



# First Quarter 2020

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Financial Results and Business Update

April 22, 2020

# Forward-looking statements

This presentation 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; potential of our commercial business and pipeline programs; capital allocation and investment strategy; clinical development programs, clinical trials, and data readouts and presentations; risks and uncertainties associated with drug development and commercialization; regulatory filings and the timing thereof; the potential benefits, safety, and efficacy of our products and investigational therapies; the anticipated benefits and potential of investments, collaborations, and business development activities; our future financial and operating results; the direct and indirect impact of COVID-19 on our business and operations, including sales, expenses, supply chain, manufacturing, research and development costs, clinical trials, and employees; and our ability to achieve our environmental, social and governance goals, commitments, and targets. 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; failure to 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; 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; 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; difficulties in obtaining and maintaining adequate coverage, pricing, and reimbursement for our products; risks relating to technology failures or breaches; 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 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; risks related to commercialization of biosimilars; fluctuations in our operating results; fluctuations in our effective tax rate; risks related to investment in properties; the market, interest, and credit risks associated with our portfolio of marketable securities; risks relating to share repurchase programs; risks relating to access to capital and credit markets; risks related to indebtedness; environmental risks; 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; change in control provisions in certain of our collaboration agreements; and the other risks and uncertainties that are described in the Risk Factors section of our most recent annual or quarterly report and 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 the date of this presentation. We do not undertake any obligation to publicly update any forward-looking statements.

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# Q1 2020 earnings call agenda

## Introduction

**Joe Mara**

VP, Investor Relations

## Overview

**Michel Vounatsos**

Chief Executive Officer

## R&D Update

**Al Sandrock, M.D., Ph.D.**

EVP, Research & Development

## Financial Update

**Jeff Capello**

EVP, Chief Financial Officer

## Closing Remarks

**Michel Vounatsos**

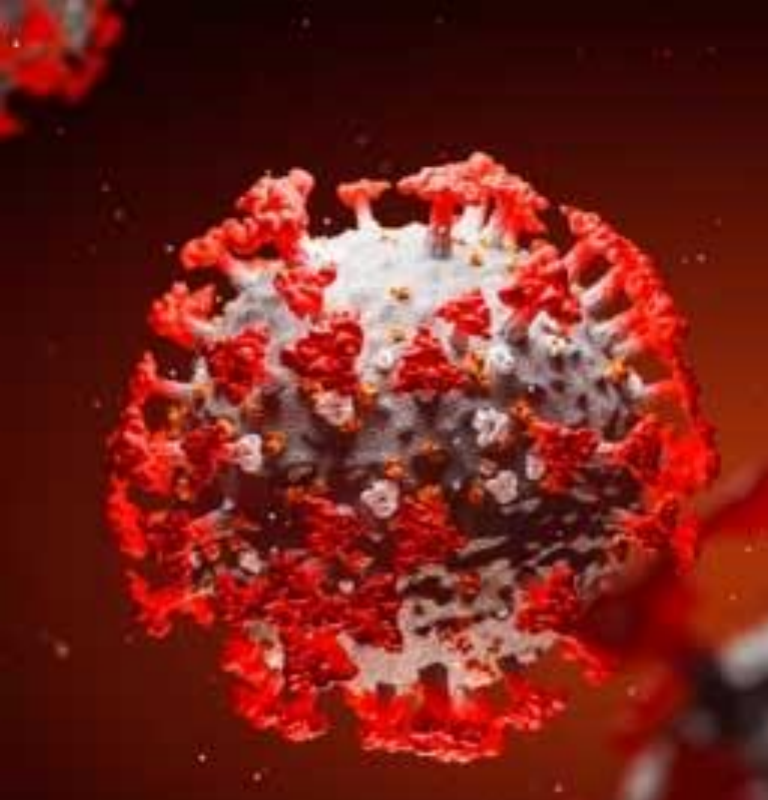
Chief Executive Officer

# Overview

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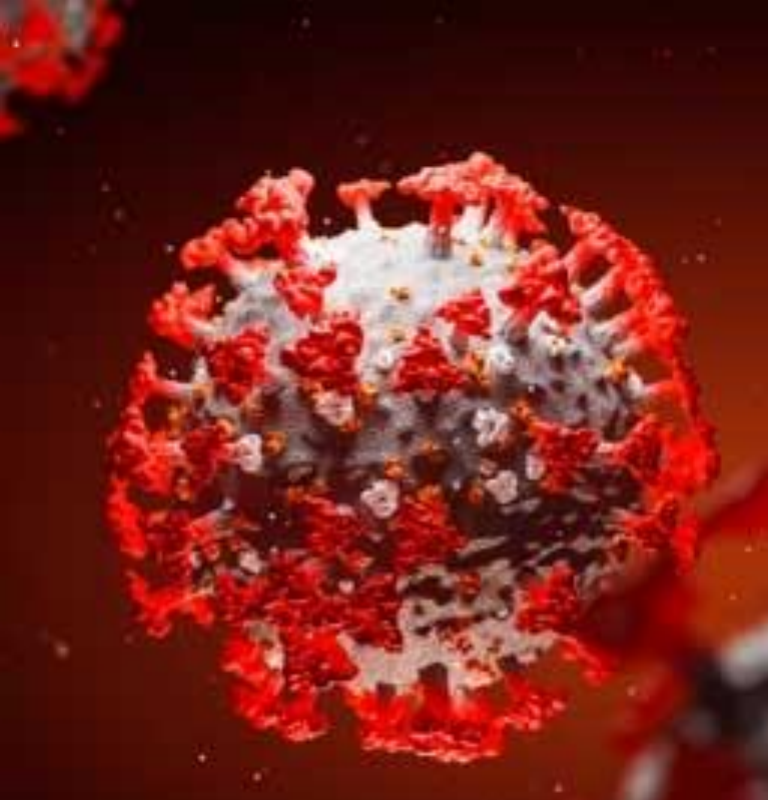
Michel Vounatsos  
Chief Executive Officer





