media outlet in Brazil. The live webcast was attended by approximately 1,000 individuals, the digital media garnered more than 125,000 page views and the print media reached approximately 812,000 people.

In Australia, our MS Motion campaign harnessed the power of social media and MS influencers to expose the hidden side of MS and urge those in the early stages of the disease to



*Bill, living with Alzheimer's disease, with his wife, Candace.*

prioritize disease management for improved outcomes. The MS Motion Campaign messages were shared widely, garnering an impressive 26,296,610 overall media impressions. Social media content reached over 81,710 Australians with a 9% engagement rate, well above the 1–2% baseline in the health space. In Australia, we also engaged with patient advocacy groups and a local Paralympian Dylan Alcott to encourage the SMA community to share challenges that they face in their daily lives and hosted a virtual hackathon event with experts in disability innovation, designers, engineers, occupational therapists, PAG representatives and adults living with SMA to come up with potential solutions.

In addition, we engaged more than 1,500 Biogen employees worldwide in Alzheimer's PAG activities, raising awareness and advancing Alzheimer's community engagement. We also developed a comprehensive online resource about Alzheimer's disease.

### Promoting Healthy Churches

As sponsors of The Balm in Gilead's Healthy Churches 2030 Annual Conference, designed to align faith and public health to address the alarming rates of health disparities among African





Kamaria cares for her mother, Mary, who has early-onset Alzheimer's disease.

Americans, Biogen experts shared their expertise on Alzheimer's disease. Alzheimer's affects African Americans at twice the rate that it does non-Hispanic whites. In fact, the Alzheimer's Association has identified the "silent epidemic" of Alzheimer's as an emerging public health crisis among African Americans. More than 20% of Americans with Alzheimer's are African Americans, and the illness is the fourth-leading cause of death among older African Americans.

Chirfi Guindo, Head of Global Product Strategy & Commercialization at Biogen, hosted a conversation with Kamaria Moore-Hollis about her experiences as a caregiver for her mother, Mary, who is living with Alzheimer's. They focused on Mary's path to diagnosis and Kamaria's role in overcoming barriers to care. The discussion brought to light how Kamaria's proactive approach to navigating complex medical systems and support from the Alzheimer's community has helped ensure her mother is receiving the best care possible.

Another important topic addressed at the conference was recognizing the early signs and symptoms of Alzheimer's, and prioritizing brain health. Yuval Zabar, a Medical Director at Biogen, led a session on this topic, which provided information on the prevalence of the disease, symptoms, current research efforts and testing and diagnosis. This information is particularly important for the African American community because, despite the disproportionate impact on the community, screening and assessment tools and clinical trials are often not designed to address the unique presentation of Alzheimer's in African Americans.

[\*\*➤ READ KAMARIA'S STORY OF CARING FOR HER MOTHER, WHO WAS DIAGNOSED WITH EARLY-ONSET ALZHEIMER'S AT AGE 57\*\*](#)

### Support for Providers and Partners

Biogen cares deeply for patients, and that means extending a variety of support to providers and partners, as well. For example, [Biogen Medical Information](#) offers healthcare professionals (HCPs) accurate and timely scientific information about Biogen products and therapeutic areas. HCPs can search the medical database, access medical information in specific

therapeutic areas, view conference materials, report an adverse event and contact a Biogen Medical Information Specialist or Science Liaison. Across Europe, we help treat more than 200,000 people affected by Immune Medicated Inflammatory Diseases (IMIDs) – who are served by a large network of clinicians. We provide HCPs with meaningful clinical education and digital resources to aid their clinical practice. Our [Biosimilars Medical Academy](#) website has been developed with internationally renowned Key International Medical Experts (KMEs) and features key medical topics.

Biogen Mexico designed and implemented the Lumbar Injection Simulator (LIS) project to support healthcare providers who expressed interest in practicing lumbar punctures before administering SPINRAZA. LIS is an immersive virtual experience using Microsoft HoloLens technology and an anatomical model to complete the sensorial experience. The virtual training experience won Ibero-American Health and Pharmacy Communications' ASPID Award for the "Best Virtual or Augmented Reality Campaign" in 2020.

### Supporting Spinal Muscular Atrophy Patients at Any Age

It can be overwhelming to deal with a rare, progressive neuromuscular disease like SMA, a complex lifelong condition that can involve different patient needs depending on their age and SMA type.



Andrea, living with SMA.

Biogen family access managers (FAMs) are go-to resources when a SMA patient or their guardian has a question related to the non-clinical factors of SMA, including logistics of managing the disease – including during the COVID19 pandemic – and coordinating with their care team at every phase of their SMA journey:

- **Newborns, Infants and Children**  
Biogen FAMs help by connecting parents and guardians to educational resources and services, from the latest literature to online support groups geared toward families.
- **Teenagers and Young Adults**  
FAMs can help young adults who may take a stronger hold on their own care and treatment plan including helping find and transition successfully to a new center of care if they move from one city to another for college, work or other reasons.
- **Adults**  
For many adults with SMA, preservation of independence and mobility is a top priority. Some also look to get more involved in the SMA community, and FAMs can help connect those patients with advocacy groups and activities in their area.

For every stage of life, Biogen FAMs follow the three Es: engage, educate, empower as a trusted, reliable resource for patients and their loved ones managing a challenging disease. It's one of the many ways Biogen puts patients first.

## PIONEERING DIGITAL HEALTH SOLUTIONS

Today, people are working, learning and shopping online – and patients expect health solutions at their fingertips, too. Biogen continues to create and sponsor digital health solutions to meet the needs of patients and those who care for them.

For example, in 2020 we created an online tool for providers, [MyBiogen](#), which helps streamline the process of starting and continuing patients on a Biogen therapy. Providers can access tools and resources to make the process clearer for patients, track the process and keep the team informed of patient therapy.



### Digital Health for Multiple Sclerosis Patients

For people living with MS, cognitive difficulties and fatigue can be associated with reduced work productivity. To help, we're working to improve the way healthcare providers monitor for cognitive and other MS symptoms, both in and out of the clinic. In 2020 CogEval®, a free iPad® app that allows healthcare providers to routinely track and evaluate cognitive MS symptoms, became available in 39 countries and 22 languages. Konectom™, currently in clinical trial use, is a smartphone-based app that enables MS patients to quantitatively self-assess at-home neurological functioning and has potential applications for clinical research and by doctors and patients making treatment decisions.

Above MS™ is an online resource that provides tips, tools and resources for MS patients and those who support them. Biogen's free, customizable mobile app Aby™ / Cleo™ has a variety of tips, trackers, patient videos, MS coaches, well-being programs and information to help support day-to-day life with MS. The Aby / Cleo app was voted the No. 1 app for people living with MS, as ranked by more than 600 neurologists across 9 countries in 2020.<sup>3</sup> The number of registered users grew rapidly in markets like Mexico. With more than 400,000 registered users worldwide, the app is available in 15 countries with additional launches planned in 2021.

In the U.K., we initiated the 1MSg Campaign to encourage MS patients to make disease management decisions informed by the latest data. Through 1MSg, an online resource, we highlight the benefits of regular engagement with MS-specialist services and provide tips on how to get the most out of a consultation.

Through the Io Non Sclero campaign in Italy, the real face of MS is unveiled through a web series that shows patients looking toward the future like any other person. Supporting digital components offer the opportunity for fans of the web series to send video messages of positivity and exchange messages. In 2020 Io Non Sclero messaging was tailored to address tough moments during the pandemic's initial lockdown phase. The campaign saw its highest engagement rate at 11.9%.



Caroline, living with MS.

<sup>3</sup> As ranked in a Pascaleo survey, November 2020.

We also pioneered MS PATHS (Multiple Sclerosis Partners Advancing Technology and Health Solutions), which uses advances in technology to generate and collect standardized patient data during routine office visits in 10 leading MS centers in the U.S. and Europe. The information could help researchers better quantify the value of treatment, advance new discoveries and improve patient outcomes. More than 18,000 MS patients have shared their data as part of the program, with one year of follow-up data available for more than 75% of patients.

➔ [LEARN MORE ABOUT MS PATHS](#)

### New Resources for Spinal Muscular Atrophy

Biogen sponsors [Together in SMA](#), a site with information about SMA symptoms, clinical guidelines and care options and insights from experienced members of the SMA community.

In collaboration with Invitae, a specialized site allows patients to confirm SMA diagnosis or carrier status through no-charge genetic testing. On [Invitae.com](#) patients learn about SMA testing eligibility and options, and can order a genetic test.

And, in Germany, our interactive exchange platform, SMAI talk, provides a space for SMA patients and families of people diagnosed with SMA to discuss topics about everyday life with SMA. Every week, new videos, blogs and articles appear, co-created with SMA patients and their relatives.

### New Brain Health Platform Addresses Need for Information and Insights About Cognitive Impairment and Alzheimer's Disease

Created by UsAgainstAlzheimer's, with in-kind and financial support from Biogen, [BrainGuide™](#) is a first-of-its-kind platform that runs on Amazon Web Services and empowers people with the education and resources to take the best next steps in managing their own or a loved one's brain health. Participants receive a free tailored set of resources based on their responses to a confidential memory questionnaire, which is available online and by telephone, in English or Spanish.

## SPOTLIGHT

### A NEW VIRTUAL RESEARCH STUDY IN COLLABORATION WITH APPLE

In January 2021 we announced a new virtual research study, in collaboration with Apple, to investigate the role Apple Watch and iPhone could play in monitoring cognitive performance and screening for decline in cognitive health including mild cognitive impairment (MCI).

The multi-year, observational research study will be launched later in 2021 and will enroll participants including young and aging adults with a range of cognitive performance. Driven by the powerful technology in Apple Watch and iPhone and Biogen's in-depth knowledge of neuroscience, the study's primary objectives are to develop digital biomarkers to help monitor cognitive performance over time and identify early signs of MCI.

The virtual study has been designed with data security, customer privacy, control and transparency in mind.



**Detecting disease at its earliest stage is our best bet to treat it effectively. To that end, this exciting study could enable us to learn how to get early warning signs of cognitive decline which may be addressed through lifestyle and therapeutic changes designed to slow or stop the progression of brain disease."**

**George Vradenburg**

CHAIRMAN AND COFOUNDER OF USAGAINSTALZHEIMER'S



**Strategies that optimize brain health and improve cognitive function are the key to reducing the risk of dementia and this study has the potential to discover transformative ways to monitor and assess brain health."**

**Nora Super**

EXECUTIVE DIRECTOR OF THE MILKEN INSTITUTE ALLIANCE TO IMPROVE DEMENTIA CARE



# OUR PEOPLE



Enhanced Diversity, Equity & Inclusion strategy aims to boost diversity<sup>1</sup> in U.S. manager positions and above by

**30%**

**\$15M**

allocated in emergency relief and care to support Biogen employees during the pandemic



7 Employee Resource Networks of

**>2,000 EMPLOYEES**



100% score as Corporate Equality Index for the 8<sup>th</sup> time:

**BEST PLACES TO WORK**

for LGBTQ Equality



**48%**

women globally in director+ positions

**28%**

ethnic/racial minorities in the U.S. in director+ positions

1. Percent of U.S. manager positions and above held by Black, African American, and Latinx employees, as well as Asian employees where underrepresented by level and function; by year end 2021.

**Minita Shah-Mara**, Head of Biogen's Organization Effectiveness and Diversity, Equity & Inclusion, challenges leaders and employees to be more vulnerable and empowers us to foster a more inclusive workplace.

# A DIVERSE AND INCLUSIVE WORKPLACE WITH LEADING SCIENTIFIC MINDS

Biogen attracts some of the world's leading innovative minds – people who care deeply and work fearlessly every day to change lives for the better.

## PRIORITIZING HEALTH AND WELL-BEING DURING THE PANDEMIC

The people of Biogen make us who we are, and we couldn't be more proud. Our differences fuel innovation in a workplace where people are empowered to learn, grow and build rewarding careers. In 2020 we continued to build programs and to engage our people in support of our global growth strategy. Together, we endeavor to drive greater patient outcomes and be a positive force in the world.

2020 was an extremely difficult year, and all of us at Biogen rallied together to support our patients, colleagues and communities.

As a company that cares deeply about employee well-being, Biogen rapidly expanded health and safety measures, ensuring people required to work on-site had access to personal protective equipment (PPE), such as masks, gloves and sanitizers, and that effective virus-control protocols were in place, always following the latest science.

We allocated \$15 million in emergency relief and care to support our people and their loved ones in navigating unprecedented challenges. We were also one of the first Massachusetts-based companies to mandate working from home. To support this transition, we provided a \$750 stipend to cover items and services our people most needed – from home office

setups to food delivery to disinfectant supplies. We engaged Biogen's Parents Group to understand what parents needed as work moved into homes. Hearing about their needs, we expanded our dependent-care reimbursement policies to provide unprecedented flexibility and increased coverage, and we facilitated home errands through our Circles Concierge service. We also initiated a weekly forum for leaders and employees to connect and discuss topics ranging from work-life balance to home-to-business innovation. The 30-minute sessions attracted hundreds of participants and provided a creative way for employees to stay connected and to access support.

As added support, we offered supplementary, coordinated vacation days so nobody would feel behind after they unplugged. Many parts of our business tried different ideas such as meeting-free days to help manage stress, video conference fatigue and workload while continuing to deliver for our patients.





We ensured employees had appropriate healthcare coverage and paid sick leave. With mental health a heightened concern during the pandemic, Biogen assessed our healthcare coverage offerings to minimize any potential access barriers for employees seeking counseling. We determined that around 90% of our employees had access to quality counseling services within our network. For increased coverage, we virtualized Biogen's on-site counselor so employees working from home had access to support. We also provided the Headspace® meditation app for all our employees and took our fitness center virtual and global to help ensure our people were addressing their mental and physical health needs.

Looking ahead, we will continue to strengthen our focus on resilience. In 2021 we launched behavioral health engagement activities, so employees can securely assess personal behavioral health and access tools to support improved health.

## OUR CULTURE

As the periodic table of elements documents the building blocks of our universe, the **Biogen Elements** shape our company's culture: pioneering spirit, strong ethics, personal accountability, inclusivity, agility and unwavering customer focus. Biogen Elements are a celebration – and reminder – of all that makes us unique, and all that unites us as one Biogen.

Each year, CEO Elements Awards recognize Biogen employees who go above and beyond to meet patient needs while demonstrating Biogen Elements. In 2020 nominations reflected every function and geography, and we celebrated 53 winning teams and individuals for a total of 597 awards, reflecting employee dedication in a challenging year.

Our corporate culture is guided by our Credo of Caring Deeply, Working Fearlessly and Changing Lives™.

➔ [TO READ MORE ABOUT OUR CREDO AND CORE VALUES, VISIT OUR CODE OF BUSINESS CONDUCT](#)



### Our Priority Focus Areas

As pioneers of neuroscience, every day we engage in our work knowing that hundreds of thousands of people in more than 100 countries count on Biogen and our therapies to make a meaningful difference in their lives. It's people who inspire us, drive us and propel our work toward innovative product solutions.

Beyond our medicines, we endeavor to improve patient health outcomes, help solve social and environmental challenges, cultivate a workplace that enables our employees to thrive, support local communities and inspire future generations of scientists. These efforts are central to our purpose, and their success is vital to our growth.

### An Ethical Company

At Biogen, everything we do – from investigating therapies for patients to promoting health equity – is grounded in our core values. These include respect, teamwork, honesty, transparency and integrity. Our values are detailed and made public in our [Code of Business Conduct](#), which includes our individual and collective responsibilities.

All employees are expected to report actual or suspected violations of law or the Code of Business Conduct. This can be done through their manager or a Helpline. Regardless of the type of misconduct reported, we will not tolerate retaliation against anyone who cooperates with an investigation or who makes a good faith report of an alleged violation of laws, regulations, the Code of Business Conduct or our policies. We take claims of retaliation seriously. All such claims will be thoroughly investigated and resolved.

### A Culture of Giving

Caring deeply is part of Biogen's ethos, and every day our people generously share their time, talent and financial resources to enrich the world. In 2020 we stepped up to meet the challenges of the pandemic. Biogen employees volunteered more than 4,370 hours around the world and donated more than \$2.5 million, including the Biogen Foundation's employee matching gift program.

[➤ READ MORE ABOUT HOW BIOGEN AND OUR PEOPLE SUPPORTED OUR COMMUNITIES](#)





## DIVERSITY, EQUITY & INCLUSION

We believe diversity is a strength and prejudice is unacceptable. Our overall commitment to Diversity, Equity & Inclusion (DE&I) starts at the top. In 2020, after the murder of George Floyd, our leaders and our people came together to share thoughts and ideas during dozens of listening sessions. Those sessions helped inform our new four-part DE&I strategy:

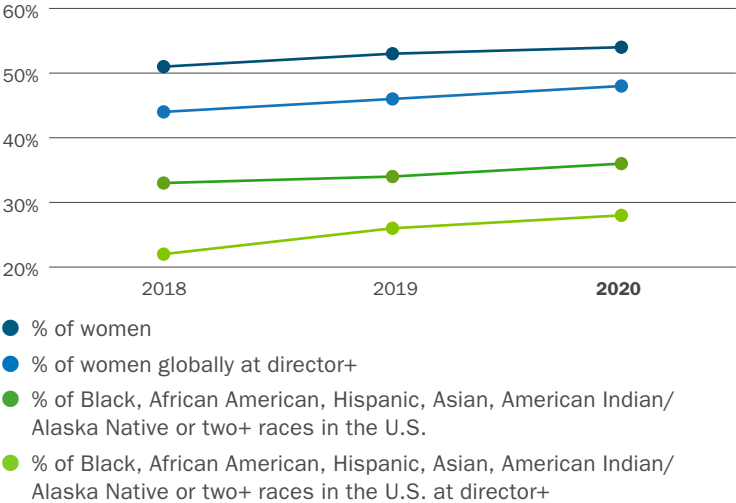
1. Build company-wide awareness, capability and urgency to foster and sustain a diverse and inclusive environment. Our goals:
  - 95% of People Managers trained on inclusive recruiting, hiring, promotion and retention.
  - 60% of all employees participate in DE&I training.
2. Build an intentional high-performing, engaged, diverse and inclusive talent pipeline. Our goals:
  - Increase women in director-level and above roles by 30% globally, until gender parity reached.
  - Increase diversity<sup>2</sup> in U.S. manager positions and above by 30%.
  - Increase representation of people who identify as veterans, people with disabilities and LGBTQ+ by 30% in the U.S.
3. Improve health outcomes for African American, Black, Latinx and other minority communities in the disease areas we treat. Our goal:
  - Exceed industry diversity benchmarks in clinical trials and medical publications on underserved and underrepresented communities.
4. Promote economic empowerment and expand sourcing with minority-owned businesses. Our goal:
  - Increase spending by 50-100% with minority-owned businesses in the U.S.

### ➤ [READ MORE ABOUT OUR SUPPLIER DIVERSITY PROGRAM](#)

- Explore expanding the use of minority-owned banks for a portion of Biogen's cash balances.

<sup>2</sup> Percent of U.S. manager positions and above held by Black, African American, and Latinx employees, as well as Asian employees where underrepresented; by year end 2021.

Only U.S. employees have the opportunity to self-identify their race/ethnicity



We are committed to a global DE&I strategy, with various local initiatives designed to advance progress. With the support of global Affiliates and functions, we identify opportunities and gaps to continue to grow our inclusive culture and build on our progress.

- [LEARN MORE ABOUT BIOGEN'S DE&I STRATEGY](#)
- [READ OUR ESG DATA TABLE](#)

To advance this strategy, we rely on leadership and a global, cross-functional governing body of employees known as the DE&I Strategic Council. The team works to assure that our talent processes disrupt bias, that everyone owns DE&I and that our strategy also focuses on serving the needs of underserved and underrepresented patients in the disease areas we treat. In 2021, as part of our commitment to these critical issues, we have tied a portion of our employees' and executive officers' 2021 compensation to advancing our ESG strategy.

SPOTLIGHT

A message to Biogen employees around the world

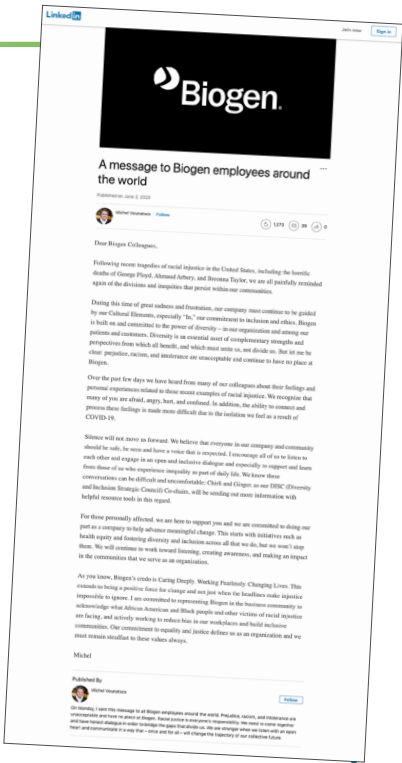
Following the racial injustice tragedies in the United States in 2020, CEO Michel Vounatsos sent an email to all employees and posted the letter on LinkedIn.

