

# where Science humanity meets where meets where between the second second

Biogen-169304 May 2022

More than

## **300m**

people across Europe are affected by neurological diseases.\*

## Neuroscience is the next frontier.

At Biogen, we are pioneering new science that takes us deep into the body's nervous system, and stretches across digital networks and patient communities, to better understand and preserve the underlying qualities of our essential human nature.

We believe that we are on the cusp of a healthcare revolution with breakthrough advances in neuroscience and neurotechnology offering hope for the potential treatment and potential cure of these devastating diseases.

The risk of failure keeps others away. But, at Biogen, we are not afraid to go where others won't. Not because we can but because we must.

\*European Academy of Neurology, as of June 24, 2019

#### **Biogen in Europe**

### "

There is not a moment to be lost in bringing vital innovation to people living with devastating neurological and related diseases."

Wolfram Schmidt President Europe, Canada & Partner Markets

#### Biogen and Europe share an ambition: to lead in medical innovations that address urgent unmet medical needs and long-term social challenges.

We are proud to contribute to Europe's innovation ecosystem: investing in people, research and production. We are committed to supporting sustainable healthcare systems and transforming patient lives through our deep expertise in neuroscience.

We believe that the challenges facing today's healthcare systems can only be solved through collaboration. We forge progressive collaborations and work holistically with governments and the healthcare sector with the goal to drive innovation, increase sustainability, expand access, and deliver better patient outcomes. Every single person at Biogen is driven by our commitment to our patients and guided every day by our credo: to work fearlessly, care deeply, and change lives.

Approximately

**3,000** 

people are directly employed by Biogen across 24 countries in Europe.\*

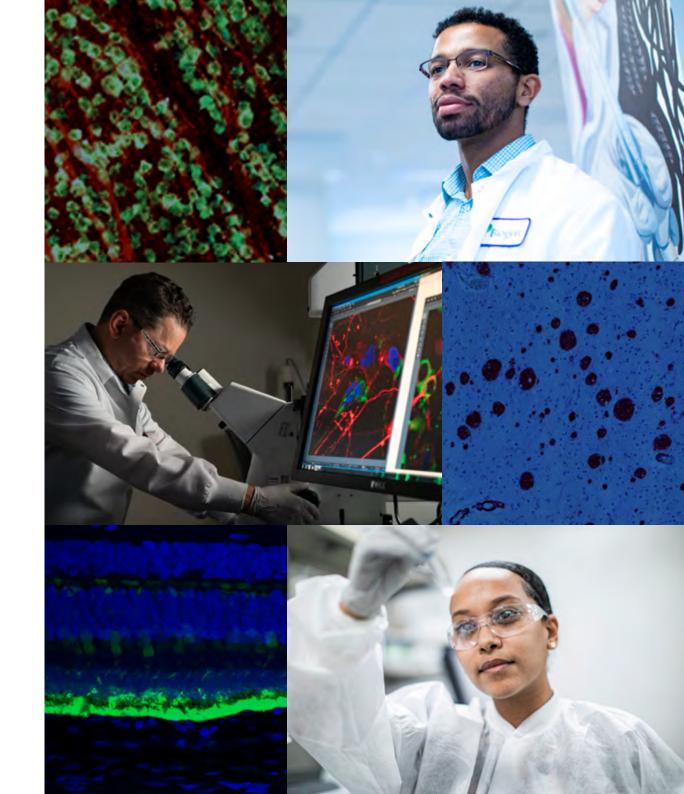
#### Our identity and mission

#### Working fearlessly as pioneers in neuroscience. Since 1978.

As pioneers in neuroscience, Biogen discovers, develops, and delivers worldwide innovative therapies for people living with serious neurological diseases as well as related therapeutic adjacencies.

One of the world's first global biotechnology companies, Biogen was founded in 1978 in Geneva, Switzerland, by Charles Weissmann, Heinz Schaller, Sir Kenneth Murray and Nobel Prize winners Walter Gilbert and Phillip Sharp.

Today, Biogen has a leading portfolio of medicines to treat multiple sclerosis, has introduced the first approved treatment for spinal muscular atrophy, and is providing the first and only approved treatment to address a defining pathology of Alzheimer's disease. Biogen is also commercializing biosimilars and focusing on advancing the industry's most diversified pipeline in neuroscience that will transform the standard of care for patients in several areas of high unmet need.



## Pioneering science that transforms lives

We believe that no other disease area holds as much need or as much promise for medical breakthroughs as neuroscience.