- **Implementing policies and practices to safeguard our employees and communities**
- **Providing medical equipment and supplies and donating 3D-printed personal protective equipment**
- **Committing \$10 million from the Biogen Foundation to support global response efforts**
- **Facilitating volunteer efforts by employees**
- **Engaging with investigators who may want to evaluate the potential of our interferon therapies to treat COVID-19**
- **Launching consortium with Broad Institute of MIT and Harvard and Partners Healthcare to build and share a COVID-19 biobank**
- **Pursuing a process development and manufacturing collaboration with Vir Biotechnology, Inc.**

## **Biogen's response to COVID-19**



## **Working on innovative approaches to both mitigate risks and identify new opportunities across R&D, manufacturing, medical, and commercial operations**

Supply chain: Working with organizations across the supply chain to maintain continuity, while continuing to closely monitor the evolving situation

Clinical studies: Working on a case by case basis to continue safely advancing as many clinical trials as possible. Pursuing innovative approaches such as remote monitoring, remote patient visits, and supporting home infusions. Expect vast majority of the 10 remaining readouts highlighted on Q4 2019 earnings call to occur before the end of 2021.

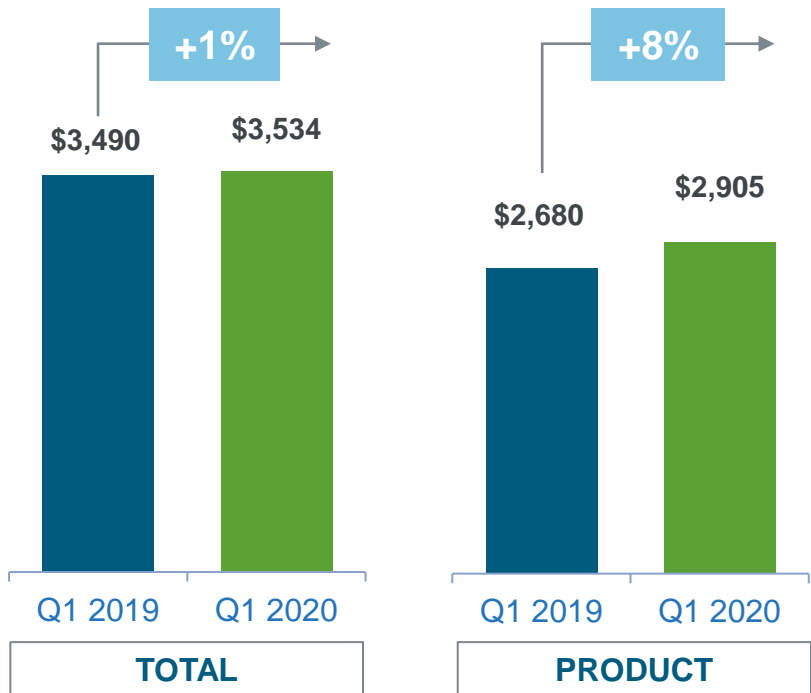
Regulatory: Continuing frequent regulatory interactions, including for aducanumab

Business operations: Adjusted commercial and medical affairs operations; accelerated digital engagement; working to enable home infusions of TYSABRI where appropriate

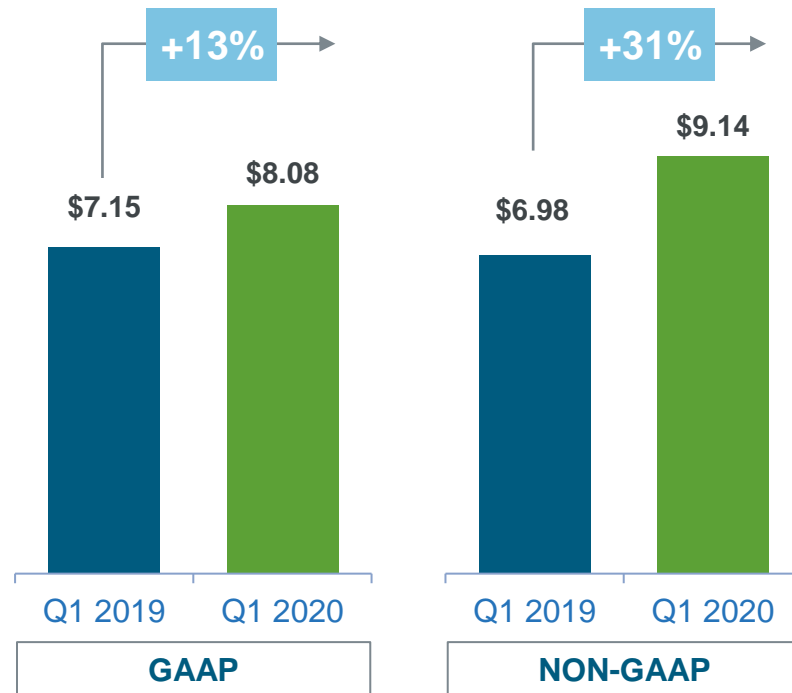
**Adapting to business impacts of COVID-19**