"Following recent tragedies of racial injustice in the United States, including the horrific deaths of George Floyd, Ahmaud Arbery and Breonna Taylor, we are all painfully reminded again of the divisions and inequities that persist within our communities.

During this time of great sadness and frustration, our company must continue to be guided by

our Cultural Elements, especially "In," our commitment to inclusion and ethics. Biogen is built on and committed to the power of diversity – in our organization and among our patients and customers. Diversity is an essential asset of complementary strengths and perspectives from which all benefit, and which must unite us, not divide us. But let me be clear: prejudice, racism, and intolerance are unacceptable and continue to have no place at Biogen."

➤ [READ THE FULL LETTER](#)



We hold ourselves accountable for advancing diversity at Biogen, in line with our:

- [Philosophy on pay equity.](#)
- 2020 CEO commitment to MassBio's [CEO Pledge for a More Equitable and Inclusive Life Sciences Industry](#), recognizing racial inequity and pledging broad, specific and measurable results-oriented action.
- Ongoing affirmation of the [CEO Action for Diversity & Inclusion™](#), the largest CEO-driven business commitment to advance DE&I within the workplace.

As an [Equal Opportunity Employer](#), Biogen is committed to DE&I of all kinds, including race, ethnicity, national origin, religion, age,





gender, gender identity, sexual orientation, disability, veterans’ status and diversity of thought, reflecting the communities where we operate and the patients we serve. We will measure, track and report on our progress, including disclosure of our [U.S. EEO-1 \(Equal Employment Opportunity\) data](#), global pay equity data and workforce data analysis.

**Pay Equity Analysis**

Biogen is committed to ensuring our employees receive equal pay for equal work, consistent with our [philosophy on pay equity](#). In 2020 we analyzed equity in compensation for 85% of our global workforce, evaluating whether gender impacted compensation globally and assessing racial/ethnic pay equity in the U.S. Individuals not included in the analysis were either in single-incumbent roles or homogenous groups by gender or by race, and therefore could not be analyzed.

We analyzed our employees’ pay relative to race, gender, geography, responsibilities, level, performance and a wide range of other criteria. The pay equity analysis showed that the compensation of 99.7% of those analyzed was equitable. For the remaining 0.3% of employees (17 total), we made appropriate adjustments.

This robust analysis confirmed that fairness and equity are embedded in our compensation practices around the globe. We will continue to regularly review our compensation philosophy; ensure employees understand Biogen’s total compensation practices; and provide training for managers and leaders to prevent bias during recruiting, hiring, compensation decisions and performance management.

**SPOTLIGHT**

Delivering a culture of data democratization to impact DE&I

In 2020 Biogen launched a new effort to give HR professionals and business leaders greater access to people data. Biogen’s People Analytics Dashboard provides organizational people metrics to drive transparency and accountability with Biogen’s talent priorities. These insights are an important step toward understanding gaps and implementing solutions while maintaining the confidentiality and privacy of employees.

“Extending data access beyond HR helps us live our belief that we are all accountable for DE&I,” said Noah Hendy, who co-created the Dashboard. “Dashboard insights are helping to inform plans for addressing underrepresentation in leadership

roles, which will enable us to become an even more innovative and successful company.”

As a testament to Biogen’s agile culture, this powerful resource was developed in a matter of months. Hendy’s team is working to expand the tool in 2021 to provide other key performance indicators.

“As pioneers in science, it makes sense for us to use data to understand how we measure our commitments to attract, develop and retain underrepresented talent. Analytics increase transparency and hold us accountable,” said Hendy. “It is where data science meets humanity.”



As pioneers in science, it makes sense for us to use data to understand how we measure our commitments to attract, develop and retain underrepresented talent. Analytics increase transparency and hold us accountable. It is where data science meets humanity.”

Noah Hendy  
CO-CREATOR OF BIOGEN’S PEOPLE ANALYTICS DASHBOARD

Gender

As of December 31, 2020, globally, 48% of director-level-and-above positions were held by women, a 2% increase from 2019. We work toward gender parity and develop the next generation of female leaders through our Women’s Leadership Program, which cultivates high-potential women for leadership roles.

Race and Ethnicity

As of December 31, 2020, 28% of Biogen’s U.S. director-level-and-above positions were held by ethnic or racial minorities, a 2% increase from 2019. While our policies and practices are global, the laws in many countries do not permit us to collect employees’ ethnic or racial data.

To enrich our talent pipeline, we encourage mid-career, underrepresented minorities to participate in The Partnership, Inc.’s BioDiversity Fellows Program. Biogen helped create the program to strengthen the leadership capacity of our Black, African American, Latinx and Asian employees. Since then, the majority of graduates of the BioDiversity Fellows Program have been promoted during or after completion of the program.

Through a collaboration with [Morehouse School of Medicine](#), to help educate underrepresented future leaders of the industry, we were proud to welcome our first intern cohort from Historically Black Colleges and Universities (HBCUs) in 2020. In 2021 we brought together employees passionate about increasing HBCU and Black interns with a goal to increase overall participation by 300% from our 2020 number.

[➤ LEARN ABOUT OUR FORMER HBCU INTERNS’ EXPERIENCES ON OUR INTERN PAGE](#)

In 2020 Biogen also began recognizing Juneteenth as an official U.S. holiday and held a virtual dialogue on racial injustice.

Celebrating and Advancing Diversity of All Kinds

Biogen respects fundamental human rights and believes that every person deserves to be treated fairly and with dignity.

[➤ READ OUR FULL HUMAN RIGHTS POSITION, WHICH CONTINUES TO INSPIRE A VARIETY OF COMPANY-WIDE PROGRAMS](#)

For example, in 2020 Biogen’s LGBTQ+ and Allies Employee Resource Network ReachOUT held a two-hour global virtual event that drew approximately 500 colleagues from 14 countries. The session raised funds for four organizations making a difference in Black and LGBTQ+ communities. Biogen employee and corporate contributions together totaled \$23,895 for nonprofits promoting equity.

[➤ LEARN MORE IN THE COMMUNITY SECTION OF THIS REPORT](#)

To celebrate 30 years of the Americans with Disabilities Act (ADA), Biogen participated in the [United Spinal Association’s ADA Roll on 30! challenge](#), a united acknowledgment of the importance of an inclusive and accessible workplace for people with disabilities.

Also, in 2020, with Massachusetts General Hospital’s Aspire program, we piloted a new internship program, Limitless, focused on recruiting neurodiverse students. Neurodiversity refers to the natural range of variation in human neurocognition and includes autism spectrum disorder, attention deficit hyperactivity disorder, dyslexia, dyspraxia and Tourette syndrome, among others. A first-of-its-kind program in the biotech industry, the pilot consisted of four interns who spent 12 weeks in various Biogen departments, learning to juggle multiple workstreams while building a professional network.

After evaluating the program, we made plans for 2021 and beyond. Tom Kleber, University Programs Lead for Biogen, shared his vision for the program: “Biogen prides itself as being a pioneer in neuroscience, and the Limitless program expands upon this mission by developing neurodivergent students to become future leaders in life science. This program not only demonstrates our commitment to fostering an inclusive environment, but also harnesses the power of diverse perspectives, leading to further innovation for the company.”

[➤ LEARN MORE ABOUT THE BIOGEN FOUNDATION’S SUPPORT OF MASS GENERAL’S YOUTH NEUROLOGY EDUCATION AND RESEARCH PROGRAM](#)

“By shining the spotlight on this significant, unsustainable gap, the life sciences industry – already known for innovation – will broaden our understanding of the market and uncover even more ingenuity and opportunities to discover and develop potentially life-changing therapies.”

**Minita Shah-Mara**  
HEAD OF ORGANIZATION  
EFFECTIVENESS AND DIVERSITY,  
EQUITY & INCLUSION, BIOGEN

Awards and Recognition

For the third consecutive year, Biogen scored 100% on the **Disability Equality Index**, which measures our policies and practices related to disability inclusion.

For the eighth consecutive year, in 2021, we were recognized as a **Best Place to Work for LGBTQ Equality** by the Human Rights Campaign, scoring 100% on their Corporate Equality Index. We also were named as a Triangle Business Journal's **2020 Leader in Diversity**.

Globally, Biogen was honored to be named a **Great Place To Work® 2020** in France and Italy, with Italy also receiving a special acknowledgment that we were one of the **Best Workplaces™ for Women**. Our Switzerland Affiliate has also received national acclaim for the strength of our women in leadership.

Within the first few months of 2021, Biogen was named one of the **50 Best Workplaces in Canada** as well as the **Best Workplaces for Women** by Great Place to Work, based on an employee-driven competitive process. We were also honored to receive the **2021 Great Place to Work** certificates in Poland and the U.K., and the **Top Employer Spain 2021** certification.

Industry Leadership on DE&I

Biogen is committed to using our voice to inspire positive change in our industry and society as a whole. In 2020 we were proud to sponsor the Women of Color in Pharma's (WOCIP) 4<sup>th</sup> Annual Conference featuring Stephanie Dyson, Biogen Head of Government Affairs & Public Policy, who spoke about her career journey and path to leadership in the pharmaceutical industry.

We also recognize the need to address the stark financial disparities that exist in the Venture Capital industry, particularly for women and minority women, who receive disproportionately less money. In 2020 we worked with Liftstream, New England Venture Capital Association, Third Rock Ventures and BioDirector to co-found the Bioscience & Investor Inclusion Group (BIIG), a coalition created to advance DE&I in the life sciences sector. BIIG brings together leaders with a range of industry perspectives including

SPOTLIGHT  
SUPPORTING BLACK-OWNED BANKS

Hong Gou had only been with Biogen for three months when she received a message from a former business school classmate who was encouraging companies to deposit cash into minority-owned banks to promote economic empowerment.

"I wasn't sure how to approach the idea," said Gou, Associate Director, Biogen U.S. Alzheimer's marketing team. Then, Alisha Alaimo, President of Biogen U.S., held an open dialogue forum on the topic of racial injustice. Gou recalled, "I hadn't met her yet, but because of her leadership and her



Hong Gou, Associate Director, U.S. Alzheimer's marketing team, Biogen.

opening up about George Floyd's death, I felt comfortable raising this idea."

In August 2020 Biogen deposited \$10 million at Boston-based OneUnited Bank, the largest Black-owned bank in America. The deposit supports the bank's focus on Black and African American economic empowerment, and addresses the fact that Black-owned banks control less than 1% of U.S. banking assets.

[➤ READ MORE ABOUT BIOGEN'S SUPPORT OF ONEUNITED](#)

R&D, commercialization, human capital, venture investing and corporate governance. The participants are committed to changing gender and minority disparities and will share proven practices to develop solutions for the entire sector.

In addition, in 2021 we collaborated with The Partnership, Inc. to launch the North Carolina Mid-Career Leadership Accelerator Program with an initial group of 40 participants from various industries in the Research Triangle Park area. The Accelerator Program helps mid-career professionals strengthen their leadership capacity, and is designed to advance Black, African American, Latinx and Asian leaders in the industries driving the economy of the Research Triangle and Charlotte region in North Carolina.



## EMPLOYEE ENGAGEMENT

Our Total Rewards are employee-centric and holistic, focusing on physical and emotional well-being, financial support and career development. Our programs aim to meet employees and their families where they are and in ways they want to be met. We strive to create a workplace where employees are supported in and accountable for their well-being, empowered to own their careers and motivated and connected to resources that help them thrive.

### Learning and Development

In 2020 we introduced new resources and continued to offer high-impact opportunities including:

- **ARC** (Activate, Reflect and Co-Create): Preparing top talent for the rigors of executive roles.
- **WLP** (Women's Leadership Program): Addressing the unique challenges faced by female leaders to increase influence and impact.
- **ELR** (Executive Leadership Retreat): Immersing leaders in topics designed to help them shape culture and build resilience.

With many Biogen employees working from home, we quickly increased access to virtual learning opportunities and offered 310 trainings, a 10% increase over 2019. Employees participated in 354,000 hours of professional development programming through Biogen University and other resources. For example, through LinkedIn Learning, our new e-learning resource, we provided our employees with access to more than 16,000 on-demand learning modules in English, French, German, Spanish, Japanese and Portuguese.

In 2020, to provide added support for our people, we worked with BetterUp, the world's leading coaching provider. BetterUp held a series of Coaching Circles on the topic of Building Resilience. The Coaching Circles were live group sessions that integrated evidence-based learning, peer coaching and group discussions to build skills and to help employees find ways to adapt to these challenging times with support from colleagues.





We offer year-long personalized learning experiences, matching participants with a dedicated mentor to identify and work toward short-term professional goals. In 2020, 190 Biogen employees were enrolled in the program as mentees and 70 signed up as mentors, and we look forward to building on this success in 2021.

### Employee Resource Networks

In 2020 membership increased across Biogen's seven [Employee Resource Networks \(ERNs\)](#), internal groups for employees who share characteristics, life experiences and interests – and their allies. These networks provide opportunities to exchange knowledge, find mentors and receive support, which can be invaluable for career development. Employees interested in advancing inclusion are welcome to join any network.

Biogen's Veterans Network, for example, works to attract, hire and develop veteran talent.

[➤ READ MILITARY VETERAN AND BIOGEN FULL-TIME EMPLOYEE ANDERSON HERNANDEZ'S STORY ABOUT HOW HE'S LEVERAGING HIS MILITARY SERVICE EXPERIENCE IN HIS QUALITY SPECIALIST ROLE](#)

In 2020 Biogen employees launched a new ERN called ourIMPACT, which focuses on environmental sustainability and its links to human health. As of March 2021, more than 500 Biogen employees had signed up. [ourIMPACT supports our Healthy Climate, Healthy Lives™ initiative to eliminate fossil fuels across our operations by 2040.](#)

### Employee Annual Bonus Plan

Employees develop individual goals annually that align with and help execute on Biogen's overall strategic goals. At the end of the year, employees are evaluated on individual performance against those goals through the lens of the Biogen Elements. As a company, Biogen is also evaluated on performance through our Corporate Scorecard. The amount of bonus payout we receive each year under the Annual Bonus Plan is based on our individual performance as well as the company's performance.

In our 2021 Corporate Scorecard, we remain committed to our financial performance, leadership in Alzheimer's, maximizing our robust pipeline and driving our biosimilars business forward as key metrics. In addition, we introduced two new scorecard focus areas:

- Digital Health
- ESG

Digital Health will scale our digital foundations to create substantial value for patients. Including an ESG company performance metric reaffirms our commitment to advancing our DE&I and Healthy Climate, Healthy Lives efforts.

### Employee and Family Solutions

We strive to foster employee well-being, working to provide all employees with consistent and convenient access to a robust set of resources. In 2020 we introduced Employee and Family Solutions, a new global employee assistance program that offers legal services, financial consultations, behavioral healthcare and child and elder care referral services. Employee and Family Solutions is available to all employees and family members around the world, and is accessible 24 hours a day, seven days a week.

In 2020 we evaluated and elevated programs that can promote a culture that embraces trust, empowerment and flexibility as employees manage both professional and personal responsibilities. Our Flexible Work Arrangements (FWA) include:

- **Flextime:** A work schedule with variable starting and ending times, within limits. Employees still work their standard number of hours per week.
- **Part-time:** A less than full-time schedule, receiving a prorated salary and benefits.
- **Job share:** Two part-time employees share responsibilities of a full-time position, each receiving prorated salary and benefits.
- **Telecommuting:** An arrangement that allows employees to regularly work at home or at an approved alternative worksite up to three days per week.

In 2020 Biogen announced the expansion of our paid parental bonding leave benefits to support employees who have a newborn or adopted child. Starting in 2021, our maternity leave policy provides 100% of base pay for up to 16 weeks and non-birth parents receive eight weeks of parental bonding leave.

2020 was a particularly challenging year for many parents. In response to care disruption caused by the COVID-19 pandemic, we increased allocation and funding for backup “crisis care” services to assist families, offering \$100/day childcare reimbursement for up to 80 days. Employees could use crisis care to reimburse members of their own personal networks to provide childcare while regular care options were unavailable. When our childcare facilities on our Massachusetts and North Carolina campuses had to close at the onset of the COVID-19 pandemic, we continued to support teachers with pay and covered family tuitions to keep these critical communities intact. Once permitted to re-open, our state-of-the-art Bright Horizons Child Care Centers on our campuses in Cambridge, Massachusetts and North Carolina increased services and safety protocols and resumed offering a variety of programs to support up to 170 children.

### Employee Sabbaticals

We strive to create an environment where our employees can flourish, both in and out of the office. Our employee sabbatical program is an opportunity for those who have been with us for at least six years to participate in a paid sabbatical. Since the program’s launch in 2014, nearly 3,700 employees have participated, using this unique opportunity to contribute to their communities, travel, spend time with loved ones and accelerate their lifelong learning.

[➤ LEARN HOW THERESE RUDSLATT DEBOU, OUR EU REGIONAL HR LEAD, ENJOYED HER SABBATICAL THIS YEAR, DESPITE HAVING TO CHANGE HER PLANS DUE TO COVID-19](#)

### Employee Surveys

Employee perspectives guide us to improve engagement and support and help us maintain Biogen’s reputation as a great place to work for all employees. In 2020 we continued to drive our employee-listening program forward with industry-leading





best practices. We care deeply about employee sentiment and feedback, and we demonstrated this commitment by expanding leaders' direct access to their employees' feedback. Managers now also have the ability to directly shape their team's experience with the help of this tool. Nearly 75% of employees participated in the survey, with 86% of employees responding as proud to be associated with Biogen, a 10% increase over 2019. Scores across almost all of our questions increased in 2020, demonstrating the efficacy of our efforts, which will continue to shape a positive future for our workforce.

### Strengthening a Diverse Talent Pipeline

Biogen supports a variety of initiatives to promote diversity within our industry, expanding our talent pipeline. Examples include The Partnership, Inc.'s BioDiversity Fellows Program and [Massachusetts General Hospital's Youth Neurology Program](#).

In 2020 we expanded Biogen's Research Fellow Program, which is designed to attract high-caliber Ph.D. candidates and postdocs who are interested in the biotech industry. The program provides early-career professionals with the opportunity to collaborate with Biogen scientists and contribute to our pipeline and portfolio projects, and in 2020, we grew the program to 15 fellows from the inaugural cohort of eight in 2019.

[➤ LEARN ABOUT OUR EFFORTS TO ENGAGE STUDENTS IN STEM](#)

Dr. Verneda Hawkins, Associate Director for U.S. Field Medical Excellence at Biogen, serves as a voice for underrepresented and underserved populations through her work with Health Equity Patient Engagement & Education and her participation in Mosaic, our multicultural employee resource network.

[➤ READ HOW DR. HAWKINS IS INSPIRING FUTURE GENERATIONS](#)

## WORKPLACE HEALTH AND SAFETY

At Biogen, it's essential to us that our employees feel healthy, productive and safe at work. Although our mission is to bring life-saving therapies to patients, we will always put our employees' health and safety at the forefront of everything we do.

We believe every employee has a role in creating a safe and healthy workplace – whether work happens in the lab, in an office or in a manufacturing plant. By fostering a culture of safety and well-being, we can better focus our energy on what is at the heart of our business – improving patient lives.

### Reducing Risk, Promoting Well-being

In 2020 Biogen continued to make significant progress integrating Human Performance (Hu) into our Environment, Health and Safety (EHS) programs. Hu encourages employees to collaboratively engage in proactive problem solving through practices such as Open Reporting and Work Observation and Risk Conversations. By engaging and empowering our employees through innovative, effective programs, we hope to help change how the entire industry approaches safety performance and risk management.

In 2020 our Days Away Case Rate (DACR), which monitors the frequency of work-related illnesses and injuries that lead to a work absence, and our Total Recordable Injury Rate (TRIR) were both below the industry average. Our DACR was 0.06 (U.S. industry average at 0.22 in 2019) and TRIR was 0.17 (U.S. industry average at 1.0 in 2019) excluding work-related COVID-19 infections because the infections occurred at an off-site meeting and are not indicative of health and safety performance within our operations. Compared to a peer group of 15 pharmaceutical/biotechnology leaders using a three-year rolling average of DACR, we achieved second place in the group. When COVID-19 cases are included the DACR is 0.07 and TRIR is 1.11.



Our cross-functional teams performed a detailed evaluation of 400 work tasks across Pharmaceutical Operations & Technology and Research & Development, and identified 57 critical tasks that could expose employees to serious injury or fatality (SIF) if controls are absent or not used. To reduce the risks associated with these essential activities, we pinpointed 92 action items and by March 2021 had already completed 39 of them. Completion of these actions will lead to the reduction of critical tasks.