#### **Multiple sclerosis**

**1.2m** 

people in Europe are living with MS, with the majority diagnosed between 20 and 40 years old.\*

#### "

We strive to transform the lives of those living with MS... working towards the day when we can all confidently say, 'we have a cure'."

Michel Vounatsos, CEO, Biogen

For more than four decades, we have remained dedicated to advancing the treatment of multiple sclerosis (MS).

We continue to innovate as we strive to improve outcomes. Today, our industry-leading portfolio of medicines helps address the diverse needs that people living with MS may have throughout their lives. Our current work is expanding our focus beyond treatment, advancing digital innovation with the goal to better understand, diagnose, and manage the disease to transform the lives of people around the world.

\* European MS Platform. 2020 MS Barometer. Brussels: EMSP



#### Alzheimer's disease

We are committed to helping address the significant unmet need of Alzheimer's disease, with an emphasis on early-stage disease.

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**Kamaria** was 28 years old when her mother, Mary, was diagnosed with Alzheimer's disease.

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## **10**m

people in Europe are living with Alzheimer's disease and related dementias and this number is expected to double by 2030.\*

Alzheimer's disease is a progressive neurological condition that impairs thinking, memory, and independence, leading to premature death. The disease is a growing global health crisis, affecting those living with the disease and their families.

Alzheimer's disease operates out of sight – slowly developing over years to cause injury to the brain.\*\* We understand Alzheimer's disease to be a continuum, as it can be present for decades before it is even suspected.

Driven by our commitment to patients and our strong business foundation, we are committed to furthering Alzheimer's disease research and treatment, aiming to help address the unmet needs in this devastating condition, with an emphasis on early-stage disease.

<sup>\*</sup> World Health Organization (WHO) Regional Office for Europe: Dementia.

<sup>\*\*</sup> Jack CR, Bennet DA, Blennow K, et al. NIA-AA Research Framework: Toward a biological definition of Alzheimer's disease. Alzheimers Dement 2018;14:535–562.

Bateman RJ, Xiong C, Benzinger TLS, et al. Clinical and Biomarker Changes in Dominantly Inherited Alzheimer's Disease. N Engl J Med 2012;367:795–804.

#### Spinal muscular atrophy

**Landon** and his sister both live with SMA. SMA affects people of all ages. Newborn screening is important for early diagnosis and treatment. Approximately

**10,000** people in Europe are affected by SMA, a leading genetic cause of infant mortality.

#### We are dedicated to enhancing the lives of those with SMA and their families.

Spinal muscular atrophy (SMA) is a rare, genetic, progressive, neuromuscular disease that affects infants, children and adults. It is a leading genetic cause of death in infants and causes a range of disability in teenagers and adults as a result of muscle weakness and progressive loss of movement.\*\*

SMA affects people of all ages and is diagnosed through newborn screening, genetic or prenatal testing. Infants currently represent approximately 6% of those living with SMA. Children account for about 33% of the population living with SMA, while adults represent around 61%.\*\*\*

In 2016, Biogen launched the world's first approved therapy for the treatment of SMA and, since then, we have worked with governments and healthcare providers around the world to provide urgent access to treatment for people of all ages with SMA. We are committed to removing barriers to access, increasing early screening and diagnosis, working closely with the community to support people living with SMA and their families, and continuing to advance research into new potential treatment approaches.



Marci Living with SMA

- \* Verhaart et al. Orphanet Journal of Rare Diseases (2017) 12:124
- \*\* National Institute of Neurological Disorders and Stroke, NIH. Spinal Muscular Atrophy Fact Sheet
- \*\*\* Biogen data on file



approximate cost savings estimated to healthcare systems across Europe in 2021.\*

Biosimilars are helping to answer one of Europe's greatest challenges: expanding access to treatments while estimated to save healthcare systems billions.<sup>\*</sup>

#### "

**Biosimilars** 

Living with a chronic, progressive disease, having access to the right treatment at the right time made a real difference in my quality of life."

**Nicole** Living with rheumatoid arthritis Biosimilars allow people to benefit from highly effective, potentially lifechanging treatments. For healthcare systems that are under pressure from aging populations, biosimilars broaden patient access while delivering cost savings to support long-term sustainability.

In Europe, Biogen is leading the way with anti-TNF biosimilars in chronic, inflammatory conditions such as rheumatoid arthritis, ulcerative collitis, Crohn's disease, and psoriasis.