# Strong performance in Q1 2020

## Revenues (\$M)



## Diluted EPS (\$)





**Leading in  
Alzheimer's disease**

**Good progress toward regulatory filing in the U.S. for aducanumab**

**Open Biologics License Application (BLA); started to submit modules**

**Additional formal interactions with FDA using mechanisms such as Type C meetings**

**Preparing for pre-BLA meeting, currently scheduled for the summer of 2020**

**Expect to complete the U.S. filing in Q3 2020**

**Initial discussions with regulators in E.U./Japan**



# Strong progress implementing strategy

## Maximizing the resilience of our MS core business

- ☑ Q1 2020 MS revenues, including OCREVUS, increased 9% to \$2.3 billion
- ☑ Global MS patients increased 3% versus Q1 2019
- ☑ Continued U.S. launch of VUMERITY\* and planning for other markets

## Accelerating our neuromuscular franchise

- ☑ Q1 2020 SPINRAZA revenues increased 9% vs. Q1 2019 to \$565 million
- ☑ Over 10,000 patients on therapy globally as of March 31, 2020<sup>#</sup>
- ☑ New data published on SPINRAZA's efficacy in teens and adults
- ☑ Initiated DEVOTE study to evaluate a higher dose of SPINRAZA

## Unlocking the potential of biosimilars

- ☑ Q1 2020 biosimilars revenues increased 25% to \$219 million
- ☑ Contributed ~ €1.8 billion of healthcare savings in 2019 across Europe<sup>^</sup>

# Strong progress implementing strategy

## Leading in Alzheimer's disease

- ☑ Good progress toward regulatory filing in the U.S. for aducanumab; expect to complete in Q3 2020
  - ☑ Initiated EMBARK re-dosing study; believe not required for filing
  - ☑ Expect to have adequate supply to meet anticipated demand
  - ☑ Aim to build a broad franchise across multiple targets and modalities
- 

## Developing and expanding our neuroscience portfolio and pursuing therapeutic adjacencies

- ☑ Submitted regulatory filings for intramuscular PLEGRIDY in U.S. and E.U.
  - ☑ Multiple opportunities for near-term value-creation
  - ☑ Continuing to build a multi-franchise portfolio
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## Continuous improvement and diligent capital allocation

- ☑ Generated ~ \$1.5 billion in cash flow from operations in Q1 2020
- ☑ New collaboration with Sangamo Therapeutics for gene regulation therapies

# R&D Update

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Al Sandrock, M.D., Ph.D.  
EVP, Research & Development

# Clinical trial guiding principles during COVID-19

1

The safety of all our clinical trial participants and their healthcare providers and the integrity of the data we collect will remain paramount.

2

Given the importance of our clinical trials to patients with serious diseases, we aim to continue our ongoing clinical trials, as long as the risk to patient and healthcare provider safety, as well as data integrity, can be sufficiently mitigated.

3

We are generally allowing the enrollment of new patients, sites, and countries into ongoing clinical trials. However, this may be stopped on a study-by-study basis if such enrollment compromises our ability to mitigate risk to patient and healthcare provider safety and data integrity.

4

We may allow the initiation of new studies, as long as the risk to safety and data integrity can be sufficiently mitigated. We are implementing a limited pause on initiation of new trials evaluating molecules which suppress the immune system or specifically modulate antiviral responses.

5

We are reviewing informed consent forms from all studies to ensure that potential risks associated with travel to study sites, and where applicable, product-specific risks of viral infection are highlighted.