### Engaging Employees

Our annual EHS Awards recognize exemplary employee efforts in four areas: safety, health & wellness, sustainability and resiliency. In 2020 17 projects and 35 employees were recognized with an EHS award.

A “Be Resilient” program winner was FIRST Forums, which launched in 2020 to support integrated working teams to mitigate risks, continuously improve and better understand operational trends and challenges. “Be Safe” winners enhanced safety with chemical storage upgrades, new walkthroughs to identify and address safety gaps, and COVID-19 protocols. Our “Be Sustainable” winners were celebrated for efforts such as selecting and creating environmentally responsible office spaces and making drug substance processes more sustainable. COVID-19 support circles, personalized coaching sessions and increased air filtration systems were some of the projects honored in our “Be Well” category.

These and other Workplace Health and Safety efforts are guided by our EHS Policy, which calls on all of us at Biogen to maintain a healthful and safe work environment and to minimize the impact of our operations on the environment.

[!\[\]\(f1c5da15572e3e09d343161be98f508d\_img.jpg\) READ OUR EHS POLICY](#)



# ENVIRONMENT

1<sup>st</sup> Fortune 500 company  
to commit to go

**FOSSIL  
FUEL FREE**

across operations **by 2040**



**100%**

renewable electricity

1<sup>st</sup> U.S. Biotech to join

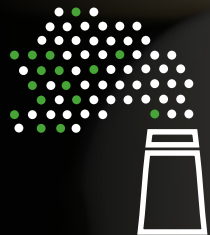
**BUSINESS  
AMBITION**

for **1.5°C**



**26%**

of suppliers by spend  
have, or committed to  
set, a science-based  
climate target



Collaboration with leading institutions to  
advance science of climate and health,  
including potential link between


**AIR POLLUTION  
and BRAIN HEALTH**

**500 EMPLOYEES**

across 15 countries joined ourIMPACT  
employee resource network to date



*Paul Blanchard, Senior Engineer, Facilities at Biogen, helps power the energy management program at our Cambridge operations, a key part to helping Biogen go fossil fuel free.*

 **Biogen**



# A YEAR OF FIRSTS IN CLIMATE, HEALTH AND EQUITY

In a year when some might have slowed environmental initiatives, we pursued firsts in climate, health and equity, launching our most ambitious environmental commitment to date.

Biogen is a science-based company that cares deeply for human health, and we recognize that urgent action is needed to address climate change and other environmental issues. Given the well-documented connection between the environment and human health, we focus on science-based efforts to mitigate any environmental and human health impacts and risks related to our business:

- Climate change
- Air pollution created by the burning of fossil fuels
- Water, specifically withdrawal from watersheds and release of treated wastewater
- Waste, with an emphasis on minimization and beneficial reuse
- Up- and downstream impacts related to resource usage, particularly plastics

We acknowledge the call from our investors to better understand Biogen's climate-related financial risks.

[➔ READ ABOUT OUR TRANSPARENCY AND DISCLOSURES REPORTING](#)

## SPOTLIGHT

### ADDRESSING ENVIRONMENTAL IMPACTS DURING THE COVID-19 PANDEMIC

In response to the COVID-19 pandemic in 2020, the majority of our office-based roles globally shifted to a work-from-home model while sales visits and business travel were halted or significantly curtailed. Our manufacturing operations continued uninterrupted in 2020 to ensure patients received therapies.

We estimate that operational changes in response to COVID-19 reduced our overall Scope 1 emissions by 6%, Scope 3 emissions and waste by 4% and water withdrawal by less than 1%. We saw an average energy reduction from our non-R&D and manufacturing sites of approximately 30%.

The reductions in greenhouse gas emissions from reduced office usage and employee commuting was offset by work-from-home related emissions (e.g., electricity and natural gas for computers, heating and cooling at home), which we calculated for the first time in 2020. To help mitigate these impacts, in 2020 we announced a new employee benefit, which will cover the cost of 100% renewable energy at home. At this time, the long-term impact from moving some jobs to a work-from-home model is unclear and is being closely monitored.

## HEALTHY CLIMATE, HEALTHY LIVES™

The connection between the environment and human health inspired us to accelerate our climate ambition in 2020 with new Science Based Targets initiative (SBTi)-approved goals. This informed the launch of our Healthy Climate, Healthy Lives™ initiative, which made Biogen the first Fortune 500 company to commit to fossil fuel free operations by 2040.

Healthy Climate, Healthy Lives is a groundbreaking \$250 million, 20-year initiative to eliminate our use of fossil fuels and to collaborate with key stakeholders to achieve climate targets and improve human health.

Fossil fuel emissions are at the heart of our strategy because they significantly impact human health by contributing to the climate crisis and to air pollution. Emerging data suggest air pollution may be a leading cause of death globally, claiming nearly 9 million lives each year, worsening the prevalence and severity of COVID-19 and potentially harming brain health.

[➤ READ MORE ABOUT THE IMPACT OF CLIMATE ON HUMAN HEALTH](#)

To address these issues, Healthy Climate, Healthy Lives provides a framework for Biogen to:

1. Eliminate the combustion of fossil fuels in our operations by 2040 in line with the global ambition to limit warming to 1.5°C.
2. Invest in green chemistry and a comprehensive Sustainable Drug Development paradigm, including circular economy principles around resources and wastes.
3. Align with our suppliers around new climate targets, as part of our broader responsible supply chain efforts.
4. Engage Biogen employees with new programs and benefits.
5. Collaborate with global leaders, working to influence climate policy to improve health outcomes, particularly for the world's most vulnerable populations.





“

**Biogen was the first company in the life sciences industry to become carbon neutral. We believe that it is time to take even greater action to address and impact dramatic health disparities among people around the world, as well as build a stronger, more sustainable future for all.”**

**Michel Vounatsos**

CEO, BIOGEN



Healthy Climate, Healthy Lives is sponsored by Executive Leadership and overseen by a cross-functional team of senior leaders who are accountable to the Board of Directors. Healthy Climate, Healthy Lives is the cornerstone of our overall sustainability program.

[➔ READ MORE ABOUT HEALTHY CLIMATE, HEALTHY LIVES](#)

### Progress Beyond Carbon Neutrality to Fossil Fuel Free

In 2014 Biogen became carbon neutral, achieved by matching 100% of our electricity with renewable electricity (via unbundled renewable energy credits) and retiring carbon offsets (from certified landfill gas to energy projects) against the remainder of our Scope 1, 2 and 3 emissions.

Following new guidance that avoided emission carbon offsets (i.e., offsets that still involve emitting activity as compared to a negative emitting activity, which are referred to as “negative emission carbon offsets/credits”) are not consistent with the Paris Agreement, Biogen reevaluated its carbon neutral strategy and moved away from carbon offsets in 2019. While our long-term objective is to become fossil fuel free, we may use both avoided emission and negative emission carbon offsets/credits in the short term as part of our overall climate strategy and our desire to have a positive impact.

2020 marked a transformative year in Biogen’s climate journey. We launched Healthy Climate, Healthy Lives; retired our 2020 carbon intensity target; and increased the ambition of our approved, science-based target: reduce absolute Scope 1 and 2 GHG emissions 55% by 2032 and 100% by 2040 from a 2019 base year. This new target is deemed consistent with reductions required to keep warming to 1.5°C, as outlined in the Paris Agreement, and is the most ambitious level set by the SBTi.

We achieved a 78% reduction in operational carbon intensity from 2006 to 2020, which fell just short of our target of 80%. This target was focused on energy efficiency and did not take into account our transition to renewable electricity. Although we did not meet the target, we are pleased with this significant reduction and are taking steps to promote further reductions in 2021.





In 2020 we reduced our absolute emissions by 11% compared to 2019 and 39% over the last decade. While this places Biogen ahead of schedule toward the 2032 target, we anticipate a small regression next year with increased office and sales fleet operation.

We achieved 100%<sup>1</sup> global renewable electricity for the seventh year in a row. More importantly, we began to shift toward more impactful purchasing. We entered into a two-year direct contract with the Harriman Hydro Plant in Readsboro, Vermont in September 2020 to support our Cambridge, Massachusetts headquarters and signed a direct contract with a hydro plant in Switzerland for our Solothurn biologics site, commencing in 2021. Additionally, we are evaluating options to secure a Virtual Power Purchase Agreement or contract with Duke Energy using the Green Source Advantage program for our North Carolina campuses.

[➤ READ OUR CLIMATE POSITION STATEMENT](#)

1 RE100 member Biogen has maintained its achievement of 100% renewable electricity across 30 of the markets in which they operate. In total, this equates to 99.9% of their global demand, with 0.1% remaining unmet in South Korea and New Zealand, where Biogen is facing barriers to sourcing RE in accordance with the strict RE100 criteria. We look forward to working with our RE100 members to improve supply in these markets.

“  
The breadth of Biogen’s initiative is striking. I am not aware of any other company that has pledged to go fossil fuel free across their entire global operations. While others are taking significant steps to get to net zero carbon emissions, Biogen is taking the next step by eliminating fossil fuel use in all aspects of its business. I applaud their ambition.”

**Bill Sisson**  
EXECUTIVE DIRECTOR, WORLD BUSINESS COUNCIL FOR SUSTAINABLE DEVELOPMENT NORTH AMERICA



# PROGRESS UPDATE

Although our fossil fuel free breakthrough initiative was launched less than a year ago, we’ve made significant strides across all areas of our organization. Many of the activities described in this year’s report are laying the groundwork for future progress and successes as we set out to achieve our aggressive climate targets.

## Fossil Fuel Free Operations Fleet

In 2020 Biogen committed to transitioning to an all-electric fleet by 2025, joined the EV100 partnership and engaged our fleet management partners to develop our EV roadmap. This included an expansion of our relationship with LeasePlan, a leader in the EV movement and EV100 member, in Europe.

Phase 1 of our EV transition is a pilot rollout across the U.S. and European affiliates with adequate EV availability and charging infrastructure. Biogen’s pilot program includes home charger installation with each vehicle, significant expansion of office charging and accounts with leading public charging networks. To achieve our fossil fuel free ambition, the program will match 100% of electricity consumed with wind-, solar- or hydro-generated electricity. In addition, Japan is exploring a pilot program and we expect this to expand in other global markets as rapidly charging infrastructure and charging availability will allow.

At the end of 2020, we had 12 battery electric vehicles (BEVs) and 41 plug-in hybrid electric vehicles (PHEVs) on the road with 49 office charging points across 10 sites. As of report publication, we also have 23 Tesla Model 3 or Ys on order. By the end of 2021 we are targeting 140 BEVs, or around 7% of the fleet. While PHEVs serve as a great interim approach to lessening reliance on fossil fuels, we aim to convert our entire fleet to BEVs to meet our target.

[➤ LEARN ABOUT BIOGEN PORTUGAL’S SUSTAINABLE TRANSPORTATION STRATEGY](#)

## Buildings

Eliminating the use of fossil fuels in our office buildings, manufacturing plants and R&D labs is a significantly larger challenge than switching to an all-electric fleet. We began to inventory our sites for fossil fuel usage in 2020 and will complete formal energy assessments in 2021 to help plan our long-term electrification strategy. We anticipate this strategy will combine energy efficiency activities, access to more renewables with better additionality, onsite energy generation and investments in electrification.

For example, in Baar, Switzerland, we selected an innovative office space. A dual-use heat pump, supplied with water from thermal piles, provided 85% of the annual energy demand for heating. Due to the reduced occupancy in 2020, 98% of the building's energy was fossil fuel free. We have engaged with other building tenants and the property owner to find even greater efficiencies so we can become 100% fossil fuel free even with full occupancy. In Australia, we significantly reduced our environmental footprint through design and materials choices and by moving to a new office in Sydney that received a 4-star Green Building Council of Australia rating and a 5-star rating (out of 6 stars) in the National Australian Built Environment Rating System.

We also are exploring solar and solar-battery projects at several sites. Although we already match 100% of our electricity with renewables, on-site solar will contribute green energy to the local grid. We also are integrating key concepts from Healthy Climate, Healthy Lives into our workplace and furniture standards and into our real estate framework.







## SUSTAINABLE DRUG DEVELOPMENT

Sustainable therapies are more likely when environmental criteria are evaluated early and throughout the development phase of a drug candidate's life cycle. Biogen is integrating green chemistry and other environmentally focused ways of working into our sustainable drug development mindset, which includes how we source our raw materials, to how we design our packaging, to how we operate our labs. This approach is not limited to traditional green chemistry programs in our labs, but is a modality-agnostic way of developing drugs throughout Biogen's robust and diverse pipeline.

### Green Chemistry

Green chemistry explores new ways to make drug development processes safer, more efficient and more sustainable while saving resources. A considerable portion of our energy, water and chemical usage and waste generation result from these processes. For years, Biogen has used the 12 Principles of Green Chemistry to improve our efficiency, economics and environmental impact.

[!\[\]\(b4eeff342f60cc7bcd67d869b4fedca2\_img.jpg\) SEE OUR SPOTLIGHT ON VUMERITY AS AN EXAMPLE](#)

In 2020 we committed to advancing innovation by establishing formal green processes and standardized metrics across all modalities and for every drug we develop. Our small molecule group began that process in late 2020 with other modality groups to follow in 2021.

Biosimilars is a growing component of our business, and we look forward to working with our collaboration partners to quantify the environmental impacts of our development and production to understand the impacts and prioritize areas for improvements.

### Packaging

Our global commercial device and packaging team has worked diligently over the past year to build out the packaging component of Healthy Climate, Healthy Lives. We are excited to announce four new packaging commitments, which we believe





will help reduce the life cycle impact of our packaging, from raw material extraction to disposal.

Biogen's 2025 Sustainable Packaging Goals include:

- Becoming PVC-free for all new finished goods packaging, with a plan to remove PVC from our legacy products.
- Phasing out plastic trays to pack our devices in all our new finished goods development.
- Reviewing packaging solutions of our full product portfolio and developing a roadmap toward more sustainable alternative materials for our legacy products.
- Developing collaborations with suppliers and CMOs to increase the proportion of sustainable material in our packaging systems and to increase the percentage of renewable energy to create/produce our packaging items (e.g., glass vials and cardboard).

## SPOTLIGHT

# VUMERITY™ – Maximizing Patient Health While Minimizing Environmental Impacts

The pharmaceutical and genetics industries are estimated to produce 15 billion kg of waste each year.<sup>1</sup> While Biogen has achieved zero waste to landfill, we also are accelerating our use of green chemistry to help address the challenges of waste and fossil fuel emissions.

“Green chemistry involves an environmental mindset and ultimately can bring multiple benefits,” said Erin O'Brien, Director of Technical Development at Biogen. “If we can make a treatment more sustainable, with less waste and faster processing time, we hope to free up funds for reinvestment into more sustainable practices and development of novel therapies.”

Employing the American Chemical Society's widely accepted 12 Principles of Green Chemistry,<sup>2</sup> Biogen improved the production process of VUMERITY, a Biogen therapy for patients with relapsing MS. Through strategies such as eliminating agents and combining steps, we are currently validating a process to:

- Reduce both solvent and reagent chemical usage and waste by 33%, meaning 12 kg fewer chemicals are used and disposed of per kg of drug substance produced.
- Reduce GHG emissions 43% from chemical production and disposal (166 kg CO<sub>2</sub>e per kg of drug substance).
- Reduce GHG emissions from chemical production and disposal for each metric ton of drug substance that are equivalent to growth of more than 2,750 tree seedlings for 10 years.

This approach also will cut production time for five tons of product from eight months to five months, while yielding the same quality end-product.

“At Biogen, we view green chemistry as an opportunity to create environmental, economic and social value. Caring about patient health holistically means considering inefficiencies and reducing waste, energy and emissions. And, the more efficient we can make the production process for one treatment, such as VUMERITY, the more time we can direct to exploring potential new treatments to address other diseases,” said Erin.

<sup>1</sup> Analysis and verification of VUMERITY results were calculated using the American Chemical Society Green Chemistry Institute Pharmaceutical Roundtable's Convergent PMI Calculator, American Chemical Society Green Chemistry Institutes Pharmaceutical Roundtable's LCA-PMI Tool (GCIPR members only) and third party review.



# SUPPLIER ENGAGEMENT

In 2020, we committed to developing a **Responsible Supply Chain Program** that will enhance our supplier risk assessment process and help evaluate the maturity of our suppliers' sustainability efforts. These assessments will enable us to help our suppliers address gaps in their programs and increase transparency in reporting across a range of responsibility efforts.

Our supply chain accounts for more than 85% of Biogen's GHG emissions. To address Scope 3 emissions, in 2020 we set two SBTi-approved supplier targets:

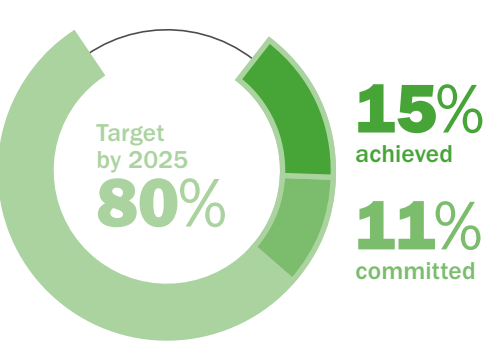
- 80% of supplier spend will be with suppliers who have set a science-based target (SBT) for reducing their climate impacts by 2025.
- 50% of supplier spend will be with suppliers who use 100% renewable electricity globally by 2030, increasing to 90% by 2040.

To advance our goal, we will focus on critical suppliers that represent approximately 80% of our spend and have a moderate to high carbon contribution. In early 2021 we engaged with six commercial manufacturing organizations, representing 5% of our total spend.

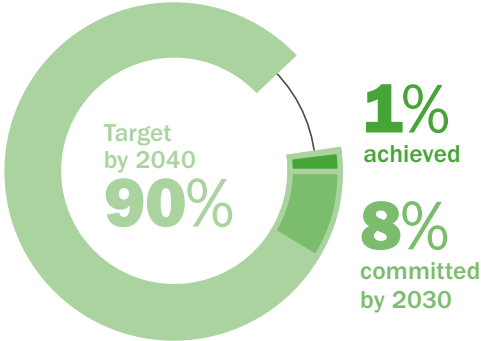
Biogen recognizes it is not the only organization pushing for renewable electricity and SBTs from its suppliers and believes the collective effort is paying off with 15% of our spend associated with suppliers with SBTs (and another 11% from suppliers committed to one). Achieving 100% renewable electricity across our supply chain is proving to be more challenging, as only 1% of our spend is currently toward suppliers achieving that level, with another 8% committed to it by 2030. We strongly encourage our peers to develop similar targets to help drive down Scope 3 emissions across the industry.

[➤ LEARN MORE ABOUT OUR BROADER COMMITMENT TO AN ETHICAL AND TRANSPARENT SUPPLY CHAIN](#)

Suppliers with science-based targets (SBTs)



Renewable electricity across supplier spend



## SPOTLIGHT CDP SUPPLIER ENGAGEMENT LEADERSHIP RATING

CDP evaluates companies' engagements with suppliers on climate change, recognizing that purchasing companies have the influence to incentivize significant environmental changes by their suppliers. Through these rankings, CDP aims to accelerate global action on supply chain emissions.

In 2020 Biogen received an A- on CDP's Supplier Engagement Rating Report, which indicates we are implementing supplier engagement best practices. This rating is in CDP's Leadership band, and ranks higher than the North American regional average of B- and above the biotech and pharma sector average of B-.



## SCIENTIFIC COLLABORATION AND ADVOCACY

Recognizing that organizations can make more rapid progress through collaboration, Biogen joins forces with global leaders to advance climate, health and equity. We are working to advance the science and action on these issues, influence policy and improve health outcomes, particularly for the world's most vulnerable populations. This includes:

- Working with the [MIT Joint Program on the Science and Policy of Global Change and the MIT Technology and Policy Program](#) to support the creation of new models of how different climate actions impact human health to deliver climate and health co-benefits. Insights will be used to bridge research-to-policy gaps, influence policy decisions and advance training of the next generation of scientists and leaders for far-reaching impact.

➔ [LEARN MORE ABOUT OUR WORK WITH MIT](#)

- Collaborating with the Harvard T.H. Chan School of Public Health's Center for Climate, Health, and the Global Environment (Harvard Chan C-CHANGE) to help under-resourced healthcare clinics address climate risks to improve operational resilience and improve patient health.

➔ [LEARN MORE ABOUT OUR WORK WITH HARVARD CHAN C-CHANGE AND COMMUNITY HEALTH CENTERS](#)

- Convening other leading global institutions, including World Business Council on Sustainable Development (WBCSD), World Economic Forum (WEF), the United Nations Global Compact (UNGC), Ceres, We Mean Business and The Climate Group to advocate for science-based progress at the intersection of climate, health and equity. For example, we are the first U.S. pharmaceutical company to join the [Business Ambition for 1.5°C](#). We also aim to catalyze progress in our sector via our work with BIO, Biopharma Sustainability Roundtable and the Pharmaceutical Environmental Group, among others.