In 2021, Biogen's biosimilars treated more than 249,000 patients and are estimated to have delivered associated cost savings of approximately €2.6 billion across European healthcare systems\*. Biosimilars could lower healthcare systems costs broadly and enable governments to potentially redirect savings to priorities such as increasing access to transformative therapies.

\* Biogen data on file as of December 31, 2021.

As we look to the future, we are focused on driving the next wave of growth in four priority areas, addressing areas of high unmet need.



#### Neurology

Expanding on Biogen's leadership in neuroscience with a diversified pipeline.



#### Specialized Immunology

Delivering first-in-class and best-in-class lupus therapies.



#### **Biosimilars**

Providing patient access to innovative medicines and contributing to healthcare sustainability.



#### **Digital Health**

Accelerating efforts to build complementary digital solutions and technologies to potentially predict, measure and prevent disease.

## Advancing a robust and diversified portfolio

Our pipeline focuses on transforming the standard of care in areas of high unmet need.

We aim to transform patients' lives by pioneering and leading in neuroscience. Our goal is to offer treatments for devastating neurological diseases, including several rare conditions. We led the way in MS and SMA and are now working towards treatments for neuromuscular diseases, specialized immunology and more.

We are also investing in connected areas of need such as major depressive disorders (MDD), a common co-morbidity of neurological conditions. We are addressing this area of unmet need through our global collaboration with Sage Therapeutics, combining our leading capabilities in neuroscience with Sage's deep expertise in psychiatry.

We persist where others have given up. Despite setbacks, we continue to pursue the science, discovering new possibilities for treating disease and improving people's lives.

Yesterday	2016-2020	Early-mid 2020s	Mid–late 2020s
			GENETIC NEURODEVELOPMENTAL
			PARKINSON'S DISEASE / MOVEMENT DISORDERS
			LUPUS
			STROKE
		DEPRESSION	NEUROPSYCHIATRY
		ALZHEIMER'S DISEASE	ALZHEIMER'S DISEASE
	BIOSIMILARS	EXPANDED BIOSIMILARS	EXPANDED BIOSIMILARS
	SPINAL MUSCULAR ATROPHY	NEUROMUSCULAR	NEUROMUSCULAR
MULTIPLE SCLEROSIS	MULTIPLE SCLEROSIS	MULTIPLE SCLEROSIS	MULTIPLE SCLEROSIS

Pioneering science that creates access to innovation.

At Biogen, innovation is not limited to the lab. We bring the same fresh thinking, determination, and commitment to work collaboratively with healthcare systems and communities to provide sustainable, affordable, and potentially life-changing care to as many people as possible. We aspire to transform patients' lives by making personalized and digital medicine in neuroscience a reality.

Biogen Digital Health is dedicated to pioneering personalized and digital medicine in neuroscience. Recent advances in the understanding of disease biology, along with an exponential acceleration in technologies, are paving the way for a shift in how diseases of the central nervous system (CNS) are diagnosed, measured and treated.

We believe that now, more than ever, biology and technology should go hand in hand to better meet patient needs while enabling a shift toward more prevention-focused, affordable and equitable care. Building complementary digital solutions that predict, measure and prevent disease is of particular importance in neuroscience due to the heterogeneity and complexity of measuring neurological disease progression.

For example, developing validated digital biomarkers may enable us to accelerate clinical development and increase the probability of success of our pipeline assets, and also create opportunities for clinicians to better monitor disease progression with more sensitive and predictive measures than those currently available. As pioneers in neuroscience, we will explore synergistic opportunities for digital therapeutics to further address the unmet needs of patients.



#### Our bioreactor capacity is among the largest in biotech.

Europe plays a crucial role in our manufacturing and production, helping us maintain a secure supply for patients across the region and around the world. Our European operations also supply North America and other countries around the world, contributing to the EU's €109 billion\* trade surplus in pharmaceuticals.

Europe will remain critical in the future of Biogen's production. We have recently invested around €2bn in our next-generation biologics manufacturing facility in Solothurn, Switzerland, creating more than 520 high-skilled jobs.\*\*

The next generation manufacturing facility will produce up to 10 metric tonnes of antibody per year, helping provide meaningful therapies to patients with serious medical conditions around the globe. With its strategic position at the center of Europe, Solothurn will allow the production and supply of high quality medicines.

€2bn

investment in our new manufacturing facility in Switzerland.