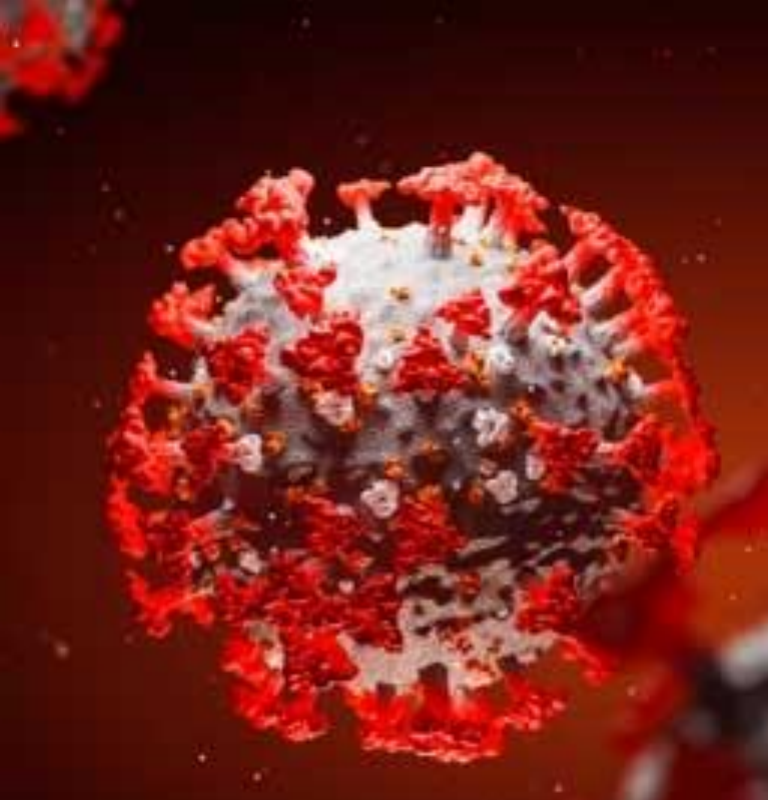


## Mitigating impact to our ongoing clinical studies

**Vast majority of the 10 remaining recently highlighted mid-to-late-stage data readouts still expected by end of 2021**

**Pursuing initiatives to mitigate further impact to our ongoing clinical studies, including:**

- Remote monitoring and remote data verification
- Supporting patient and staff travel to study sites
- Launching a direct-to-patient delivery service for our investigational therapies
- Supporting at-home infusions
- Providing telemedicine options to minimize the number of missed study visits and study withdrawals
- Conducting risk assessments to highlight study-specific risks, identify appropriate mitigation strategies, and ensure compliance with evolving regulatory guidelines



**Helping advance  
potential therapeutic  
solutions to COVID-19**

- **Launching a consortium** that will build and share a COVID-19 biobank working with the Broad Institute of MIT and Harvard and Partners HealthCare
- **Pursuing a collaboration with Vir Biotechnology** to accelerate process development and manufacturing of human monoclonal antibodies that may neutralize SARS-CoV-2, the virus responsible for COVID-19
- **Engaging with investigators** who may be interested in evaluating the potential of our beta-interferon products in the treatment of COVID-19



**Leading in  
Alzheimer's disease**

**Continued to make progress toward regulatory filing for aducanumab in the U.S.**

- Began to submit BLA modules and expect to complete the filing in Q3 2020

**Dosed the first patient in the EMBARK re-dosing study**

- Patients will be titrated to 10 mg/kg aducanumab infusions every 4 weeks

**Advancing a broad Alzheimer's disease portfolio, including BAN2401 and multiple tau-directed assets**



## Building depth in neuromuscular disorders

- Independent study in *Lancet Neurology* found that **SPINRAZA** treatment was associated with **statistically significant improvement in motor function in teens and adults**
- **Dosed the first patient in DEVOTE**, a Phase 2/3 study evaluating whether higher doses of SPINRAZA can provide even greater efficacy than the currently approved dose
- **Submitted IND for BIIB105**, an antisense oligonucleotide targeting ataxin-2 for sporadic ALS





**Continued to expand  
our market-leading  
MS portfolio**

**Submitted regulatory filings for an intramuscular formulation of PLEGRIDY in both the U.S. and E.U.**

- Bioequivalence between intramuscular and subcutaneous routes of administration on plasma exposures
- Proportion of patients reporting injection site reactions reduced by over 50% after intramuscular dosing compared to subcutaneous dosing

**FDA updated labels of AVONEX and PLEGRIDY to include data to assist HCPs when considering use during pregnancy**



## Progress in ophthalmology

- **Data from the Phase 1/2 dose-escalation study of BII112 (AAV-based gene therapy targeting XLRP) published in *Nature Medicine***
- **Results indicated an acceptable safety profile and dose-responsive gains in visual function**, with 7 of 18 patients experiencing early increases in central retinal sensitivity that were sustained at month 6 of follow-up



## **Announced broad collaboration with Sangamo Therapeutics**

- **Leverages Sangamo's proprietary zinc finger protein platform**
  - Enables generation of designer DNA-binding proteins that can be easily packaged into an AAV vector and serve as specific, potent, and tunable regulators of gene expression
- **Enables access to Sangamo's capsid engineering platform**
  - Potential to identify novel capsids to allow more efficient and specific delivery of AAV payloads to the CNS
- **Will first focus on programs for Alzheimer's disease, Parkinson's disease, and a third neuromuscular disease target**

# Advancing a broad pipeline toward a multi-franchise portfolio

## Core Growth Areas

Core Growth Areas	MS and Neuroimmunology	Opicinumab (anti-LINGO) – MS	Ph2
		BIIB061 (oral remyelination) – MS	Ph1
		BIIB091 (BTK inhibitor) – MS	Ph1
	Alzheimer's Disease and Dementia	Aducanumab (Aβ mAb)* – Alzheimer's	Ph3
		BAN2401 (Aβ mAb)* – Alzheimer's	Ph3
		BIIB092 (gosuranemab) – Alzheimer's	Ph2
		BIIB076 (anti-tau mAb) – Alzheimer's	Ph1
		BIIB080 (tau ASO) – Alzheimer's	Ph1
	Neuromuscular Disorders including SMA and ALS	BIIB067 (tofersen) – ALS	Ph3
		BIIB078 (IONIS-C9 <sub>Rx</sub> )# – ALS	Ph1
		BIIB110 (ActRIIA/B ligand trap) – SMA	Ph1
		BIIB100 (XPO1 inhibitor) – ALS	Ph1
Parkinson's Disease and Movement Disorders	BIIB054 (cinpanemab) – Parkinson's	Ph2	
	BIIB094 (ION859)# – Parkinson's	Ph1	
Ophthalmology	BIIB111 (timrepigene emparvovec) – Choroideremia	Ph3	
	BIIB112 (RPGR gene therapy) – XLRP	Ph2/3	
Emerging Growth Areas	Immunology / Other	Dapirolizumab pegol (anti-CD40L)* – SLE	Ph2
		BIIB059 (anti-BDCA2) – CLE/SLE	Ph2
Emerging Growth Areas	Neurocognitive Disorders	BIIB104 (AMPA) – CIAS	Ph2
	Acute Neurology	BIIB093 (glibenclamide IV) – LHI Stroke	Ph3
		TMS-007# – Acute Ischemic Stroke	Ph2
		BIIB093 (glibenclamide IV) – Brain Contusion	Ph2
	Pain	BIIB074 (vixotrigine) – Trigeminal Neuralgia	Ph2
		BIIB074 (vixotrigine) – Small Fiber Neuropathy	Ph2
	Biosimilars	BIIB095 (Nav 1.7) – Neuropathic Pain	Ph1
	SB11 (referencing LUCENTIS®)*	Ph3	