In 2021 we joined over 230 companies in signing a letter to President Biden, initiated by We Mean Business and Ceres, that calls for the U.S. to adopt a target of at least 50% emissions reduction by 2030 to place the country on a credible pathway



“If climate change mitigation efforts are designed with people in mind, they can meaningfully improve public health and reduce the burden of disease.”

**Noelle Eckley Selin**  
PH.D., DIRECTOR OF THE  
MIT TECHNOLOGY AND POLICY  
PROGRAM

to reach net-zero emissions by 2050. We believe this bold goal will catalyze a zero-emissions future, propel a robust economic recovery and generate millions of well-paying jobs.

“Evidence suggests that air pollution can harm the brains of children and other vulnerable populations. Children living in highly polluted areas are more likely to have behavioral problems and slower development, and air pollution can affect their cognition and may even set their brains up for neurodegenerative disease later in life.”

**Dr. Aaron Bernstein**  
INTERIM DIRECTOR AT THE HARVARD CHAN C-CHANGE



## EMPLOYEE ENGAGEMENT

We create meaningful opportunities for our employees to become even more involved in going fossil fuel free at work, at home and in the community.

### ourIMPACT

In 2020 we launched ourIMPACT, a new global employee resource network dedicated to climate, health and equity. The mission of ourIMPACT is to create an engaged global grassroots community to generate new thinking, share best practices for personal sustainability and implement tangible ideas that advance the goals of Healthy Climate, Healthy Lives. ourIMPACT grew rapidly, and more than 500 employees in 15 countries have joined as members to date.

### Renewable Electricity at Home

We provide support to enable all Biogen employees to access and afford 100% renewable energy in their homes. In the U.S., Biogen is working with Arcadia to connect both renters and homeowners to wind and solar energy, including community solar. Outside of the U.S., Biogen subsidizes the premium of renewable electricity or matches their electricity usage with renewable energy credits.

As of April 13, 2021, 270 employees had enrolled, switching an estimated 2,700 megawatt-hours of electricity to 100% renewables, avoiding the release of 1,800 metric tons of CO<sub>2</sub> emissions. This is equivalent to the growth of more than 29,000 tree seedlings for 10 years.<sup>1</sup>

<sup>1</sup> [www.epa.gov/energy/greenhouse-gas-equivalencies-calculator](http://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator).



## SPOTLIGHT

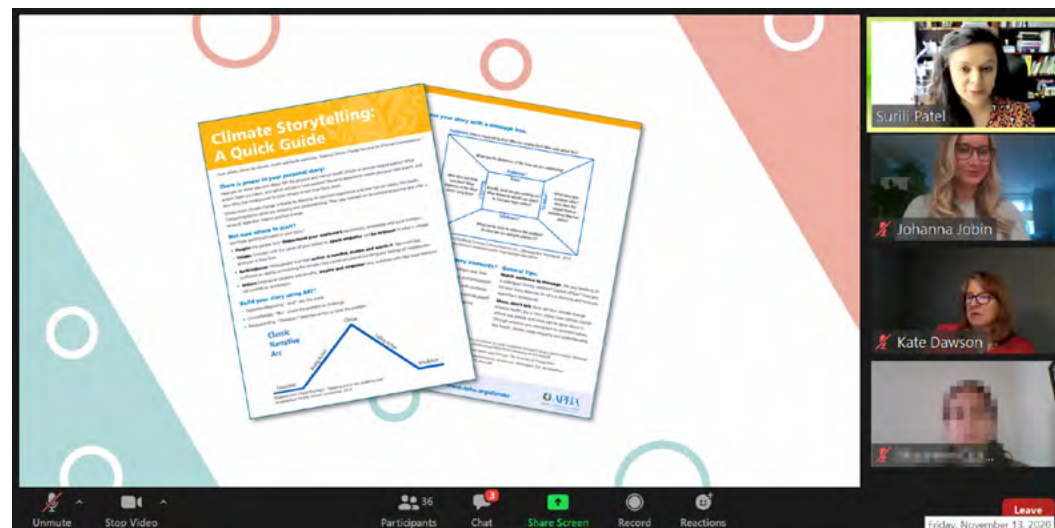
# Minimizing the Gap in Science and Health Education

As part of Healthy Climate, Healthy Lives, in 2020 we worked with the American Public Health Association (APHA) to launch a first-of-its-kind pilot curriculum to close the gap in climate and health education.

According to an **NPR/Ipsos survey**, more than half of teachers in the U.S. don't cover the climate crisis, even though more than 80% of parents and 86% of teachers think they should. The new curriculum is designed to provide a science-based overview of how the climate crisis impacts human health and insights into adaptation and mitigation strategies.

The APHA developed the curriculum with input from members and partners, including the National Institute of Environmental Health Sciences. Biogen trained 32 employees, including leading biotech scientists and engineers, to deliver the curriculum in 2020 to the first cohort of 400 high school students in North Carolina and Massachusetts, two locations where we live and work.

APHA gathered feedback from pilot participants to further refine the curriculum materials and will launch nationwide in 2021.



High school students participate in a pilot curriculum we created with the American Public Health Association to close the gap in climate and health education.

## Fossil Fuel Free Benefits

We understand the expense of switching to fossil fuel free alternative products can be a barrier; therefore, Biogen provides a financial incentive of up to \$500 to start the journey. In April 2021 we announced this benefit which allows employees to be reimbursed for products that meet the aim of Healthy Climate, Healthy Lives such as BEVs, electric heat pumps, geothermal heating systems, commuter bicycles and more.

## My Green Labs

Biogen worked with the not-for-profit organization My Green Labs to allow our scientists to engage and directly support the aims of Healthy Climate, Healthy Lives. Through this program, our scientists learn how to improve lab practices with respect to waste, energy, water and chemicals. In 2021 we will engage our first R&D and Product Development labs in Cambridge, Massachusetts, and Research Triangle Park, North Carolina, in the My Green Labs program.



## ADDITIONAL PROGRESS

### Air Pollution

In line with our commitment to climate, health and equity, we are disclosing air pollution emissions (NOx, SOx, CO, and VOCs) from our stationary combustion sources for the first time this year. To further enhance transparency, we will work to identify methodologies to calculate PM2.5 emissions from these same sources for future disclosures.

In 2020 we experienced and self-reported to the regulatory authorities 10 air permit emission exceedances. These all occurred at our Cambridge facility due to issues with the natural gas-fired cogeneration unit, which was subsequently refurbished in early 2021.

### Water

In 2020 we reduced our absolute water withdrawal by 10% (excluding the impact of the divestment of our former manufacturing site in Denmark) and increased our water recycling/reuse to 7% of total water use compared to 2019.

We aim for long-term sustainability in water usage, with a goal to withdraw less than our fair, just and proportional share of local water resources at our three major facilities. In 2019 the Center for Sustainable Organizations verified that each Biogen facility achieved this metric using its context-based assessment. As each facility lowered its water use in 2020, we are confident that we maintained this sustainable level of water withdrawal.

We will reassess facilities when warranted by facility growth or climate impacts on the watershed to ensure we maintain a sustainable level of water withdrawal. For example, we anticipate water use to increase in the future as our Solothurn biologics facility ramps up production.

From 2006 to 2020 we achieved a 72% reduction in operational water intensity, a significant achievement that nonetheless fell short of our target of 80%. Moving forward we will develop water targets with context as to the impact they have on the environment and society.

Since 2015 Biogen has utilized the World Wildlife Fund's Water Risk Filter tool to complete site water risk assessments. We leverage this tool to understand water risks at Biogen sites and among our critical suppliers. The Water Risk Filter also helps us understand how water risks will change under climate scenarios. Based on the water risk assessment, water scarcity is identified as a low risk at all our major facilities.

In 2020 we evaluated 264 of the most critical GMP supplier sites using the Water Risk Filter tool, and none was identified as potentially higher risk.

### Waste

In 2014 we established a zero waste to landfill target. In 2020 we reduced our total non-hazardous waste by 35% and hazardous waste by 5% compared to the prior year (excluding the impact of the divestment of our former manufacturing site in Denmark). We achieved 99% diversion from landfill, a slight shortfall relative to our target of 100%. The gap was due to a logistics issue with a waste stream at our North Carolina facility, which we are aiming to resolve in 2021.

In 2020 we included single-use and other plastics and packaging as key components of Healthy Climate, Healthy Lives in recognition of the need to maximize circular opportunities for beneficial reuse and recycling (i.e., use the waste hierarchy starting with elimination and reduction at the top followed by reuse, compost, recycle, waste to energy, incineration and ending with landfill).





### Management Systems

Our EHS management system is implemented in line with recognized international standards, including ISO 14001, 18001 and 50001. Every three years we have our management system externally audited to ensure our system remains relevant with evolving expectations. Our North Carolina sites continue to maintain their Carolina Star certification, and we may move forward with externally certifying our Solothurn biologics manufacturing facility to ISO 14001 and/or 50001 in the future.

[!\[\]\(4b7a79268f6ba26c1471d4232fffa85a\_img.jpg\) LEARN MORE ABOUT OUR COMMITMENT TO HEALTH AND SAFETY](#)



# COMMUNITY

**\$2.5 M**

in matched employee  
donations from the  
Biogen Foundation in 2020



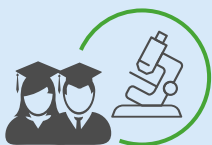
**~4,500**

volunteer hours  
globally in 2020



**57,000  
STUDENTS**

engaged in our STEM Community  
Labs since 2002 with a focus on  
underrepresented students



**\$18.9 M**

granted from the  
Biogen Foundation to  
100 organizations



Launched

**VIRTUAL  
COMMUNITY  
LAB**

teaching STEM  
in 3 languages



**\$10 M**

investment in a  
STEM ecosystem in  
Massachusetts helped  
reach 365+ teachers  
and ~3,000 students  
since 2018



*Alazar Ayele, Corporate Responsibility Manager, helped start the Biogen Foundation's and Massachusetts General Hospital's Youth Neurology Education and Research Program, helping to inspire underrepresented students in neurology.*



# HELPING NEIGHBORS IN NEED AND INSPIRING THE NEXT GENERATION IN SCIENCE

Biogen cares deeply about creating a healthier, more equitable world by supporting our neighbors in need and engaging the next generation in science, a commitment that spans the globe.

## PROVIDING PANDEMIC RELIEF GLOBALLY

Through our corporate giving, the Biogen Foundation and the dedication of our employees, we helped our neighbors through the challenges of the pandemic, promoted diversity and inclusion, and launched new programs to inspire the next generation of scientists.

The COVID-19 pandemic has taken a personal toll on communities where we live and work, and Biogen immediately stepped up to make a difference.

In 2020 the Biogen Foundation committed approximately \$12 million to support COVID-19 relief efforts around the world, funding organizations providing food and other immediate humanitarian relief, expanding testing capacity and easing the burden on healthcare systems. We were among the first to respond, and several nonprofits reported that Biogen's early contributions helped catalyze additional funding.

As community needs evolved, so did our corporate and Foundation response. The Biogen Foundation donated to more than 82 organizations across 35 countries. In Q1 2021 we already have committed an additional \$2.3 million.

On the international level, we provided the International Medical Corps with one of its first grants to mobilize training and COVID-19 testing, and to purchase personal protective equipment (PPE) for countries in need, in collaboration with the World Health Organization.



The Biogen Foundation funded organizations across Asia Pacific, Europe and the Americas. We helped procure PPE and supplies for healthcare services, supported people who have lost employment, supported funding for hotlines for people seeking emotional support, and responded to a variety of other local needs.

In the U.S., we supported the CDC Foundation to help expand access to COVID-19 testing and treatment, with a focus on the most vulnerable. To address the rise in food insecurity, we also supported Feeding America to help deliver needed nutrition to communities across the country. In our headquarters community of Cambridge, Massachusetts, we helped Partners in Health expand testing for essential health workers who serve elderly clients, and in North Carolina, we helped CareMessage provide mobile phone-based educational outreach to low-income, at-risk patients, to promote vaccine awareness and information.

Our COVID-19 support extended beyond financial relief. In April 2020 in collaboration with the Broad Institute of MIT and Harvard and Partners HealthCare, we formed a consortium to build and share a COVID-19 biobank. Through the biobank, Biogen employees, family members and other close contacts contributed blood samples and medical data to aid efforts to rapidly understand and overcome COVID-19.

We also appreciate the generosity of Biogen employees, who together donated more than \$300,000 for COVID-19 relief in response to the first wave of the pandemic alone – which the Biogen Foundation matched two-for-one.

Biogen employees also quickly mobilized to bring our world-class Community Lab programs online, preventing the pandemic from interrupting education. (Read more about our virtual Community Lab programs below.) We also provided in-kind donations of PPE, including **3D-printed face masks** for healthcare workers in North Carolina and Massachusetts, donating an estimated \$60,000 in personal protective equipment.

[➤ LEARN MORE ABOUT OUR SUPPORT FOR GLOBAL COVID-19 RELIEF](#)

## SPOTLIGHT

# Using Mobile Technology to Promote Health Equity

To help promote health equity, the Biogen Foundation supported CareMessage, the largest patient engagement platform in the U.S., which equips at-risk communities with access to accurate healthcare information using basic text and voice messages – key to reaching people who don't have broadband.

Black, Latinx and Native American communities represent 31% of the U.S. population, yet make up 60% of patients served at community health centers. These resource-constrained safety-net organizations need low-cost ways to connect with patients to facilitate care.

During the pandemic, community health centers have relied on CareMessage for COVID-19 prevention and vaccine education, coordination

of testing and vaccinations, and telehealth services, in addition to continuity of ongoing care. CareMessage has sent more than 20 million COVID-19-related messages nationwide.

In North Carolina, Biogen Foundation support is helping 10 additional safety-net clinics connect with an additional 50,000 patients to provide accurate vaccine information and to address social determinants of health, including food, shelter and health insurance. The mobile tool also helps “close the loop” with real-time patient updates that can help promote health compliance and improve health outcomes.

We are proud to support CareMessage and other organizations around the world that are promoting health access and strengthening healthcare systems.



## SPOTLIGHT

# \$18.9M in Grants for Communities Around the World



In 2020, the Biogen Foundation granted \$18.9 million to 100 organizations, providing food to families in need; advancing STEM education; and strengthening healthcare systems by purchasing essential supplies for frontline workers, expanding telehealth programs and supporting the well-being of vulnerable communities around the world.



## CARING DEEPLY: CORPORATE COMMUNITY ENGAGEMENT

Biogen cares deeply about human health and wellbeing, and we dedicate significant financial support to advance these and other issues through corporate initiatives that include grants and sponsorships, medical research, Community Labs, paid time off for employees to volunteer and other forms of in-kind giving.

### Corporate Grants and Sponsorships

Our corporate giving aims to catalyze scientific innovation, address unmet patient needs, advance medical and disease education, and promote diversity, equity and inclusion (DE&I). In 2020 our corporate giving included more than \$72.4 million in grants and sponsorships.

Biogen grants also support medical and patient education and educational fellowships, and they strengthen healthcare infrastructure. In addition, the Biogen Foundation provided several grants and matched employee gifts.

[➤ LEARN MORE ABOUT OUR CORPORATE GIVING](#)

### WORKING TO END FOOD INSECURITY

Biogen promotes health, equity and access through in-kind support that ranges from meaningful product donations to the use of physical spaces. Biogen helped Food For Free establish its first commercial kitchen, allocating 500 square feet of prime real estate in our Cambridge, Massachusetts headquarters to help nourish our neighbors in need. In 2020 that was equivalent to an in-kind donation of \$26,750.

In 2021, Life Science Cares Boston and the Biogen Foundation teamed up as inaugural sponsors of Food For Free's new Just Eats Grocery Box program, an effort to reduce food insecurity for 3,000 area families.

[➤ READ MORE ABOUT OUR SUPPORT OF FOOD FOR FREE](#)



## SPOTLIGHT

# Biogen Scientist Helps Lead Effort to Open COVID Vaccination Center in UK



Dr. Mahesh Varsani, Associate Director of Analytical Development, Biogen.

For 15 years, **Dr. Mahesh Varsani**, Associate Director of Analytical Development at Biogen, has been a trustee at his Mandir, or Hindu temple, which is located in a predominantly Black, Asian and minority ethnic (BAME) community in London that has been disproportionately affected by COVID-19.

When local doctors approached Varsani about using the Mandir as a vaccination center, the Mandir's Board quickly agreed, opening in January 2021 as

a first-of-its-kind COVID-19 vaccination center in the U.K. "I was able to recommend and approve use of the premises free of charge, and help with any legal logistics," said Varsani.

The center aims to immunize more than 1,300 people a day, with members of the Mandir community volunteering to provide IT, logistics and visitor stewardship.

➔ [READ MORE ABOUT DR. VARSANI'S EFFORTS](#)



© MAHESH VARSANI

London's Mayor and Deputy Mayor offered their support to the vaccination center in a recent visit. From left: Deputy Lord Mayor of London Rajesh Agrawal, Dr. Mahesh Varsani, Mayor of London Sadiq Khan.

In addition, Biogen sponsors a range of programs and events, including in 2020 a focus on Alzheimer's support as well as hands-on science experiences and education:

- In October 2020 we proudly sponsored Seth Rogen and Lauren Miller Rogen's Hilarity For Charity (**HFC**) **first virtual fundraising event**. It raised \$325,000 to provide free, in-home care relief and online support to Alzheimer's caregivers, and funding to brain-health education and Alzheimer's-prevention research.
- In 2021 Biogen awarded Bolden Therapeutics and Seranova Bio with Biogen Golden Tickets, an **initiative** offering promising winning startups one year of access to state-of-the-art lab facilities at LabCentral along with Biogen mentorship.

## Medical Research

Biogen supports medical research that advances scientific knowledge of disorders relevant to our therapeutic portfolio, with a focus on **Investigatory-Initiated Trial (IIT) and Sponsor Research Agreements**.

## Community Lab

Opened in 2002, Biogen's Community Lab is the longest-running, hands-on corporate science lab in the U.S., serving as the model for a growing number of similar initiatives in the biotech community. Biogen's Community Labs are state-of-the-art laboratory classrooms that offer free interactive science activities for middle and high school students, rigorous summer programs and teacher professional development to inspire the next generation of science, technology, engineering and math (STEM) leaders.

The U.S. locations in Cambridge, Massachusetts, and Research Triangle Park, North Carolina, have served more than 57,000 students to date, with the North Carolina lab recently reaching its 10,000<sup>th</sup> student.

➔ [READ MORE ABOUT COMMUNITY LAB](#)

In 2020 Biogen expanded our Community Lab to new international locations and launched a Virtual Summer Lab with MIT to ensure continuity of education.

### Sustaining Education During the Pandemic

As COVID-19 created temporary Community Lab closures, Biogen employees found solutions. We teamed up with leading institutions to create the [Virtual Community Lab](#), a hub where students, parents and teachers accessed free scientific content, tutorial videos of science experiments that can be done at home and other engaging educational materials.

Despite the pandemic, in 2020 we still served nearly 1,545 U.S. students, and 165 teachers participated in our professional development training sessions, all possible thanks to our 110 volunteer educators.

### Community Lab Program Goes Virtual

When the school year finishes, Community Lab continues with our Adventures in Biotechnology High School Lab Program in the summer. Since 2002 we have offered students the opportunity to come to Biogen to conduct a hands-on lab project, meet and interact with biotech professionals and get an inside view of a biotech company.

With COVID-19 impacting in-person learning opportunities, for our 2020 summer program, we collaborated with the Lemelson-MIT Program (LMIT) to launch the [Biogen-MIT Biotech in Action: Virtual Summer Lab](#). This virtual lab offered 400 Massachusetts

### SUPPORTING DEMOCRACY

In defense of democracy, Biogen [released a statement](#) noting that we support the right to vote and oppose discrimination or action that could prevent equal opportunity to cast a ballot.

We stand with those who have spoken out against both proposed and enacted changes to election laws in several U.S. states. As additional state capitals weigh more proposals, we want to be absolutely clear that governments must ensure free, fair and equitable voting access to all eligible citizens. Every American must have a voice in our democracy and states must comply with Constitutional principles.

**Biogen believes there is a strong link between racial equity and democracy. It's one of the reasons we reinforce our employees' civic participation.**

Biogen encourages election participation via voting education for employees and gives paid time off to vote or volunteer at the polls. Voting is central to a just society, and that's why we joined the nonpartisan Civic Alliance, which shares our belief that every American should shape our country.

Biogen



### SPOTLIGHT

## FRANK VOGGENREITER BRINGS COVID-19 RELIEF FROM GERMANY TO A SMALL HOSPITAL IN EL SALVADOR

Frank Voggenreiter is a founding member of [Vamos Deutschland](#), a small Munich-based nonprofit that funds projects in El Salvador. Frank puts his skills as Biogen's associate director of Global Commercial Training to good use on [Vamos Deutschland's](#) board, tackling tasks ranging from finance to project planning to development. The funds the organization provides have never been needed more.