\* European Commission, Pharmaceutical Strategy for Europe 2020 \*\* Biogen data on file as of March 30, 2021



## We believe in science that addresses the urgent challenges facing humankind.

Our vision is to have an impact far beyond our medicines and therapies. We aim to improve patient health outcomes, solve social and environmental challenges, cultivate a workplace in which our employees can thrive, support local communities, and inspire future generations of scientists. Because we believe that pioneering should not be limited by our company's walls.

#### We are now advancing the science of climate and health.

We are taking an active, pioneering role in facing one of the greatest challenges of our time: the climate crisis and its impact on human health. Nearly 9 million lives are lost each year to air pollutionrelated health problems, making it one of the leading causes of death worldwide.\*

In 2014, we took a leadership position on climate change by becoming carbon neutral. As climate science has evolved, we have established new science-based targets for climate and health, and we are the first *Fortune* 500 company committing to becoming fossil fuel free by 2040.

Healthy Climate, Healthy Lives<sup>™</sup> is a ground-breaking, 20-year, \$250 million initiative to eliminate fossil fuels across our operations and to collaborate with global leaders and renowned institutions to advance the science of climate change and its impact on human health.

Cardiovascular Research: Loss of life expectancy from air pollution compared to other risk factors: a worldwide perspective, September 1 2020



initiative to eliminate fossil fuels across our operations.

2040

The year by which we are committed to becoming fossil fuel free.

Biogen

## 9 years

as Biotech leader on Dow Jones Sustainability Index.\*\*

\*RobecoSAM and S&P Global

#### Science at Biogen is inspired by the diversity and passion of our people.

Diversity leads to better teamwork and collaboration, promotes respect and trust, reinforces cultural competence and drives success with our patients, providers, and suppliers.

Globally, 48% of director-level-and-above positions were held by women in 2020, and 26% of Biogen's U.S. director-level and-above positions are held by ethnic or racial minorities<sup>\*</sup>. We are equally committed to furthering Diversity, Equity and Inclusion outside of our walls. Since 2002 our Community Labs have given approximately 61,000 students a hands-on introduction to the wonders of science.

We want young people to know that, through science, they can change the world. So, we are inspiring the next generation to pursue science, technology, engineering, and mathematics (STEM) subjects and we are focused on making STEM education and careers accessible to diverse populations.

Through the Biogen Foundation and our employee volunteering program, Care Deeply Every Day, we also aim to have a positive impact on the broader community, supporting charities and social enterprises worldwide.

\*Biogen data on file as of December 31, 2021. While our policies and practices are global, the laws in many countries outside the US do not permit us to collect employees' ethnic or racial data.

## 61,000

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

## **48**%

women at director-level or above at Biogen.

## 4th

consecutive year scoring 100% on 2021 Disability Equality Index.

## 8th

consecutive year recognized as a Best Place to Work for LGBTQ Equality by the Human Rights Campaign.

#### **Biogen Safe Harbour**

This document contains forward-looking statements, including statements made pursuant to the Private Securities Litigation Reform Act of 1995, relating to: Biogen's strategy and plans; potential of our commercial business and pipeline programs; clinical development programs, potential safety and efficacy of our products and investigational therapies; risks and uncertainties associated with drug development and commercialization; the potential benefits, safety and efficacy of our and our collaboration partners' products and investigational therapies; regulatory filings and the timing thereof; anticipated benefits and potential of investments related to and anticipated timelines of our Healthy Climate, Healthy Lives initiative, our Diversity, Equity & Inclusion (DE&I) initiatives and other related Environmental, Social and Governance (ESG) and corporate responsibility initiatives; and anticipated benefits and potential of investments, collaborations and business development activities.

These statements may be identified by words such as "aim," "anticipate," "believe," "could," "estimate," "expect," "forecast," "goal," "intend," "may," "plan," "possible," "potential," "will," "would" and other words and terms of similar meaning. 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 without limitation 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; 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 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; 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; the direct and indirect impacts of the ongoing COVID-19 pandemic on our business, results of operations and financial condition; 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; and any other risks and uncertainties that are described in other reports we have filed with the U.S. Securities and Exchange Commission.

The foregoing sets forth many, but not all, of the factors that could cause actual results to differ from Biogen's expectations in any forward-looking statement. Investors should consider this cautionary statement as well as the risk factors identified in Biogen's most recent annual or quarterly report and in other reports it has filed with the U.S. Securities and Exchange Commission.

These statements are based on Biogen's current beliefs and expectations and speak only as of May 1, 2022. Biogen does not undertake any obligation to publicly update any forward-looking statements, whether as a result of new information, future developments or otherwise.