# Financial Update

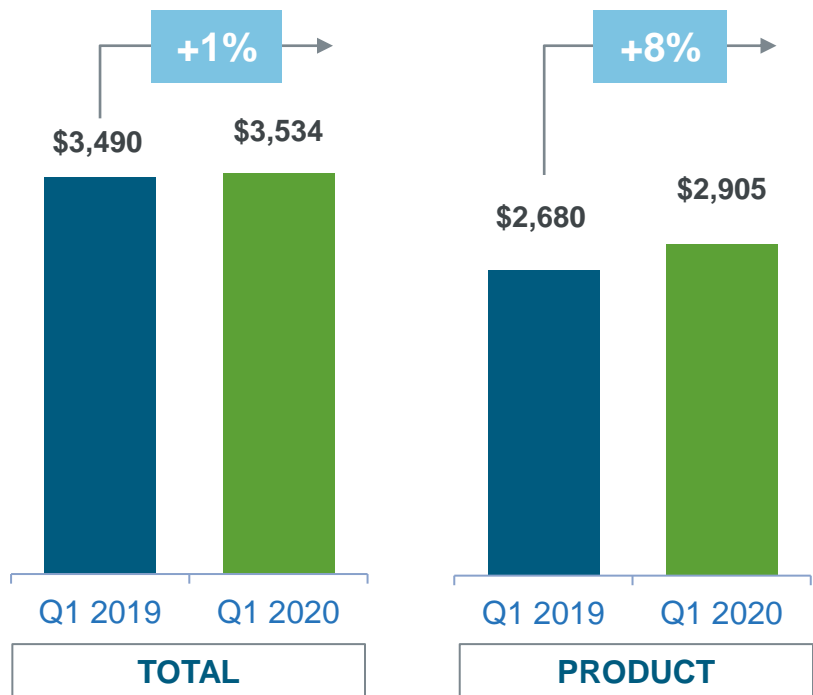
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Jeff Capello