One of [Vamos Deutschland's](#) largest projects is supporting a small hospital that serves impoverished patients on San Salvador's outskirts. In 2020 Frank created online ads to raise funds for the hospital's COVID-19-related costs, such as disinfection and safety equipment, projects all managed by locals.

Through Biogen's International Community Currency Program, Biogen contributes funds for every hour Frank and other employees volunteer, providing [Vamos Deutschland](#) with another source



© VAMOS DEUTSCHLAND

Many Biogen employees supported COVID-19 relief efforts, including support for childcare programs in El Salvador.

of needed funds. The program allows volunteer work to be translated into donations that employees can direct to a charity of their choice. And, as he has for the past 25 years, Frank chooses [Vamos Deutschland](#).

and North Carolina high school students firsthand experience in biotechnology with leading scientists at Biogen and MIT. The program was free, with preference given to students from low-income households and groups historically underrepresented in STEM. Students also were recruited from several Biogen Foundation grant recipient programs, including the STAR Initiative. [See page 86](#)

Each five-week-long program engages 80 student participants, and we reached 400 students in 2020, 54% from low-income households. They engaged with celebrated scientific experts, such as 3D printer co-inventor Michael Cima; interacted with a Parkinson's disease patient; and used Labster, a virtual

## SPOTLIGHT

# Alazar Ayele Awarded Inaugural Immigrant Leadership Award

For six years, **Alazar Ayele** has been a leader in **Biogen's Cambridge Community Lab** and corporate responsibility program where he collaborates with community organizations to introduce students to STEM careers. One of those organizations, **Enroot**, awarded Alazar with its inaugural Immigrant Leadership Award.

"Enroot is focused on developing students, which is the core of what we do in the Community Lab both in Cambridge and North Carolina. With Enroot, it's not only about STEM education, but illuminating what is possible for these students by introducing them to people who

look like them and have personal journeys like theirs who have pursued a career in STEM," shared Alazar. "I want them to look at me and other immigrants working in STEM careers and think 'I can do that, too.'"

"Being identified as an immigrant leader isn't something you think of yourself as, but then people ask you where you are from it makes you reflect on who you are. I'm the 7-year old boy who got on a plane with my family and came to the U.S. because my parents had hope. So, this particular award isn't just about me, it's about my family also."



Biogen Community Labs are designed to inspire students with STEM education.

science lab where students perform simulations around real-life scenarios. As a final project, students either conceived an invention to help patients with a neuro-degenerative disease or identified a potential scientific breakthrough.

In 2021 we took the Community Lab program international so students across the globe can access Community Lab programs. These pilot programs are taught in English and live translated into Spanish and Portuguese.

## How Biogen is Tackling Food Insecurity

As Narumi Daikai experienced firsthand through her volunteer work, food insecurity is a global concern, and particularly problematic for underserved patients who need quality nutrition to promote health and wellbeing. As one effect of the COVID-19 pandemic, an additional 200 million people face food insecurity, according to the United Nations – on top of the estimated 2 billion who faced some degree of food insecurity prior to 2020. [See page 83](#)

In response to this growing humanitarian crisis, in 2020 the Biogen Foundation donated nearly \$3 million to organizations around the world to help continue to combat food insecurity and inequity.

For example, the Biogen Foundation supported the Greater Boston Food Bank's **Hunger Free Holidays**, Feeding America and announced in February 2021, Food For Free's **Just Eats** program, which committed a total of \$170,000 to reducing food insecurity for 3,000 families in Cambridge, Somerville and Boston, Massachusetts.

The Biogen Foundation also supported the Food Bank of Central & Eastern North Carolina, which serves 34 counties across the Tarheel State. The Foundation's longtime support was perhaps never needed more than during the challenges of 2020.

In Germany, the Biogen Foundation helped support Tafel Deutschland in its mission to "rescue" quality food that otherwise would be wasted and use it to promote nutrition for those in need. The nonprofit supports 1.6 million people in need



of food throughout Germany, and the grant is one example of the Biogen Foundation's commitment to food and nutrition security around the world.

### Employee Community Engagement

Biogen employees generously dedicate time and expertise to meaningfully contribute to our local communities.

In 2020 we expanded our employee matching gift program to all employees outside the U.S., and evolved Care Deeply Day, our annual day of service, to provide greater flexibility and promote health and safety around COVID-19. Offering employees the opportunity to take paid time off work to volunteer on the day of their choice, we came together to celebrate Care Deeply Every Day. Employees tended gardens, picked up trash, recorded online stories for youth educational purposes and more, both in person and online. More than 347 employees representing eight countries logged 4,370 volunteer hours at various service projects in 2020.

In the U.K., we helped Link Foundation provide families in need with everyday essentials such as mattresses, sheets and bedding, school uniforms and shoes. At publication, this Easter Charity Initiative had raised more than \$5,000 with the help of the Biogen Foundation match.

Our German affiliate held four virtual engagements and two office engagements, aligned with COVID-19 safety precautions. In total, 83 employees participated, almost twice as many as in 2019. German colleagues produced more than 160 heart-formed pillows for breast cancer patients; read and recorded more than 20 dementia stories for seniors and 24 bedtime stories for children; provided virtual job application training to 13 young refugees; and built a total of 10 bird nesting boxes and four insect hotels.

The Biogen Foundation also matches Biogen employee gifts to nonprofit organizations, up to \$25,000 per employee, per year. In 2020 the matching grant program contributed \$2.5 million to worthy organizations ranging from those fighting disease to those promoting racial justice to those providing disaster relief.

## SPOTLIGHT

# Patient Advocacy Manager Tackles Food Insecurity One Volunteer at a Time

Narumi Daikai, Manager of Patient Advocacy in Japan, cultivated her love of volunteering while working in the U.S. as a registered nurse.

"A colleague of mine told me about a family who had no food or presents for Christmas, and how heartbroken that it made them feel," Narumi recalls. "That's what fueled me to help give back to the community in any way that I could."

Narumi took this passion for volunteerism back to Japan, where she connected with others who had a similar desire to give back to the community. It started simply. She gauged interest with colleagues

and provided her colleagues a list of items to use to fill care packages with food, hygienic items and other essentials.

Together, employees sent 60 kits to Second Harvest Japan, the country's only nationwide food bank.

"Second Harvest Japan and the families they helped were all so appreciative of all the employees' kindness," Narumi says. "Many recipients sent thank-you cards and, most touchingly, also sent photos of their happy families."



Narumi Daikai, Manager of Patient Advocacy, Biogen Japan.

Proudly, in 2020, through employee contributions and Biogen Foundation 2-1 match donations, more than \$440,000 was given to programs that promote racial equity and LGBTQ+ rights. During Alzheimer's Awareness Month in November, our employees helped Team Biogen raise over \$25,000 for the Alzheimer's Association Walk to End Alzheimer's®.

## SPOTLIGHT

### REACHOUT VIRTUAL EVENT ENGAGES EMPLOYEES IN SUPPORT OF LGBTQ+ EQUITY PROGRAMS

June is celebrated as Pride Month in many countries, and in 2020 Biogen hosted ReachOUT, a company-wide global virtual event to fundraise for four organizations making a difference in the Black and LGBTQ+ communities. The two-hour live Zoom included remarks by Biogen leadership; live entertainment; and 1,269 messages of positivity, love and support shared through the chat function. Employee participation was extremely strong, with 502 participants from 14 countries, and together employees and Biogen raised a total of \$23,895 for LGBTQ+ equity programs.

Both the Pride and Black Lives Matter movements were co-founded by people identifying as Black/ African American and/or LGBTQ+, and both are united in a commitment to fight systemic discrimination. At Biogen, we support organizations that strengthen this commitment, including those that address Black health disparities and promote trans health and human rights for LGBTQ+ communities. Biogen supports the following organizations with PRIDE:

- **The National Black Justice Coalition**  
A civil rights organization dedicated to the empowerment of Black LGBTQ people and people living with HIV/AIDS, with the mission of ending racism and stigma toward LGBTQ people.

- **Black Trans Advocacy Coalition**  
A national organization led by Black trans people to collectively address the inequities faced in the Black transgender human experience.
  - **OutRight Action International**  
A nonprofit that fights for human rights for LGBTIQ people everywhere. OutRight works at the international, regional and national levels to research, document, defend and advance human rights for LGBTIQ people around the world.
  - **ILGA-World**  
A worldwide federation of more than 1,600 organizations from over 150 countries and territories campaigning for lesbian, gay, bisexual, trans and intersex human rights.
- [LEARN MORE ABOUT HOW WE'RE HONORING OUR INTERSECTIONAL PRIDE](#)



## Engaging Stakeholders

Biogen takes a stakeholder-based approach to corporate responsibility, listening to external perspectives and incorporating stakeholders' feedback into many aspects of our work. We engage a variety of external groups, including:

- Patient Advocacy Organizations
- Biotech and Pharmaceutical Industry Associations
- Healthcare Organizations and Professionals
- Government Bodies and Regulators
- Community and Non-Governmental Organizations
- Universities, Research Institutions and Centers of Higher Learning
- Investors and Venture Capital
- Local and Regional Business Associations

Addressing issues on the global stage as well as hyper-local concerns, we are an active member of a growing number of organizations. Sample stakeholder groups include:

- Biotechnology Innovation Organization (BIO)
- Biopharma Sustainability Roundtable
- Ceres
- Environmental League of Massachusetts
- Harvard T.H. Chan School of Public Health, Department of Environmental Health
- Harvard T.H. Chan School of Public Health, Center for Climate, Health, and the Global Environment
- Kendall Square Association
- MassBioEd
- Massachusetts Institute of Technology: Joint Program on the Science and Policy of Global Change, Technology and Policy Program, Lemelson-MIT Program
- Pharmaceutical Research and Manufacturers of America (PhRMA)
- United Nations Global Compact
- We Mean Business
- World Business Council for Sustainable Development
- World Economic Forum

## CHANGING LIVES: BIOGEN FOUNDATION

In 2020 the Biogen Foundation donated a total of \$18.9 million to pandemic relief and our two core focus areas: science education and strengthening our communities by supporting essential human services for children and their families in the communities in which we work and live.

The Biogen Foundation is deeply committed to sparking a passion for science and discovery, supporting effective science education initiatives, and strengthening efforts to make science education and science careers accessible to diverse populations. Most of all, we want young people to know that through science they have the ability to change the world. To realize this goal, the Biogen Foundation supports organizations that focus on four areas: providing access to hands-on science education, teacher development in science, college readiness and support, and basic social needs (i.e., child hunger, poverty and social mobility).

In addition, through December 2020, the Biogen Foundation donated more than \$12 million in grants to support COVID-19 relief efforts, assisting more than 82 organizations across 35 countries. The donations focused on expanding testing options, easing the strain on medical systems and supporting access to necessities like food.

In 2020 the Biogen Foundation donated \$4.3 million to worthy organizations ranging from community services organizations to science education and teacher development programs.

- In North Carolina, the Biogen Foundation has supported the North Carolina Science Festival for 11 years. In 2020 the event attracted approximately 456,000 curious minds and pivoted to a virtual format, advancing its mission of “making science for all.”

- The Biogen Foundation has been among the sponsors of Red Sox Scholars since the 2016-2017 school year, providing scholarships; mentorship; and academic, professional and social opportunities to young people from 7th grade through college graduation and beyond. In 2020 for the third consecutive year, 100% of 12th grade Red Sox Scholars graduated from high school and enrolled in a 2- or 4-year college. In the challenging year of 2020, no scholars dropped out of a higher education program for personal or financial reasons.
- Since 2014, the Biogen Foundation has supported Technorama, Switzerland's only science center, which offers hands-on experiences that inspire enthusiasm for science and technology. Our sponsorship enables Technorama to develop workshops, operate seven days a week and increase teacher training. Thanks, in part, to Biogen's support, in 2020 Technorama safely welcomed 17,200 people, with 15,120 open lab visitors and 2,080 workshop participants.
- In Munich, the Biogen Foundation collaborates with the Science Lab Project to promote science education among elementary school students from disadvantaged backgrounds. By the end of 2020, the program had reached more than 13 schools, close to 200 teachers and 2,200 students. Biogen and Science Lab will continue this successful program in 2021, working closely with the city of Munich.

In 2020 Biogen received a Champions for Biotechnology Education Award from Massachusetts Biotechnology Education Foundation for our commitment to sparking a passion for science and discovery, supporting effective science education initiatives, and strengthening efforts to make science education and science careers accessible to diverse populations. Also in 2020, we were recognized as one of the top charitable contributors in Massachusetts by the Boston Business Journal and in North Carolina by the Triangle Business Journal.





## SPOTLIGHT

# The Biogen Foundation's STAR Initiative Celebrates Second Year

Continuing Our Focus on Racial Equity and Successfully Pivoting to Help Students and Families During COVID-19

The Biogen Foundation's STAR Initiative (Science, Teacher support, Access & Readiness) was created to strengthen STEM education ecosystems for middle and high school public school students in Cambridge and Somerville, Massachusetts. The coordinated funding strategy, launched in 2018 with an investment of \$10 million over 4 years, is helping increase access to STEM resources and opportunities for students most historically underrepresented in STEM college or career pathways – notably, students of color.

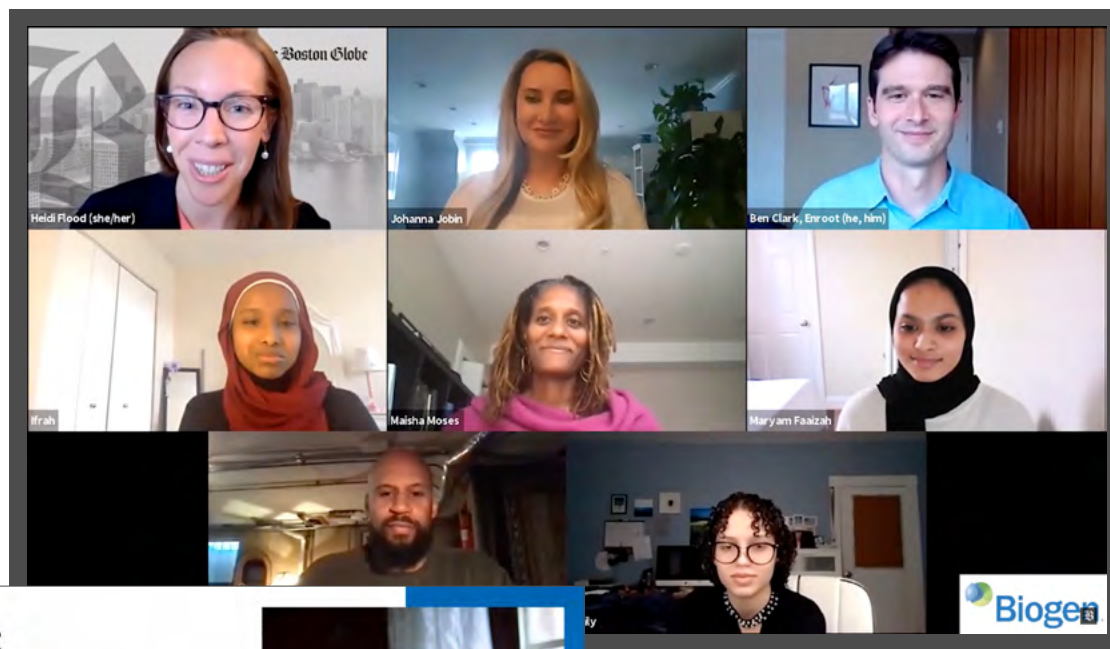
In a year when persistent racial and ethnic inequities rose to the forefront of our collective consciousness, and the pandemic emphasized these inequities through its disproportionate impact on people of color, the STAR Initiative's work seemed particularly important. As COVID-19 forced schools and nonprofits to quickly adapt to engage students, particularly those already at risk of falling behind, STAR grantees demonstrated resilience through rapid collaborations that enabled programs to support students throughout school closures.

In 2020 the STAR Initiative served more than 1,500 students: 98% students of color, 82% low-income, and 50% English Language Learners. STAR also provided more than 250 teaching fellows and educators with professional development support.

➤ [FOR MORE DETAILS ABOUT GRANTEE PROGRESS, READ OUR STAR INITIATIVE YEAR 2 ANNUAL REPORT](#)

In 2021 the Biogen Foundation has continued to support grantees to meet rapidly changing needs and plans to expand this program to Research Triangle Park, North Carolina, where we have a major manufacturing facility.

➤ [HEAR FROM STUDENTS AND STAR GRANTEE DURING BIOGEN'S EVENT WITH THE BOSTON GLOBE ON ADDRESSING RACIAL INEQUITY IN STEM EDUCATION](#)



Alongside the Boston Globe, Biogen and the Biogen Foundation brought together STAR Initiative students and grantees, with Massachusetts Lieutenant Governor Karyn Polito, for a dialogue on STEM equity.

“This group is a wonderful source of inspiration and is well positioned to make change in the field at a time when the status quo should no longer be an option.”

STAR INITIATIVE GRANTEE, LESLEY UNIVERSITY

### Collaborating With the American Public Health Association on Climate and Health Education

In collaboration with the American Public Health Association (APHA), the Biogen Community Lab piloted a high school curriculum on climate change and its effects on human health.

The new curriculum is designed to prepare today's young people for a rapidly-changing world by providing a science-based overview of how the climate crisis impacts human health and insights into adaptation and mitigation strategies. The effort is designed to help minimize the gap between science and health education.

APHA developed the curriculum with input from members and partners, including the National Institute of Environmental Health Sciences. The Biogen Foundation provided support and Biogen trained its employees to deliver the curriculum to the first cohort of high school students in North Carolina and Massachusetts. The pilot is expected to engage hundreds of students around timely material delivered by experts who have careers in science.

### Inspiring the Next Generation of Neurologists

The Biogen Foundation helped catalyze the Massachusetts General Hospital Youth Neurology Education and Research Program, which aims to advance health equity and scientific innovation by building a diverse pipeline of future neuroscientists and neurologists with strong leadership skills. It engages youth from communities underrepresented in neurology, with a focus on female, Black, Latinx, American Indian and low-income high school and undergraduate students in Massachusetts.

In 2020, 31 student interns participated in interactive learning with a diverse group of neuroscientists; enjoyed mentored research opportunities; and translated their lived experiences into scientific abstracts, publications, and community service. In addition, the weekly INSPIRE virtual speaker series reached 350 students.

To adjust to the pandemic, the program offered virtual STEM Career Interactive chats and projects with neurology and neuroscience professionals. Mentors at Massachusetts General



Hospital and Biogen utilize interactive video to keep youth engaged with meaningful mentored academic experiences related to basic, translational, clinical and health services research.

Every year, the Biogen Foundation supports access to science education for diverse populations and access to essential human services for children and their families through financial, expertise and service contributions. Our results are possible through the strategic collaborations we have with nonprofits; the devoted engagement of our employees; and the openness, interest and curiosity of the very people we aim to reach.

[➔ LEARN MORE ABOUT THE BIOGEN FOUNDATION](#)



# REPORTING

Biogen is committed to ESG transparency, and for the first time is disclosing data that includes:

## AIR POLLUTION EMISSIONS

(NO<sub>x</sub>, SO<sub>x</sub>, CO, and VOCs)



## EEO-1 DATA



## GLOBAL PAY

equity data

## WORKFORCE

data breakdowns



Biogen's next generation manufacturing facility in Solothurn, Switzerland (expected to be partially operational during the first half of 2021), will produce up to 10 metric tons of antibodies per year, helping provide meaningful therapies to patients with serious medical conditions around the globe.



# REPORTING

Transparency is a critical part of our ongoing collaboration with key stakeholders, helping to build a community of trust and respect with healthcare professionals, patients, industry peers, stockholders and the public. Biogen is committed to transparency and disclosure of issues that are material to the business and of interest to our stakeholders.

Since 2009 Biogen has conducted materiality assessments every two to three years to identify and prioritize environmental, social and governance (ESG) issues, a process informed by the Global Reporting Initiative (GRI) Principles for Defining Report Content. Since 2013 we have been reporting in accordance with the internationally recognized GRI framework.

The 2020 Year in Review contains data from calendar year 2020. In some instances, we include information on initiatives or activities that began in 2020 and continued into 2021. This report was prepared in accordance with the GRI Standards Core option and aligns with the Sustainable Accounting Standards Board (SASB) guidelines. It was informed by the Task Force on Climate-related Financial Disclosures (TCFD); the United Nations Sustainable Development Goals (SDGs); and the Stakeholder Capitalism Metrics, published by the International Business Council of the World Economic Forum in 2020. Please refer to the [ESG Data Table](#) and [SASB & GRI Content Indices](#) to see which material aspects and relevant indicators are reported and how we track our efforts in alignment with the United Nations SDGs.