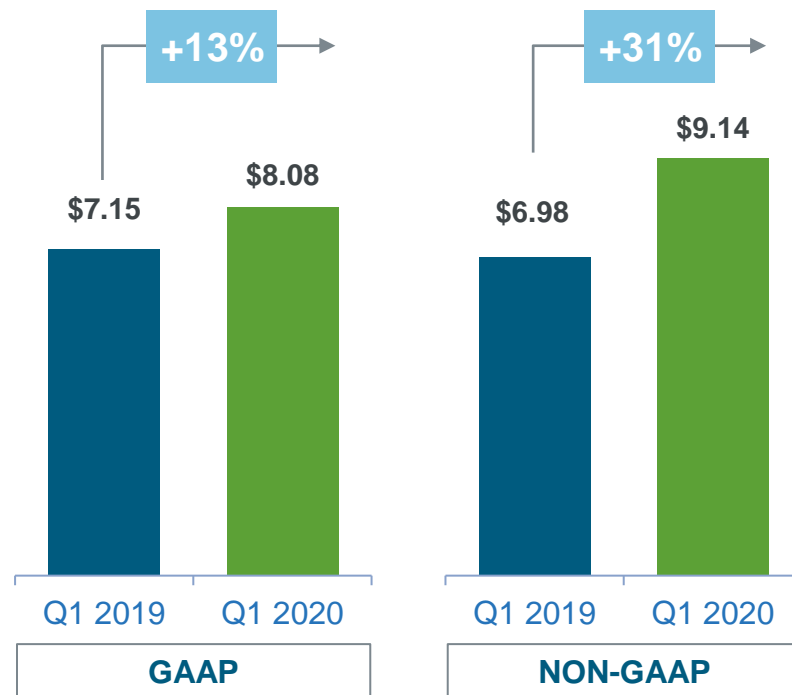
EVP, Chief Financial Officer

# Strong performance in Q1 2020

## Revenues (\$M)

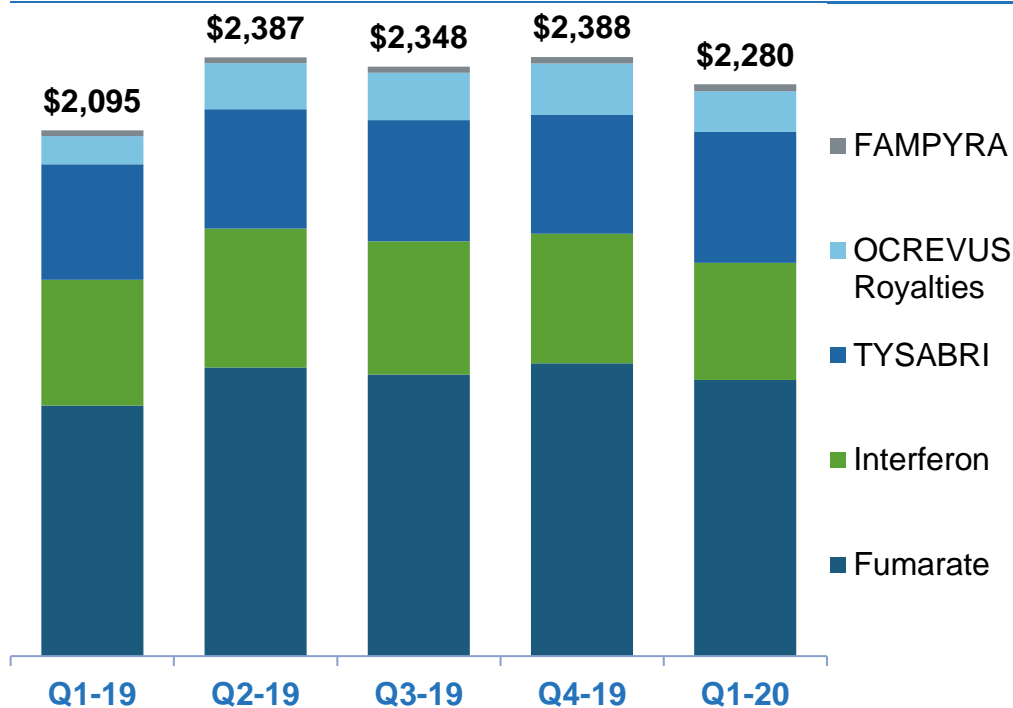


## Diluted EPS (\$)



# Global multiple sclerosis performance

## MS Revenues (\$M)



## Q1 2020 Highlights

- Revenues vs. Q1 2019 and Q4 2019

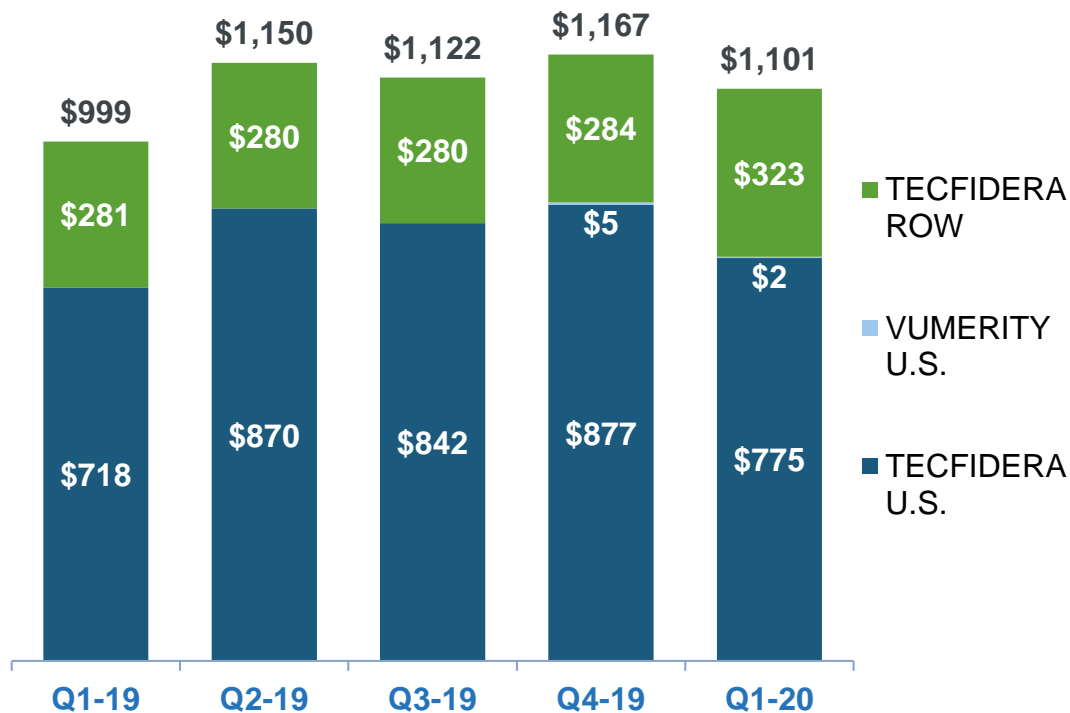
	<u>ΔYY</u>	and	<u>ΔQ/Q</u>
Total	+ 9%		- 5%
U.S. Product	+ 4%		- 11%
ROW Product	+ 11%		+ 15%
OCREVUS Royalties	+ 45%		- 21%

- Decrease in channel inventory in the U.S. of ~ \$115 million in Q1 2020 compared to decrease of ~ \$170 million in Q1 2019 and increase of ~ \$145 million in Q4 2019
- MS revenues in the U.S. benefitted by approximately \$54 million due to extra shipping days, roughly half of which impacted channel inventory
- Biogen believes that MS revenues benefitted by ~ \$15 million the U.S. and ~ \$59 million outside the U.S. due to COVID-19

# Global fumarate performance



## Fumarate Revenues (\$M)



## Q1 2020 Highlights

- Revenues vs. Q1 2019 and Q4 2019

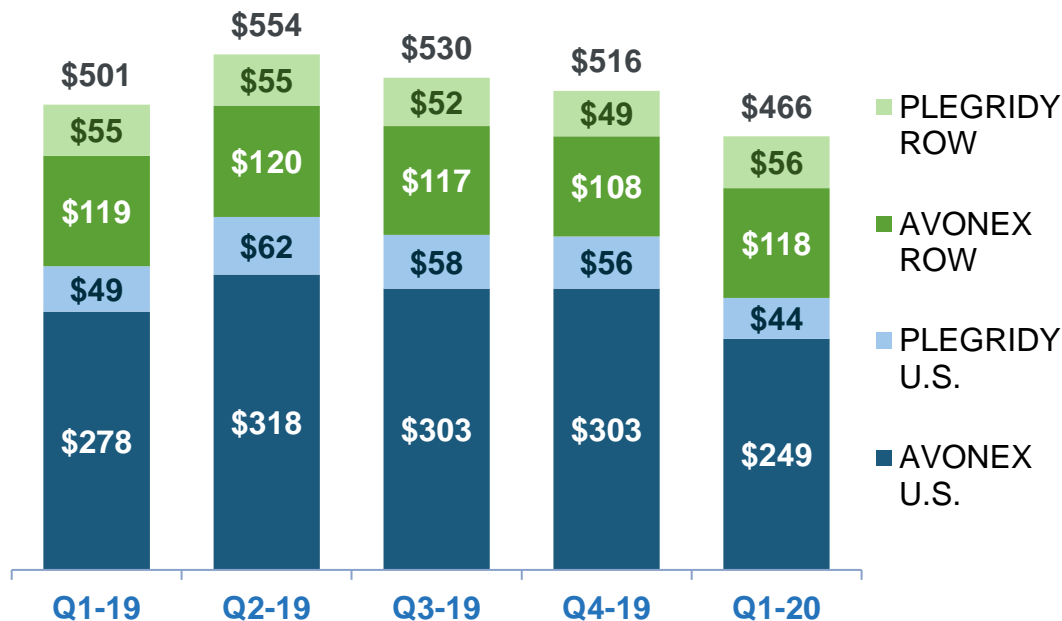
	<u>ΔY/Y</u>	and	<u>ΔQ/Q</u>
WW	+ 10%		- 6%
U.S.	+ 8%	and	- 12%
ROW	+ 15%	and	+ 14%

- Decrease in channel inventory in the U.S. of ~ \$85 million in Q1 2020 compared to decrease of ~ \$110 million in Q1 2019 and increase of ~ \$100 million in Q4 2019
- Fumarate revenues in the U.S. benefitted by approximately \$23 million due to extra shipping days
- Biogen believes that TECFIDERA revenues benefitted by approximately \$28 million outside the U.S. due to COVID-19



# Global interferon performance

## Interferon Revenues (\$M)



## Q1 2020 Highlights

- Revenues vs. Q1 2019 and Q4 2019

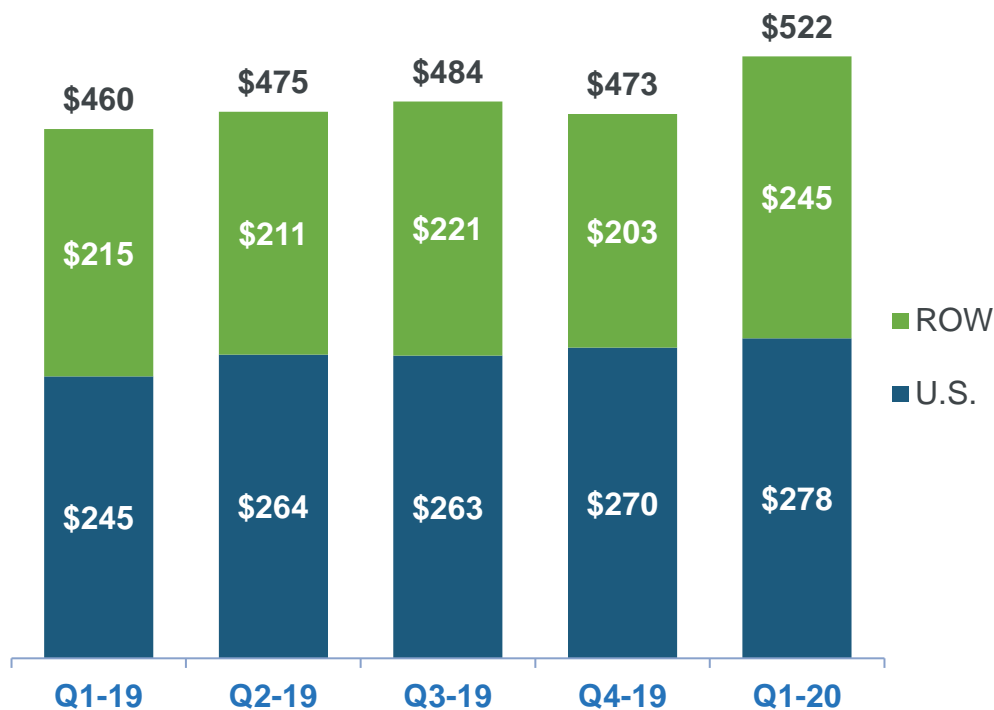
	<u>ΔY/Y</u>	and	<u>ΔQ/Q</u>
WW	- 7%		- 10%
U.S.	- 11%	and	- 19%
ROW	- 0%	and	+ 10%

- Decrease in channel inventory in the U.S. of ~ \$35 million in Q1 2020 compared to decrease of ~ \$50 million in Q1 2019 and increase of ~ \$30 million in Q4 2019
- Interferon revenues in the U.S. benefitted by approximately \$11 million due to extra shipping days
- Biogen believes that interferon revenues benefitted by approximately \$21 million outside the U.S. due to COVID-19

# Global TYSABRI performance



## TYSABRI Revenues (\$M)



Numbers may not foot due to rounding.