The SDGs are composed of 17 goals and 169 associated targets that incorporate the economic, social and environmental dimensions of sustainable development. At Biogen, we support all 17 goals and encourage all businesses to consider how they may contribute. We continue to refine our corporate responsibility (CR) strategy to align with the SDGs most relevant to our business.

In addition, as a signatory to the UN Global Compact (UNGC), we are committed to operating our business in alignment with the 10 principles of the UNGC. Our 2020 Year in Review serves as our annual UNGC Communication on Progress.

Data in this report covers our worldwide operations, including consolidated subsidiaries, but excluding joint ventures. Our operations in 2020 encompassed our major facilities in Massachusetts, North Carolina and Switzerland. The boundaries also include our global offices and our commercial fleet operations. The scope of environmental data presented in this report includes operations over which we have operational control.

ERM Certification and Verification Services, Inc. (ERM CVS) assured the 2020 data for a number of indicators, including GHG emissions and select environmental and social indicators. See the [Independent Assurance Statement](#) for full details of the assurance scope, assurance standards used, work undertaken and conclusions, and reference the [ESG Data Table](#) for assured data (bolded 2020 data points have been assured).

We are committed to continuous improvement and intend to listen to and learn from our stakeholders to deepen our understanding of the issues they care about as we strive to advance the transparency around our ESG efforts.



United Nations  
Global Compact





# ESG MATERIALITY ASSESSMENT PROCESS

At Biogen, our credo of caring deeply is reflected in the ways we listen to our stakeholders and use their input to help inform our strategies. While we have always conducted our materiality assessment in a globally accepted, GRI-compliant way, we challenge ourselves to go further than standards require.

Between 2019 and 2020 we conducted a materiality assessment as part of the review of our global CR strategy, engaging a broad range of stakeholders, adopting a new approach to questions and a deeper analysis to identify and prioritize the ESG issues at the intersection of stakeholder and company concern. Below are the detailed results of this assessment.

## Enhanced and Broader Stakeholder Categories

We looked at issues from multiple diverse perspectives, and we considered key themes in the context of the trends shaping our industry, communities and the world. We also made a point of seeking feedback from sustainability leaders who track and can provide additional insight into emerging issues and expectations. The wide range of internal and external stakeholders involved in Biogen’s materiality assessment included:

- Employees
- Suppliers
- Investors
- Industry associations
- Patient advocacy organizations
- Ratings organizations
- Researchers
- NGOs
- Competitors

## SPOTLIGHT DEFINITION OF MATERIAL TOPICS

### Product Quality & Safety

Pursuing high standards in product quality and safety, including management systems and auditing, that meet or exceed regulatory requirements.

### R&D, Pipeline & Innovation

Developing innovative products that treat systemic, challenging and complex medical issues and address the unmet medical needs of patients around the globe.

### Access & Pricing

Expanding the availability of affordable medicines for patients, including the world’s poor, by improving the obtainability of medicines and developing appropriate pricing models. This encompasses working with patient advocacy organizations.

### Climate Change & Health

Reducing anthropogenic GHG emissions along the entire value chain, avoiding the most severe consequences to human health and planetary well-being.

### Patient Use & Outcomes

Ensuring that patients are properly and effectively informed regarding medicine usage and the continuous improvement in health outcomes occurring as a result of usage. Outcomes may be measured clinically (e.g., physical examination, laboratory testing and imaging), self-reported or observed.

### Transparency & Disclosure

Disclosure of material matters concerning the company, including its financial results, spending, operational impacts and relationships, in an accurate manner.

### Health System Strengthening & Resiliency

Helping strengthen health systems and reducing cost burdens.

### Information Security & Patient Privacy

Adopting and implementing policies and practices that safeguard the privacy of patient information and protect data from unintended intruders.

### Workplace/Employee Health & Safety

Undertaking efforts to assess and mitigate potential risks that could impact the health, safety or welfare of workers and implementing activities or programs to provide employees with a safe and healthful workplace.

### Sustainable Economic Performance

Promoting the long-term economic health and performance of the company, with a focus on revenue, profitability, costs, appeal to investors, stock performance and long-term financial sustainability.

A Comprehensive Approach to Questions

We invited input on an expanded range of issues, from our core business to the broader health system, with questions that considered:

- Priorities and performance**  
We asked stakeholders what they thought should be our top priority issues and encouraged candid feedback on how we are performing in each area.
- Stakeholder expectations**  
We probed for insights to help us understand where stakeholders see us exceeding expectations and where they see us underperforming.
- Level of confidence**  
We not only asked for opinions but also gauged how confident various respondents were in their thinking. This approach enabled us to correlate stakeholder confidence with opinions of Biogen. For example, if respondents who have more negative views have low confidence in their opinion, it may suggest an opportunity for us to engage more deeply and provide additional information. Conversely, if they are very confident, it is more likely to indicate an issue that would benefit from additional Biogen review.

Our Analysis

Our approach surfaced additional data and led to practical insights by examining:

- Internal versus external perspectives**  
We considered any similarities and significant discrepancies between stakeholder groups, including whether external stakeholders and employees see Biogen differently, and whether their expectations are higher.
- Themes by stakeholder group**  
We looked for significant similarities and differences in how each category of stakeholder sees our company and priority issues. For example, we considered whether investors and suppliers expect different things from Biogen than NGOs or researchers do.

- Levels of stakeholder engagement**  
We considered the perspectives and expectations of stakeholders who have more robust relationships with us versus those who have more casual or occasional interaction.

Results

Based on the combined and cross-referenced responses from internal and external stakeholders, out of 28 potential issues, 10 rose to the top. These areas (defined below) were ranked among the top 10 most material issues for Biogen by at least two of our three key stakeholder groups:

- Internal stakeholders
- All external stakeholders
- Corporate responsibility and sustainability leaders

As a result of this comprehensive analysis, Biogen prioritized the following key issues:

- Product Quality & Safety
- R&D, Pipeline & Innovation
- Access & Pricing
- Climate Change & Health
- Patient Use & Outcomes
- Transparency & Disclosure
- Health System Strengthening & Resiliency
- Information Security & Patient Privacy
- Workplace/Employee Health & Safety
- Sustainable Economic Performance

These top 10 issues have received particular attention as part of both our CR reporting and our strategies and programs. We also continue to recognize the importance that additional issues may have for our business and key stakeholders as well as the need to address them in appropriate ways.

TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES STATEMENT

Biogen supports the Task Force on Climate-related Financial Disclosures (TCFD). This year we are publishing our first disclosure aligned with the TCFD recommendations.

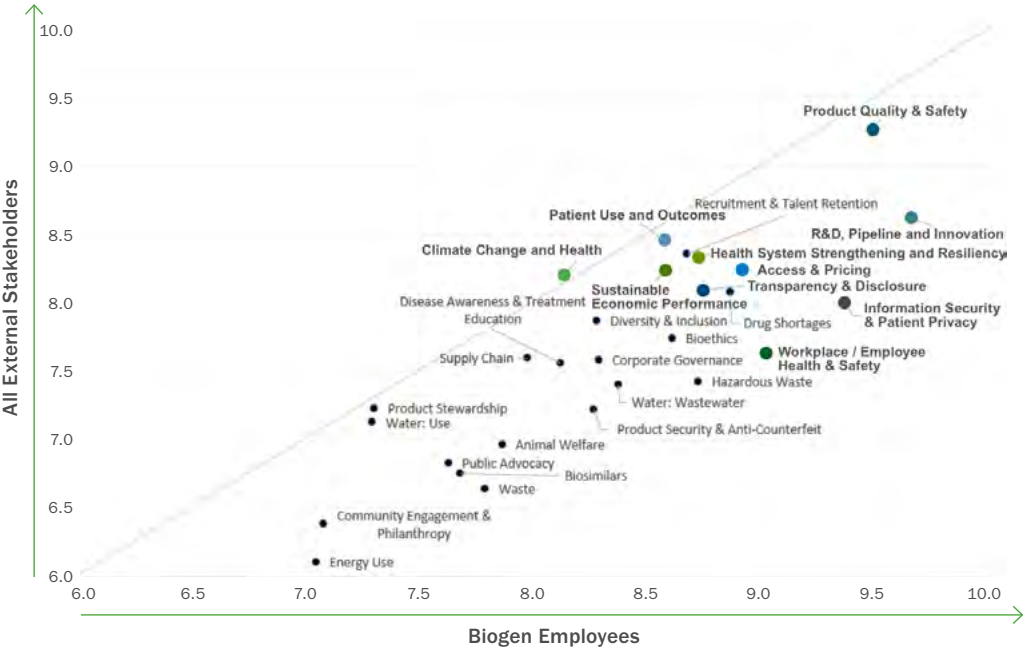
➤ PLEASE SEE OUR TCFD DISCLOSURES STATEMENT





ESG MATERIALITY

Importance of Issues (External vs. Internal)



- Product Quality & Safety
- R&D, Pipeline & Innovation
- Health System Strengthening & Resiliency
- Information Security & Patient Privacy
- Access & Pricing
- Climate Change & Health
- Workplace/Employee Health & Safety
- Sustainable Economic Performance
- Patient Use & Outcomes
- Transparency & Disclosure

ADDITIONAL RESOURCES

Report Archive

- [2019 Year in Review](#)
- [2018 Corporate Social Responsibility Report](#)
- [2017 Global Impact Report](#)
- [2016 Global Impact Report](#)
- [2015 Corporate Citizenship Report](#)
- [2014 Corporate Citizenship Report](#)
- [2013 Corporate Citizenship Report](#)

Quick Links

- [Independent Assurance Statement to Biogen Inc.](#)
- [Principles, Policies & Positions](#)
- [2020 ESG Data Table](#)
- [2020 SASB & GRI Content Indices](#)
- [2020 CDP Climate Change Disclosure](#)
- [2020 Annual Report](#)
- [U.S. Securities Exchange Commission Form 10-K](#)



# SAFE HARBOR

This report contains forward-looking statements, including statements made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995, relating to: our strategy and plans; corporate strategy update; pipeline potential and progress; potential of our commercial business and pipeline programs; the prospects of our product portfolio; capital allocation and investment strategy; clinical development programs, clinical trials and data readouts and presentations; regulatory filings and the timing thereof; risks and uncertainties associated with drug development and commercialization; the potential benefits, safety and efficacy of our products and investigational therapies; anticipated benefits and potential of investments, collaborations and business development activities; the identification and treatment of neurological and neuromuscular disorders; our research and development program for the treatment of neurological and neuromuscular disorders; potential benefits and results that may be achieved through our Healthy Climate, Healthy Lives™ initiative and other related environmental, social, governance and corporate responsibility initiatives; the anticipated timeline of our Healthy Climate, Healthy Lives initiative and other related environmental, social, governance and corporate responsibility initiatives; the anticipated completion and timing of the proposed transaction with Bio-Thera Solutions, Ltd; and the potential impact of the COVID-19 pandemic on our business and operations. These forward-looking statements may be accompanied by such words as “aim,” “anticipate,” “believe,” “could,” “estimate,” “expect,” “forecast,” “goal,” “intend,” “may,” “plan,” “potential,” “possible,” “will,” “would” and other words and terms of similar meaning. Drug development and commercialization involve a high degree of risk, and only a small number of research and development programs result in commercialization of a product. Results in early-stage clinical trials may not be indicative of full results or results from later-stage or larger-scale clinical trials and do not ensure regulatory approval. You should not place undue reliance on these statements or the scientific data presented.

These statements involve risks and uncertainties that could cause actual results to differ materially from those reflected in such statements, including: our dependence on sales from our products; uncertainty of long-term success in developing, licensing or acquiring other product candidates or additional

indications for existing products; failure to compete effectively due to significant product competition in the markets for our products; failure to successfully execute or realize the anticipated benefits of our strategic and growth initiatives; difficulties in obtaining and maintaining adequate coverage, pricing and reimbursement for our products; our dependence on collaborators, joint venture partners and other third parties for the development, regulatory approval and commercialization of products and other aspects of our business, which are outside of our full control; risks associated with current and potential future healthcare reforms; risks related to commercialization of biosimilars; the risk that positive results in a clinical trial may not be replicated in subsequent or confirmatory trials or success in early-stage clinical trials may not be predictive of results in later stage or large-scale clinical trials or trials in other potential indications; risks associated with clinical trials, including our ability to adequately manage clinical activities, unexpected concerns that may arise from additional data or analysis obtained during clinical trials, regulatory authorities may require additional information or further studies, or may fail to approve or may delay approval of our drug candidates; the occurrence of adverse safety events, restrictions on use with our products or product liability claims; risks relating to the distribution and sale by third parties of counterfeit or unfit versions of our products; risks relating to the use of social media for our business; failure to obtain, protect and enforce our data, intellectual property and other proprietary rights and the risks and uncertainties relating to intellectual property claims and challenges; the direct and indirect impacts of the ongoing COVID-19 pandemic on our business, results of operations and financial condition; risks relating to technology failures or breaches; risks relating to management and key personnel changes, including attracting and retaining key personnel; failure to comply with legal and regulatory requirements; the risks of doing business internationally, including currency exchange rate fluctuations; risks relating to investment in our manufacturing capacity; problems with our manufacturing processes; fluctuations in our effective tax rate; fluctuations in our operating results; risks related to investment in properties; the market, interest and credit risks associated with our investment portfolio; risks relating to share repurchase programs; risks relating to access to capital and credit markets; risks related to indebtedness; change in control provisions in

certain of our collaboration agreements; environmental risks; risks that the goals of our Healthy Climate, Healthy Lives initiative and other related environmental, social, governance and corporate responsibility initiatives will be completed in a timely manner or at all; uncertainty as to whether the anticipated benefits of our Healthy Climate, Healthy Lives initiative and other related environmental, social, governance and corporate responsibility initiatives can be achieved; risks that the proposed transaction with Bio-Thera Solutions, Ltd. will not be completed in a timely manner or at all; the possibility that certain closing conditions to the proposed transaction with Bio-Thera Solutions, Ltd.; and any other risks and uncertainties that are described in other reports we have filed with the U.S. Securities and Exchange Commission.

These statements are based on our current beliefs and expectations and speak only as of April 23, 2021. We do not undertake any obligation to publicly update any forward-looking statements, except as required by law.

NOTE REGARDING TRADEMARKS: AVONEX®, BIOGEN®, PLEGRIDY®, SPINRAZA®, TECFIDERA®, TYSABRI® and VUMERITY® are registered trademarks of Biogen. BENEPALI™, FLIXABI™, FUMADERM™, Healthy Climates, Healthy Lives™ and IMRALDI™ are trademarks of Biogen. Other trademarks referenced in this Year in Review are the property of their respective owners.



# 2020 ESG DATA

## ESG DATA TABLE

	Units	2017	2018	2019	2020
<b>Governance</b>					
<b>About Biogen</b>					
Revenue	Million USD	12,274	13,453	14,378	13,445
R&D Spend	Million USD	2,254	2,597	2,281	3,991
No. of Employees	#	7,300	7,800	7,400	9,340
No. of Permanent Employees	#	N/A	N/A	N/A	9,103
No. of FTEs	#	N/A	N/A	N/A	9,192
No. of R&D Employees	#	N/A	N/A	N/A	2,284
<b>ESG Ratings and Rankings<sup>1</sup></b>					
S&P Global CSA	Score	80	83 (Industry Leader)	83 (Industry Leader)	85 (Industry Leader)
MSCI	Rating	A	A	A	A
ISS ESG	Rating	C–	C+ (Prime)	C+ (Prime)	C+ (Prime)
Sustainalytics	Risk Score	N/A	N/A	22	23.5
Corporate Equality Index	%	100	100	100	100
CDP Climate Change	Rating	A	A–	A–	B
CDP Water	Rating	A	B	B	B
100 Best Corporate Citizens	Rank	66	37	46	62
America's Most JUST Companies	Rank	29	19	30	150
<b>Environmental<sup>2</sup></b>					
<b>Climate</b>					
Scope 1 (fossil fuels and refrigerants)	Metric Tons (MTCO <sub>2</sub> e)	61,577	68,448	67,447	57,553
Scope 2 – Market based (electricity and steam)	MTCO <sub>2</sub> e	59	61	106	183
Total Scope 1 & 2	MTCO <sub>2</sub> e	61,636	68,509	67,553	57,736
Scope 1 & 2 Absolute Reduction Since 2019 (Target: 55% by 2032)	%	N/A	N/A	N/A	15
Scope 1 & 2 Intensity	MTCO <sub>2</sub> e/ MM USD revenue	5.0	5.1	4.7	4.3





	Units	2017	2018	2019	2020
Carbon Offsets <sup>3</sup>	MTCO <sub>2</sub> e	69,783	76,642	76,667	29,637
Carbon Neutrality (Scope 1 & 2 – Offsets)	MTCO <sub>2</sub> e	0	0	0	28,099
Scope 2 – Location based (electricity and steam)	MTCO <sub>2</sub> e	41,134	37,347	37,712	36,953
Scope 3 <sup>4</sup>	MTCO <sub>2</sub> e	482,465	436,353	424,592	348,911
Purchased goods and services (category 1) <sup>5</sup>	MTCO <sub>2</sub> e	396,280	325,928	334,954	254,670
Capital goods (category 2)	MTCO <sub>2</sub> e	35,424	51,635	32,759	41,356
Upstream/downstream energy and water-related activities (category 3)	MTCO <sub>2</sub> e	10,533	11,048	10,570	8,755
Upstream and downstream distribution (category 4) <sup>5</sup>	MTCO <sub>2</sub> e	N/A	N/A	N/A	17,701
Waste generated in operations (category 5) <sup>6</sup>	MTCO <sub>2</sub> e	573	758	645	487
Business travel (category 6)	MTCO <sub>2</sub> e	21,111	27,277	24,083	4,038
Employee commuting & work from home (category 7) <sup>7</sup>	MTCO <sub>2</sub> e	8,106	8,133	9,516	12,763
Upstream leased assets (category 8)	MTCO <sub>2</sub> e	0	0	0	0
End-of-life treatment, sold products (category 12)	MTCO <sub>2</sub> e	10,438	11,574	12,065	9,141
Scope 3 Intensity	MTCO <sub>2</sub> e/ MM USD revenue	39	32	30	26
Scope 3 (percent of Scope 1, 2 & 3)	%	89	86	86	86
<b>Air Pollution</b>					
CO emissions	Metric Tons	4.8	7.7	8.2	6.9
NOx emissions	Metric Tons	13.8	21.9	17.0	19.8
SOx emissions	Metric Tons	1.8	3.5	1.0	2.9
VOC emissions	Metric Tons	1.1	0.8	0.5	0.9
<b>EV100 – Battery Electric Vehicle Program</b>					
Total Leased Vehicles	#	1,256	1,447	1,469	1,929
Plug-in Hybrid Electric Vehicles (PHEV)	#	0	17	12	41
Battery Electric Vehicles (BEV)	#	0	9	9	12
Office EV Charging Points	#	22	22	33	49
Sites with EV Charging Points	#	4	4	6	10
Fleet Carbon Efficiency	g CO <sub>2</sub> e / mile	326	295	292	228



	Units	2017	2018	2019	2020
<b>Energy</b>					
Total Energy Use	MWh	451,253	491,194	499,827	<b>444,147</b>
Renewable Electricity	MWh	130,532	132,751	144,972	<b>139,958</b>
PPA / Direct Contract	MWh	0	0	0	<b>4,498</b>
Renewable Energy Certificates <sup>8</sup>	MWh	130,532	132,751	144,972	<b>135,460</b>
On-site Generation	MWh	0	0	0	<b>0</b>
Non-Renewable Energy	MWh	320,721	358,443	354,855	<b>304,189</b>
Fossil Fuels (gas, oil, diesel, gasoline)	MWh	320,480	358,198	354,454	<b>303,576</b>
Municipal Steam	MWh	239	236	316	<b>490</b>
Electricity	MWh	2	10	85	<b>124</b>
Energy Intensity	MWh / MM USD revenue	37	37	35	<b>33</b>
RE100 Target – Global Renewable Electricity <sup>9</sup>	%	100	100	100	<b>100</b>
Fossil Fuel Free – Renewable Energy	%	29	27	29	<b>32</b>
<b>Water</b>					
Major Facilities with Fair Share of Water Withdrawal <sup>10</sup> (Target: Maintain 100%)	%	50	40	100	<b>100</b>
Water Use (ex. non-contact cooling water)	Million Cubic meters (m <sup>3</sup> )	0.985	1.310	1.272	<b>1.035</b>
Water Use Intensity	m <sup>3</sup> / MM USD revenue	80	97	88	<b>77</b>
Water Reused/Recycled <sup>11</sup>	%	8	6	5	<b>7</b>
Water Withdrawal	Million m <sup>3</sup>	1.306	1.629	1.511	<b>1.265</b>
Municipal Supply (potable & grey water)	Million m <sup>3</sup>	0.901	1.217	1.207	<b>0.961</b>
Fresh Surface Water (non-contact cooling)	Million m <sup>3</sup>	0.404	0.411	0.303	<b>0.303</b>
Rainwater	Million m <sup>3</sup>	0.001	0.001	0.001	<b>0.001</b>
Water Discharges	Million m <sup>3</sup>	0.935	1.214	0.990	<b>0.806</b>
Fresh Surface Water	Million m <sup>3</sup>	0.392	0.400	0.303	<b>0.303</b>
Wastewater	Million m <sup>3</sup>	0.543	0.815	0.687	<b>0.503</b>



	Units	2017	2018	2019	2020
<b>Waste</b>					
Non-hazardous Waste <sup>12</sup>	Metric Tons	7,606	8,161	7,561	<b>2,841</b>
Reused	Metric Tons	31	11	6	<b>39</b>
Recycled	Metric Tons	1,012.3	932.4	1,732	<b>527</b>
Composted	Metric Tons	3,461	3,334	2,997	<b>909</b>
Energy Recovery via Anaerobic Digestion	Metric Tons	76	70	43	<b>0</b>
Waste to Energy	Metric Tons	1,014	1,309	1,206	<b>879</b>
Incineration	Metric Tons	1,990	2,472	1,544	<b>455</b>
Landfill	Metric Tons	21	33	32	<b>32</b>
Non-hazardous Waste Intensity	Metric Tons / MM USD revenue	0.62	0.61	0.53	<b>0.21</b>
Waste to Landfill Diversion (Target: Maintain 100%)	%	100	100	100	<b>99</b>
Recovery & Recycling Rate (Non-hazardous Waste)	%	60	53	63	<b>52</b>
Hazardous and Biohazardous Waste	Metric Tons	211	233	219	<b>208</b>
Recycled	Metric Tons	8	16	16	<b>14</b>
Waste to Energy	Metric Tons	133	145	138	<b>117</b>
Incineration	Metric Tons	69	72	65	<b>77</b>
Landfill	Metric Tons	1	1	0	<b>0</b>
<b>Social</b>					
<b>Community</b>					
Total Foundation Grants <sup>13</sup>	Million USD	4.5	4.9	4.7	<b>16.4</b>
Employee Matching Gifts Program	Million USD	1.7	1.4	1.7	<b>2.5</b>
Corporate Grants and Sponsorships <sup>14</sup>	Million USD	N/A	N/A	N/A	<b>72.4</b>
Volunteer Hours <sup>15</sup>	Hours	11,000	12,200	16,560	<b>4,369</b>
STAR Initiative Investment <sup>16</sup> (Target: Cumulative \$10M by 2022)	Million USD	N/A	2.0	2.7	<b>2.8</b>





	Units	2017	2018	2019	2020
<b>Diversity, Equity &amp; Inclusion</b>					
Supplier Diversity Spend	Million USD	153	160	161	173
Supplier Diversity Spend of Total U.S. Spend	%	7.9	7.4	7.8	8.1
Women in:					
Workforce	%	49.6	50.6	52.5	53.5
Management <sup>17</sup>	%	47.1	48.4	49.8	51.7
Director Level and Above	%	N/A	N/A	46	49
Management in Revenue Generating Functions <sup>17, 18</sup>	%	N/A	51.1	50.5	52.3
STEM-related Positions	%	N/A	N/A	N/A	44.6
Junior Management	%	N/A	N/A	51.6	53.7
Top Management (VP+)	%	N/A	N/A	39.2	42.9
Executive Team	%	25	30	25	29
Board of Directors	%	27	27	23	17
Director-level and Above Positions Held by Ethnic/Racial Minorities (U.S. Only)	%	N/A	N/A	26	28
Ethnic/Racial in Workforce (U.S. Only):					
Asian	%	N/A	N/A	N/A	16.9
Black or African American	%	N/A	N/A	N/A	12.2
Hispanic or Latinx	%	N/A	N/A	N/A	5.1
White	%	N/A	N/A	N/A	63.4
Indigenous or Native	%	N/A	N/A	N/A	0.3
Native Hawaiian or Other Pacific Islander	%	N/A	N/A	N/A	0.1
Two or More Races	%	N/A	N/A	N/A	1.1
No Response	%	N/A	N/A	N/A	0.5



	Units	2017	2018	2019	2020
Ethnic / Racial in Management (U.S. Only): <sup>17</sup>					
Asian	%	N/A	N/A	N/A	18.5
Black or African American	%	N/A	N/A	N/A	5.3
Hispanic or Latinx	%	N/A	N/A	N/A	4.9
White	%	N/A	N/A	N/A	69.4
Indigenous or Native	%	N/A	N/A	N/A	0.1
People with Disability in Workforce	%	N/A	N/A	N/A	3.3
LGBTQ+ in Workforce	%	N/A	N/A	N/A	1.6
Workforce Age 29 or Younger	%	N/A	N/A	N/A	9.8
Workforce Age 30 to 50	%	N/A	N/A	N/A	67.8
Workforce Age 51 or Older	%	N/A	N/A	N/A	22.5
<b>Talent Attraction and Retention</b>					
Employee Satisfaction <sup>19</sup>	%	89	77	76	86
Engagement Survey Response Rate	%	N/A	N/A	74	74
No. of New Employees	#	1,588	1,661	1,696	2,679
Open Positions Filled by Internal Candidates	%	N/A	N/A	26.4	19.5
Training and Development	Avg Hours per FTE	N/A	N/A	N/A	38
Total Turnover <sup>20</sup>	%	N/A	13.7	13.0	9.0
Voluntary Turnover <sup>20</sup>	%	N/A	9.5	10.3	7.2
<b>Health &amp; Safety</b>					
Total Recordable Injury Rate (TRIR) <sup>21</sup>	Cases / 200,000 working hours	0.22	0.23	0.28	0.17
Days Away Case Rate (DACR) <sup>21</sup>	Cases / 200,000 working hours	0.05	0.11	0.11	0.06
3-Year Average DACR Industry Rank <sup>22</sup> (Target: Top 3)	Rank	5	4	2	2
Contractor DACR <sup>23</sup>	Cases / 200,000 working hours	0.30	0.20	0.87	0.00
Number of Fatalities	#	0	0	0	0
Collisions per Million Miles (U.S. Fleet) <sup>24</sup>	Collisions / million miles	5.6	5.0	3.7	6.9



Footnotes for 2020 Data Table

N/A = Data was not collected in reporting year.  
All prior environmental data was adjusted with the most recent emission factors available, as applicable.

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

2. The direct and indirect effects of the COVID-19 pandemic had a material impact on our environmental data in 2020 and therefore direct comparison to 2019 may not be applicable. Description of the impact is provided in the Environmental Section of the Year in Review.

3. VCS-certified carbon offsets from New Bedford Landfill Gas to Energy project in Massachusetts. These offsets are considered abatement with avoided emissions, thus applicable to Carbon Neutral approach but not Net Zero.

4. Scope 3 categories 9, 10, 11, 13, 14 and 15 were determined to not be relevant to our value chain or are aggregated into other categories.

5. Due to improvements in our categorization of spend data, we were able to split out Scope 3 category 4 from category 1 in 2020.

6. Waste generation at affiliate offices, excluding Weston, Massachusetts, is considered de minimis and excluded. However, waste generation is estimated for the purposes of calculating Scope 3 category 5 emissions.

7. Work from home emissions were included in Scope 3 category 7 for the first time in 2020.

8. Renewable energy certificates retired include bundled and unbundled Green-e certified Renewable Energy Certifications, Guarantees of Origin, J-Credits, Australian RECs, I-RECs to match Biogen's electricity usage in the U.S./Canada, Europe, Japan, Australia and South America/China/Mexico/United Arab Emirates, respectively.
9. RE100 member Biogen has maintained its achievement of 100% renewable electricity across 30 of the markets in which it operates. In total, this equates to 99.9% of its global demand, with 0.1% remaining unmet in South Korea and New Zealand, where Biogen is facing barriers to sourcing RE in accordance with the strict RE100 criteria. Biogen looks forward to working with our RE100 members to improve supply in these markets.

10. Percent of major sites assessed for water withdrawal using a context-based methodology. Fair, just and proportionate share of locally available renewable supplies is defined as a ratio of less than 1.0 using the Center for Sustainable Organization's Corporate Water Gauge tool, a context-based water metric.

11. Data reflects percentage of reclaimed water on-site, harvested rainwater and municipal grey water compared to total water use.

12. Data includes non-hazardous solid waste and trucked off wastewater from our routine operations only. Waste derived from construction and demolition debris, incinerator ash and other contractor activities is not included.

13. Includes all grants awarded by the Biogen Foundation exclusive of the Biogen Foundation's Employee Matching Gifts Program. Increase from prior year related to the committed \$10 million to support global response efforts and communities around the world impacted by COVID-19 pandemic.

14. Corporate Grants and Sponsorships includes General Grants, Fellowships and Sponsorships.
15. 347 hours were performed during paid working hours. Total monetary value of philanthropic contributions associated with Community Labs, Biogen Foundation and Medical and Patient Education Grants include: \$40.1 million cash contributions; \$27,000 employee volunteering time; \$190,000 in-kind giving; and \$1.3 million management oversight.

16. The STAR Initiative is a coordinated funding strategy designed to help catalyze the development of local science, technology, engineering and mathematics (STEM) ecosystems in Cambridge, Massachusetts, and Somerville, Massachusetts. STAR stands for Science, Teacher support, Access and Readiness and is intended to strengthen and support the educational landscapes in these cities by helping increase access to STEM resources and opportunities for students most underrepresented in STEM college or career pathways.

17. Inclusive of all management levels, consisting of manager+ level employees.

18. Revenue generating functions include Pharmaceutical Operations & Technology, Commercial and Research & Development.

19. The annual people survey question for which our employee satisfaction metric was changed in 2018 and again in 2020 to help us better assess our overall employee engagement. The employee satisfaction value for 2018 and 2019 are in line with global industry benchmarks.

20. In August 2019 Biogen completed the sale of all of the outstanding shares of its subsidiary that owned its biologics manufacturing operations in Hillerød, Denmark, to FUJIFILM Corporation. 2019 total turnover data does not include the 800 employees who continued employment under Fujifilm ownership.
21. Includes permanent and contracted employees, excludes contractors (e.g., construction, janitorial, food services). For ease of industry-wide benchmarking for our stakeholders, 2020 values do not include work related COVID-19 infections, because the infections occurred at an offsite meeting and are not indicative of health and safety performance within our operations. When COVID-19 cases are included the DACR is 0.07 and the TRIR is 1.11.

22. Industry composed of 15 leading pharmaceutical company peers.

23. Contractor DACR: Includes construction-related contractors only.

24. Fleet insurance provided was changed in 2020 resulting in change in definition of collision.



# 2020 SASB & GRI CONTENT INDICES

## SASB CONTENT INDEX

Code	Accounting Metric	Disclosure
<b>Safety of Clinical Trial Participants</b>		
HC-BP-210a.1	Discussion, by world region, of management process for ensuring quality and patient safety during clinical trials	<p>Biogen has a Global Pharmacovigilance (PV) team comprised of medical and scientific professionals with extensive safety and/or clinical or healthcare experience who are trained in PV and worldwide health authority regulations relevant to medicinal product safety.</p> <p>Biogen's safety signal management processes, combined with our robust safety governance framework, allow Biogen to determine if new safety information on our products (a 'signal') poses a risk to patients and how best to manage, mitigate and communicate the risk. All safety and benefit/risk decisions for marketed and investigational products are made at the Safety Monitoring Committee (SMC). The Safety team collaborates with Regulatory Affairs to communicate product information in a timely, transparent and accurate manner to regulatory agencies across the globe.</p> <p>In addition to complying with our company's global standards, the conduct of our clinical trials adheres to the International Council for Harmonisation Good Clinical Practice (ICH GCP) standards and to the principles that have their origin in the Declaration of Helsinki.</p> <p>Each country has its own regulatory authority with its own regulations, or laws, for conducting a clinical trial. The regulatory authority reviews and approves the protocol and ensures that the clinical trial follows national regulations.</p> <p>An Institutional Review Board (IRB) or Ethics Committee (EC) is an independent committee that includes medical, scientific and non-scientific members, whose responsibility is to protect the rights, welfare, safety and well-being of clinical trial participants. Each clinical trial location is monitored by a specific IRB / EC. It is responsible for reviewing all clinical trials as well as conducting ongoing reviews of active clinical trials.</p> <p>For more information, please visit our <a href="#">clinical trials webpage</a></p>
HC-BP-210a.2	Number of FDA Sponsor Inspections related to clinical trial management and pharmacovigilance that resulted in: (1) Voluntary Action Indicated (VAI) and (2) Official Action Indicated (OAI)	Biogen is committed to transparent Environmental Social, and Governance reporting and intends to expand its SASB disclosure in the following year.
HC-BP-210a.3	Total amount of monetary losses as a result of legal proceedings associated with clinical trials in developing countries	<p>Biogen did not sustain any monetary losses in the reporting period as a result of legal proceedings associated with the conduct as described.</p> <p>Biogen discloses all material legal and regulatory proceedings in its Annual Report on <b>Form 10-K</b> and Quarterly Reports on <b>Form 10-Q</b>.</p>

Code	Accounting Metric	Disclosure
Access to Medicines		
HC-BP-240a.1	Description of actions and initiatives to promote access to healthcare products for priority diseases and in priority countries as defined by the Access to Medicine Index	<p>Early-Onset Spinal Muscular Atrophy (SMA) is a priority disease as defined by the Access to Medicine Index.</p> <p>In 2020 we completed a one-year pilot program in India to help expand access to SPINRAZA for individuals in need of treatment. The SPINRAZA Individual Patient Humanitarian Aid Access Program (SIPHAP) provided SPINRAZA free of charge to program participants, who were selected by an independent committee of medical experts.</p> <p>Developed in collaboration with Direct Relief, SIPHAP was designed after months of considerable work including research, interviews, on-the-ground assessments of infrastructure and facilities, and training for the clinicians participating in the program.</p> <p>SIPHAP initially launched with 24 patients across 4 public hospitals in India, with 2020 expansion put on hold due to the COVID-19 pandemic. Despite pandemic challenges, all patients received all recommended doses throughout 2020. We are currently exploring the potential for future expansion within India and other countries.</p> <p>SPINRAZA is approved in more than 50 countries, including low- and middle-income countries, with formal reimbursement in 40 countries. <b>Our policy</b> to promote access to SPINRAZA will help inform our approach to our broader portfolio of therapies.</p>
HC-BP-240a.2	List of products on the WHO List of Prequalified Medicinal Products as part of its Prequalification of Medicines Programme (PQP)	Biogen has no products on the WHO List of Prequalified Medicinal Products
Affordability & Pricing		
HC-BP-240b.1	Number of settlements of Abbreviated New Drug Application (ANDA) litigation that involved payments and/or provisions to delay bringing an authorized generic product to market for a defined time period	Biogen does not comment on confidential legal matters
HC-BP-240b.2	Percentage change in: (1) average list price and (2) average net price across U.S. product portfolio compared to previous year	<p>In 2020 we saw a list price increase of 5.190% and a net price decrease of 0.273% across our U.S. product portfolio compared to the previous year.</p> <p>In addition, Biogen’s anti-TNF biosimilars may have provided healthcare savings of approximately €2.4 billion in 2020 across Europe. This savings may provide headroom for new innovative therapies to come to market.</p> <p>We regularly review our pricing strategy and prioritize patient access to our therapies. We have a value-based contracting program designed to align the price of our therapies to the value our therapies deliver to patients. We also work with regulators, clinical researchers, ethicists, physicians and patient advocacy organizations and communities, among others, to determine how best to address requests for access to our investigational therapies in a manner that is consistent with our patient-focused values and compliant with regulatory standards and protocols. Additional information is available here:</p> <ul style="list-style-type: none"><li>• <a href="#">2020 10-K</a></li><li>• <a href="#">Biogen Pricing Principles</a></li></ul>

Code	Accounting Metric	Disclosure
HC-BP-240b.3	Percentage change in: (1) list price and (2) net price of product with largest increase compared to previous year	<p>Biogen's anti-TNF biosimilars may have provided healthcare savings of approximately €2.4 billion in 2020 across Europe. This savings may provide headroom for new innovative therapies to come to market.</p> <p>We regularly review our pricing strategy and prioritize patient access to our therapies. We have a value-based contracting program designed to align the price of our therapies to the value our therapies deliver to patients. We also work with regulators, clinical researchers, ethicists, physicians and patient advocacy organizations and communities, among others, to determine how best to address requests for access to our investigational therapies in a manner that is consistent with our patient-focused values and compliant with regulatory standards and protocols.</p> <p>Additional information is available here:</p> <ul style="list-style-type: none"><li>• <a href="#">2020 10-K</a></li><li>• <a href="#">Biogen Pricing Principles</a></li></ul>
Drug Safety		
HC-BP-250a.1	List of products listed in the U.S. Food and Drug Administration's (FDA) MedWatch Safety Alerts for Human Medical Products database	There were no listings relevant to Biogen's products on the FDA's MedWatch Safety Alerts for Human Medical Products database in 2020.
HC-BP-250a.2	Number of fatalities associated with products as reported in the FDA Adverse Event Reporting System	All information related to fatalities associated with Biogen products is available via FDA Adverse Event Reporting website.
HC-BP-250a.3	Number of recalls issued; total units recalled	1 Class II (VUMERITY recall initiated December 2020, still in progress) / 1 Class III (TECFIDERA initiated June 2020 closed February 2021)
HC-BP-250a.4	Total amount of product accepted for takeback, reuse, or disposal	Due to the low volume of its products, at this time, Biogen does not manage a formal product takeback, reuse or disposal program. Per regulatory requirements, Biogen participates in several product takeback programs across various U.S. states or counties, and several other countries. In addition, Biogen provides guidance on disposal methods of its products.
HC-BP-250a.5	Number of FDA enforcement actions taken in response to violations of current Good Manufacturing Practices (cGMP), by type	Biogen did not receive any FDA enforcement actions associated with warning letters, seizures, recalls or consent decrees in 2020.





Code	Accounting Metric	Disclosure
Counterfeit Drugs		
HC-BP-260a.1	Description of methods and technologies used to maintain traceability of products throughout the supply chain and prevent counterfeiting	<p>Counterfeiting is now the largest criminal enterprise in the world, accounting for more than 3% of global trade. Not one industry is exempt from this growing threat. Patient safety is our number one priority and we take the issue of counterfeit, falsified drugs very seriously. The main goal of our Product Security function is to implement a holistic strategy in order to proactively identify, mitigate and manage illicit trade risks that could be impacting reputation and trust, and most importantly jeopardizing the health and safety of patients that take our drugs. We aim to disrupt diversion, counterfeiting, theft and other nefarious activities through the following 5 pillars:</p> <ul style="list-style-type: none"><li>• Threat Assessments: Identifying, assessing and mitigating risks and vulnerabilities across the supply chain</li><li>• Auditing: Audit supply chain partners to ensure industry best practice requirements are met regarding product security</li><li>• Monitoring: Monitor markets, channels, supply chain, customer complaints and other network elements to detect illicit trade signals and potential threats to supply chain resiliency and robustness</li><li>• Investigations: Respond to incidents with robust investigation and enforcement capability, including legal actions to stop and deter illicit trade</li><li>• Product Security: Ensure we have the appropriate level of security measures for products and supply chain nodes in order to minimize the threat of counterfeits, diversions and thefts for the purpose of ensuring patient safety</li></ul> <p>In addition to the above, a majority of our global production is serialized, meeting all global compliance requirements on serialization including the U.S. and the European Union (EU). Whenever we serialize, we also aggregate the serialization information to enable Track&amp;Trace. We have implemented Track&amp;Trace capabilities at our main distribution sites, beyond compliance requirements, to provide additional elements of traceability.</p>
HC-BP-260a.2	Discussion of process for alerting customers and business partners of potential or known risks associated with counterfeit products	<p>Biogen employs quality governed processes to manage the handling of suspect or illegitimate medicinal products: Upon detecting a potential or known product security risk, the event is captured as a complaint into the TrackWise system for formal tracking. Furthermore, there are requirements on segregation of product and the investigation process. Once the product is physically acquired, the technical product complaints group performs an investigation to verify if the product is genuine or falsified. If determined that the suspected product is falsified, potentially falsified or high risk of being falsified, a DMRB (global distributed material review board) must be completed, defining further specific market actions and communications. As necessary, all impacted competent authorities and impacted distribution partners are then notified. Once a case is closed, Biogen notifies the applicable authorities and impacted trading partners.</p> <p>In addition to the above internal processes, Biogen also participates in industry-wide systems and processes utilizing serialization data. For example, in the EU, each medication is verified against the list of list of serial numbers in circulation, prior to dispensing. Medicines shall not be dispensed if the number cannot be verified. If a medicine's serial number cannot be verified, a notification, called an alert, is electronically generated by the relevant National Medicines Verification Organization (NMVO) and shared with TraceLink, Biogen's Serialization System. Biogen reviews these alerts and resolves them in correspondence with the relevant NMVO. Serialization alerts that indicate suspect or illegitimate product will trigger the internal process described above.</p>
HC-BP-260a.3	Number of actions that led to raids, seizure, arrests, and/or filing of criminal charges related to counterfeit products	<p>Biogen did not take any actions in the reporting period that led to raids, seizure, arrests and/or filing of criminal charges related to counterfeit products.</p>




Code	Accounting Metric	Disclosure
<b>Ethical Marketing</b>		
HC-BP-270a.1	Total amount of monetary losses as a result of legal proceedings associated with false marketing claims	<p>Biogen did not sustain any monetary losses in the reporting period as a result of legal proceedings associated with the conduct as described.</p> <p>Biogen discloses all material legal and regulatory proceedings in its Annual Report on <b>Form 10-K</b> and Quarterly Reports on <b>Form 10-Q</b>.</p>
HC-BP-270a.2	Description of codes of ethics governing promotion of off-label use of products	Please visit our <b>Access</b> page for a description of Biogen's approach to off-label use.
<b>Employee Recruitment, Developing &amp; Retention</b>		
HC-BP-330a.1	Discussion of talent recruitment and retention efforts for scientists and research and development personnel	<p>In 2020 we hired over 380 individuals into R&amp;D globally and over 130 scientists across Biogen, composed of 76 scientists in the R&amp;D organization.</p> <p>Biogen recently announced a \$200 million investment to build a new gene therapy manufacturing facility at our Research Triangle Park (RTP) manufacturing campus in North Carolina.</p> <p>We expanded our engagement with conferences/programs that allow us to increase our R&amp;D brand within underrepresented communities, including: Women of Color in Pharma (WOCIP), American Women in Science (AWIS), Women in Technology (WIT) and the Life Science Veteran Action Network (BVN Partnership).</p>
HC-BP-330a.2	(1) Voluntary and (2) involuntary turnover rate for: (a) executives/senior managers, (b) mid level managers, (c) professionals, and (d) all others	<p>Total Turnover Rate: 9.00%</p> <ul style="list-style-type: none"> <li>• Voluntary Turnover Rate: 7.20%</li> <li>• Involuntary Turnover Rate: 1.80%</li> </ul>
<b>Supply Chain Management</b>		
HC-BP-430a.1	Percentage of (1) entity's facilities and (2) Tier I suppliers' facilities participating in the Rx-360 International Pharmaceutical Supply Chain Consortium audit program or equivalent third-party audit programs for integrity of supply chain and ingredients	Biogen outsources anywhere from 10–15% of our external supplier audits. We perform the vast majority of our audits through our own audit program using outsourced support or use US Data Management, LLC depending on the type of service provided, risk and availability.
<b>Business Ethics</b>		
HC-BP-510a.1	Total amount of monetary losses as a result of legal proceedings associated with corruption and bribery	<p>Biogen did not sustain any monetary losses in the reporting period as a result of legal proceedings associated with the conduct as described.</p> <p>Biogen discloses all material legal and regulatory proceedings in its Annual Report on <b>Form 10-K</b> and Quarterly Reports on <b>Form 10-Q</b>.</p>
HC-BP-510a.2	Description of code of ethics governing interactions with healthcare professionals	<p>We comply with the Pharmaceutical Research and Manufacturers of America's (PhRMA) Code on Interactions with Healthcare Professionals.</p> <p>See our <b>Code of Business Conduct</b> section on Interactions with Healthcare Professionals.</p>

Code	Accounting Metric	Disclosure
Activity Metrics		
HC-BP-000.A	Number of patients treated	<p>Our portfolio of 5 MS disease-modifying therapies has helped improve the lives of more than 1 million patients worldwide, and we have more than 25 active clinical trials. Additionally, Biogen ended 2020 with roughly 11,000 patients on SPINRAZA, including through our clinical studies and expanded access program.</p> <p>Available in the EU, approximately 240,000 patients across 15 indications in over 25 countries relied on our anti-TNF biosimilars in 2020, which represented a patient growth of 15% year-over-year. Through the end of 2020, since the inception of our biosimilars unit, we have shipped over 20 million doses with uninterrupted product supply to patients in over 25 European countries.</p>
HC-BP-000.B	Number of drugs (1) in portfolio and (2) in research and development (Phases 1-3)	<p>The number of drugs actively on the market is 10.</p> <p>We closed 2020 with a pipeline that included 33 clinical programs:</p> <ul style="list-style-type: none"><li>• Number in Phase 1 = 14</li><li>• Number in Phase 2 = 9</li><li>• Number in Phase 3 = 10</li></ul> <p>We now have 10 programs either in Phase 3 or filed with regulatory agencies, including in Alzheimer’s disease, neuropsychiatry, amyotrophic lateral sclerosis (ALS) and ophthalmology. In 2020, we added or advanced 12 clinical programs, bolstering our early- and late-stage pipelines through both internal development and collaborations with leading neuroscience companies, including Sangamo Therapeutics, Inc. (Sangamo), Denali Therapeutics Inc. (Denali) and Sage Therapeutics, Inc. (Sage). We believe we are well positioned for future growth with readouts expected in 2021 from eight clinical programs, of which four are pivotal readouts.</p> <p>More information on our <a href="#">product portfolio</a> and <a href="#">pipeline</a> is provided on our website.</p> <p>Values are as of December 31, 2020.</p>



GRI CONTENT INDEX

GRI Indicator	Description	Reference	SDG Alignment
GRI 102: GENERAL DISCLOSURES 2016			
Organizational Profile 2020			
102-1	Activities, brands, products, and services	Biogen Inc.	
102-2	Activities, brands, products, and services	Message from the CEO– 2020 Year in Review Item 1., Business, 2020 <a href="#">Form 10-K</a> , pages 1–28	
102-3	Location of headquarters	Corporate Headquarters: Cambridge, Massachusetts (U.S.)	
102-4	Location of operations	Pharmaceutical Operations & Technology Item 2., Properties, 2020 <a href="#">Form 10-K</a> , pages 47–48	
102-5	Ownership and legal form	<a href="#">Board of Directors</a> <a href="#">Corporate Governance Documents</a>	
102-6	Markets served	Item 1., Business, 2020 <a href="#">Form 10-K</a> , pages 6–9	
102-7	Scale of the organization	Highlights – 2020 Annual Report Item 1., Business, 2020 <a href="#">Form 10-K</a> , pages 1–28 Item 6., Selected Financial Data, 2020 <a href="#">Form 10-K</a> , page 51	
102-8	Information on employees and other workers	Item 1., Business, 2020 <a href="#">Form 10-K</a> , pages 26–31	
102-9	Supply chain	Item 1., Business, 2020 <a href="#">Form 10-K</a> , pages 25–26	
102-10	Significant changes to the organization and its supply chain	Item 1., Business, 2020 <a href="#">Form 10-K</a> , pages 2–3	
102-11	Precautionary principle or approach	Biogen applies the precautionary approach by achieving carbon neutrality, ensuring the safety of patients and performing detailed risk analyses related to its operations.	
102-12	External initiatives	<a href="#">Principles, Policies &amp; Positions</a> <a href="#">Environment Section – 2020 Year in Review</a>	

GRI Indicator	Description	Reference	SDG Alignment
102-13	Membership of associations	<p><b><u>Environment Section – 2020 Year in Review</u></b></p> <p>Biogen membership associations:</p> <p><b>RE100 Company</b> – Global initiative uniting more than 290 influential businesses committed to 100% renewable electricity</p> <p><b>Pharmaceutical Supply Chain Initiative (PSCI)</b> – Organization of leading global pharmaceutical companies focused on increasing the capabilities and responsibility of our supply chains</p> <p><b>Pharmaceutical Product Stewardship Work Group</b> – Association for drug and sharp manufacturers and marketers formed to address the disposal of unused and unwanted pharmaceutical products.</p> <p><b>EV100</b> – EV100 is a global initiative bringing together 102 companies committed to switching their fleets to electric vehicles and installing charging infrastructure for employees and customers by 2030.</p> <p><b>Biopharma Sustainability Roundtable</b> – A sector-specific platform designed to connect and support senior biotech and pharma executives in driving their Biopharma sustainability agendas forward.</p> <p><b>CSR Board</b> – Confidential, vendor-free membership organization for people leading corporate social responsibility at the world's biggest companies.</p> <p><b>WBCSD</b> – Global, CEO-led organization of over 200 leading businesses working together to accelerate the transition to a sustainable world.</p> <p><b>UNGC</b> – Voluntary initiative based on CEO commitments to implement universal sustainability principles and to take steps to support UN goals.</p> <p><b>WEF</b> – The World Economic Forum engages the foremost political, business, cultural and other leaders of society to shape global, regional and industry agendas.</p>	
102-14	Statement from senior decision-maker	<b><u>Message from the CEO – 2020 Year in Review</u></b>	
102-15	Key impacts, risks, and opportunities	Item 1A., Risk Factors, 2020 <b><u>Form 10-K</u></b> , pages 33–47	
<b><u>TCFD Report</u></b> – 2020 Year in Review			
<b>Ethics and Integrity</b>			
102-16	Values, principles, standards, and norms of behavior	<p><b><u>Code of Business Conduct</u></b></p> <p><b><u>Principles, Policies &amp; Positions</u></b></p>	
102-17	Description of internal and external mechanisms for: seeking advice	<b><u>Code of Business Conduct</u></b>	
102-18	Governance structure	<p><b><u>Executive Leadership</u></b></p> <p><b><u>Board of Directors</u></b></p> <p><b><u>Corporate Governance Documents</u></b></p>	








GRI Indicator	Description	Reference	SDG Alignment
102-30	Highest governance body's role	<a href="#">Code of Business Conduct</a> <a href="#">Sustainability Policy</a> <a href="#">Environmental, Health and Safety Policy</a>	
102-33	Process for communicating critical concerns to the highest governance body	<a href="#">Code of Business Conduct</a>	
<b>Stakeholder Engagement</b>			
102-40	List of stakeholder groups	<a href="#">Reporting Section – 2020 Year in Review</a>	
102-41	Collective bargaining agreements	Approximately 13.1% of Biogen's employees are under a collective bargaining agreement using a time-weighted average basis.	
102-42	Identifying and selecting stakeholders	<a href="#">Reporting Section – 2020 Year in Review</a>	
102-43	Approach to stakeholder engagement	<a href="#">Reporting Section – 2020 Year in Review</a>	
102-44	Key topics and concerns raised	<a href="#">Reporting Section – 2020 Year in Review</a>	
<b>Reporting Practice</b>			
102-45	Entities included in the consolidated financial statements	All major entities are included in the boundaries of this report. See the 2020 <a href="#">Form 10-K</a>	
102-46	Defining report content and topic boundaries	<a href="#">Reporting Section – 2020 Year in Review</a>	
102-47	List of material topics	<a href="#">Reporting Section – 2020 Year in Review</a>	
102-48	Restatements of information	No restatements were made	
102-49	Changes in reporting	No significant changes from the previous reporting period	
102-50	Reporting period	Data covers fiscal year ending December 31, 2020. Some activities from 2021 are also included.	
102-51	Date of most recent report	April 23, 2021	
102-52	Reporting cycle	We report on an annual basis	
102-53	Contact point for questions regarding the report	Biogen Media contact: <a href="mailto:public.affairs@biogen.com">public.affairs@biogen.com</a> Biogen Reputation & Responsibility contact: <a href="mailto:responsibility@biogen.com">responsibility@biogen.com</a>	
102-54	Claims of reporting in accordance with the GRI Standards	This report has been prepared in accordance with the GRI Standards: Core option	
102-55	GRI Content Index	GRI Content Index	
102-56	External assurance	<a href="#">ERM CVS Independent Assurance Statement to Biogen Inc.</a>	






























GRI Indicator	Description	Reference	SDG Alignment
<b>GRI 103: TOPICS AND TOPIC BOUNDARIES</b>			
<b>Reporting Practice</b>			
103-1	Explanation of the material topic and its boundary	<a href="#">Reporting Section – 2020 Year in Review</a>	
103-2	The management approach and its components	<a href="#">Our Purpose Section 2020 – Year in Review</a>	
103-3	Evaluation of the management approach	Consolidated Financial Statements, 2020 <a href="#">Form 10-K</a> , <a href="#">ERM CVS Independent Assurance Statement to Biogen Inc.</a>	

## GRI 200-400 TOPIC-SPECIFIC DISCLOSURES 2016












<b>Economic</b>			
<b>Economic Performance</b>			
201-1	Direct economic value generated and distributed	GAAP audited financial statements, 2020 Annual Report Item 6., Selected Financial Data, 2020 <a href="#">Form 10-K</a> , page 51, F-75-76	
201-2	Financial implications and other risks and opportunities due to climate change	<a href="#">TCFD Report</a> - 2020 Year in Review <a href="#">2020 CDP Climate Change disclosure</a>	
201-3	Defined benefit plan obligations and other retirement plans	Consolidated Financial Statements, 2020 <a href="#">Form 10-K</a> , page F-75-76	
<b>Indirect Economic Impacts</b>			
203-2	Significant indirect economic impacts	2020 Year in Review <a href="#">Reporting Section – 2020 Year in Review</a>	  
<b>Procurement Practices</b>			
204-1	Proportion of spending on local suppliers	Not applicable Biogen discloses this information only on a global level. <a href="#">Principles, Policies &amp; Positions</a> <a href="#">Supplier Diversity – Working With Us</a>	 
<b>Tax</b>			
207-1	Approach to tax	<b>This UK tax strategy</b> applies to all Biogen UK entities and its publication is regarded as satisfying the statutory obligation under paragraph 19(2), Schedule 19 of the UK Finance Act 2016, for all the Biogen UK entities. The overall goal of Biogen's tax policy is to support its business by maintaining a sustainable tax rate while complying with tax law and regulations and mitigating tax risks in the jurisdictions in which we operate.	







GRI Indicator	Description	Reference	SDG Alignment
<b>Environment</b>			
<b>Energy</b>			
302-1	Energy consumption within the organization	<a href="#">Environment Section – 2020 Year in Review</a> <a href="#">ESG Data Table – 2020 Year in Review</a>	
<b>Water and Effluents</b>			
303-1	Interactions with water as a shared resource	<a href="#">Environment Section – 2020 Year in Review</a> <a href="#">ESG Data Table – 2020 Year in Review</a> <a href="#">2020 CDP Water Security disclosure</a>	
303-3	Water withdrawal	<a href="#">Environment Section – 2020 Year in Review</a> <a href="#">ESG Data Table – 2020 Year in Review</a> <a href="#">2020 CDP Water Security disclosure</a>	
303-4	Water discharge	<a href="#">Environment Section – 2020 Year in Review</a> <a href="#">ESG Data Table – 2020 Year in Review</a> <a href="#">2020 CDP Water Security disclosure</a>	
303-5	Water consumption	<a href="#">Environment Section – 2020 Year in Review</a> <a href="#">ESG Data Table – 2020 Year in Review</a> <a href="#">2020 CDP Water Security disclosure</a>	
<b>Emissions</b>			
305-1	Direct (Scope 1) GHG emissions	<a href="#">Environment Section – 2020 Year in Review</a> <a href="#">ESG Data Table – 2020 Year in Review</a> <a href="#">2020 CDP Climate Change disclosure</a>	 
305-2	Energy indirect (Scope 2) GHG emissions	<a href="#">Environment Section – 2020 Year in Review</a> <a href="#">ESG Data Table – 2020 Year in Review</a> <a href="#">2020 CDP Climate Change disclosure</a>	 
305-3	Other indirect (Scope 3) GHG emissions	<a href="#">Environment Section – 2020 Year in Review</a> <a href="#">ESG Data Table – 2020 Year in Review</a> <a href="#">2020 CDP Climate Change disclosure</a>	 
305-5	Reduction of GHG emissions	<a href="#">Environment Section – 2020 Year in Review</a> <a href="#">ESG Data Table – 2020 Year in Review</a> <a href="#">2020 CDP Climate Change disclosure</a>	 
305-7	Nitrogen oxides (NOX), sulfur oxides (SOX), and other significant air emissions	<a href="#">ESG Data Table – 2020 Year in Review</a>	

GRI Indicator	Description	Reference	SDG Alignment
Effluents and Waste			
306-2	Management of significant waste-related impacts	<a href="#">Environment Section – 2020 Year in Review</a> <a href="#">ESG Data Table – 2020 Year in Review</a>	
Environmental Compliance			
307-1	Non-compliance with environmental laws and regulations	There were no significant instances of non-compliance in 2020. <a href="#">Principles, Policies &amp; Positions</a> Item 1A., Risk Factors, 2020 <a href="#">Form 10-K</a> , page 47	
Supplier Environmental Assessments			
308-1	New suppliers that were screened using environmental criteria	ESG Supplier Assessment, <a href="#">Environment Section – 2020 Year in Review</a>	
308-2	Negative environmental impacts in the supply chain and actions taken	<a href="#">Environment Section – 2020 Year in Review</a> <a href="#">Reporting Section – 2020 Year in Review</a> Item 1A., Risk Factors, 2020 <a href="#">Form 10-K</a> , page 47	
Social			
Employment			
401-1	New employee hires and employee turnover	<a href="#">ESG Data Table – 2020 Year in Review</a> SASB Content Index	
Occupational Health & Safety			
403-1	Occupational health and safety management system	<a href="#">Our People Section – 2020 Year in Review</a> <a href="#">Environmental, Health and Safety Policy Statement</a>	 
403-2	Hazard identification, risk assessment, and incident investigation	<a href="#">Our People Section – 2020 Year in Review</a> <a href="#">Environmental, Health and Safety Policy Statement</a>	 
403-4	Worker participation, consultation, and communication on occupational health and safety	<a href="#">Our People Section – 2020 Year in Review</a> <a href="#">Environmental, Health and Safety Policy Statement</a>	 
403-9	Work-related injuries	<a href="#">Our People Section – 2020 Year in Review</a> <a href="#">ESG Data Table – 2020 Year in Review</a> <a href="#">Environmental, Health and Safety Policy Statement</a>	 



GRI Indicator	Description	Reference	SDG Alignment
Occupational Health & Safety			
405-1	Diversity of governance bodies and employees	<a href="#">Our People Section – 2020 Year in Review</a> <a href="#">ESG Data Table – 2020 Year in Review</a> <a href="#">Board of Directors</a>	
405-2	Ratio of basic salary and remuneration of women to men	Pay Equity Analysis, <a href="#">Our People Section – 2020 Year in Review</a> Confidentiality constraints Biogen does not disclose externally any salary and wage-related data except the Executive Compensation of the Executive Committee and Board of Directors	
Local Communities			
413-1	Operations with local community engagement, impact assessments and development programs	<a href="#">Our People Section – 2020 Year in Review</a> <a href="#">Community Section – 2020 Year in Review</a> <a href="#">Grants Management and Strategic Giving</a>	 
Supplier Social Assessment			
414-1	New suppliers that were screened using social criteria	<a href="#">Our People Section – 2020 Year in Review</a> <a href="#">Reporting Section – 2020 Year in Review</a> <a href="#">Supplier Diversity – Working With Us</a> <a href="#">Code of Business Conduct</a>	  
414-2	Negative social impacts in the supply chain and actions taken	<a href="#">Supplier Diversity – Working With Us</a> <a href="#">Code of Business Conduct</a> <a href="#">Reporting Section – 2020 Year in Review</a>	  
Public Policy			
415-1	Political contributions	<a href="#">Principles, Policies &amp; Positions</a> <a href="#">Political Contributions Policy</a> <a href="#">Political Contributions Disclosure</a>	
Customer Health and Safety			
416-1	Assessment of the health and safety impacts of product and service categories	<a href="#">Patients Section – 2020 Year in Review</a> <a href="#">Pioneering Science Section – 2020 Year in Review</a> <a href="#">Principles, Policies &amp; Positions</a> <a href="#">Patient Safety</a> <a href="#">Product Stewardship</a>	
416-2	Incidents of non-compliance concerning the health and safety impacts of products and services	There were no significant instances of non-compliance in 2020. <a href="#">Pioneering Science Section – 2020 Year in Review</a> <a href="#">Patient Safety</a>	

GRI Indicator	Description	Reference	SDG Alignment
Marketing and Labeling			
417-1	Requirements for product and service information and labeling	<u>Principles, Policies &amp; Positions</u> <u>Patient Safety</u>	 
417-2	Incidents of non-compliance concerning product and service information and labeling	There were no significant instances of non-compliance in 2020. <u>Principles, Policies &amp; Positions</u>	
417-3	Incidents of non-compliance concerning marketing communications	There were no significant instances of non-compliance in 2020. <u>Principles, Policies &amp; Positions</u>	

# 2020 Year in Review

OUR COMMITMENT TO CORPORATE RESPONSIBILITY

FOLLOW US ON SOCIAL MEDIA



where  
**science**  
meets **humanity**™