## Q1 2020 Highlights

- Revenues vs. Q1 2019 and Q4 2019

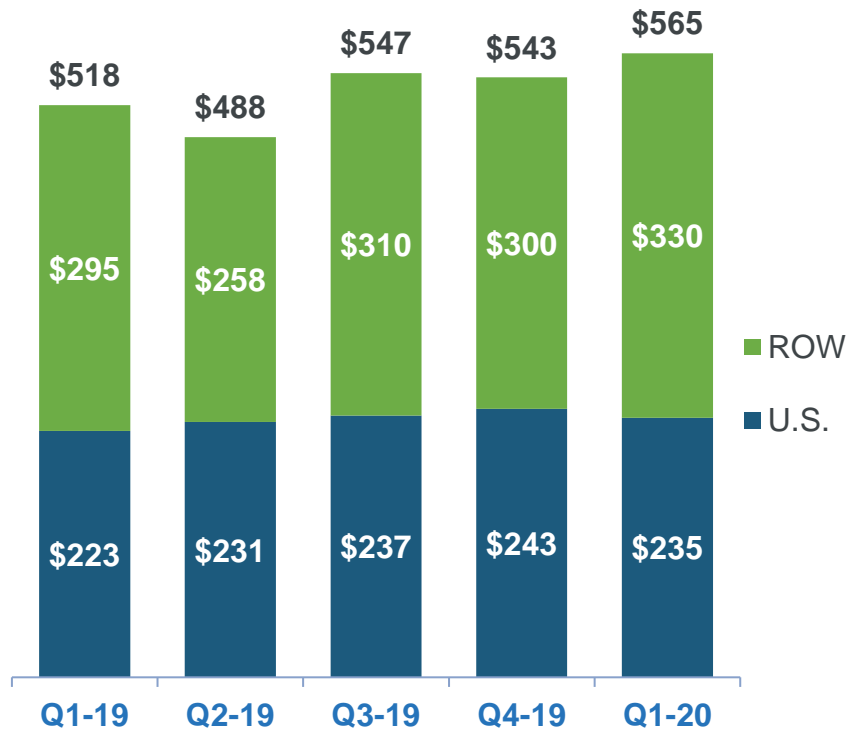
	$\frac{\Delta Y/Y}{}$	and	$\frac{\Delta Q/Q}{}$
WW	+ 13%		+ 10%
U.S.	+ 13%		+ 3%
ROW	+ 14%		+ 20%

- Increase in channel inventory in the U.S. of ~ \$5 million in Q1 2020 compared to decrease of ~ \$10 million in Q1 2019 and increase of ~ \$15 million in Q4 2019
- TYSABRI revenues in the U.S. benefitted by ~ \$20 million due to extra shipping days
- Biogen believes that TYSABRI revenues benefitted by ~ \$7 million outside the U.S. due to COVID-19
- TYSABRI revenues benefitted by ~ \$20 million due to a pricing adjustment in Italy related to prior periods

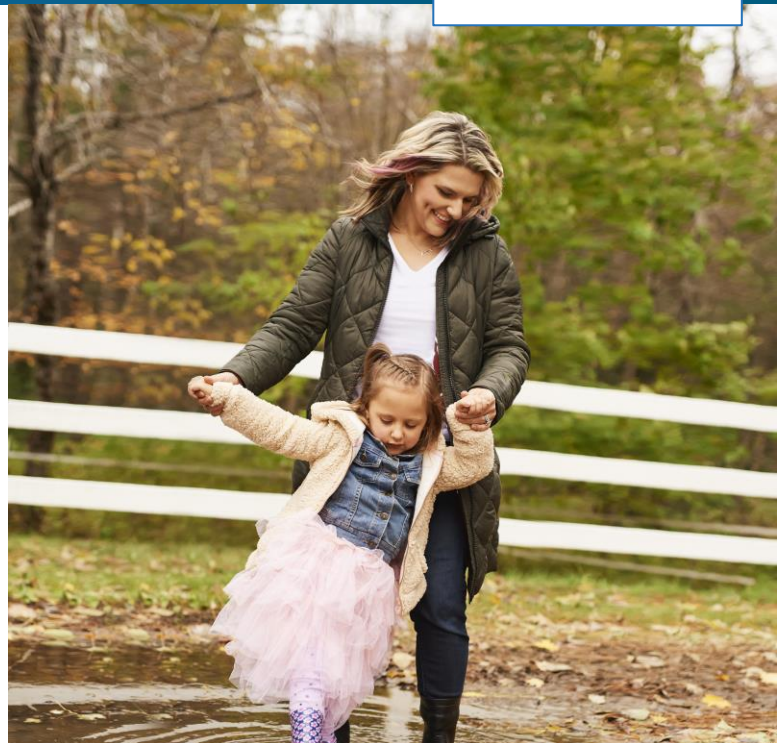
# Global SPINRAZA performance



## SPINRAZA Revenues (\$M)



Numbers may not foot due to rounding.

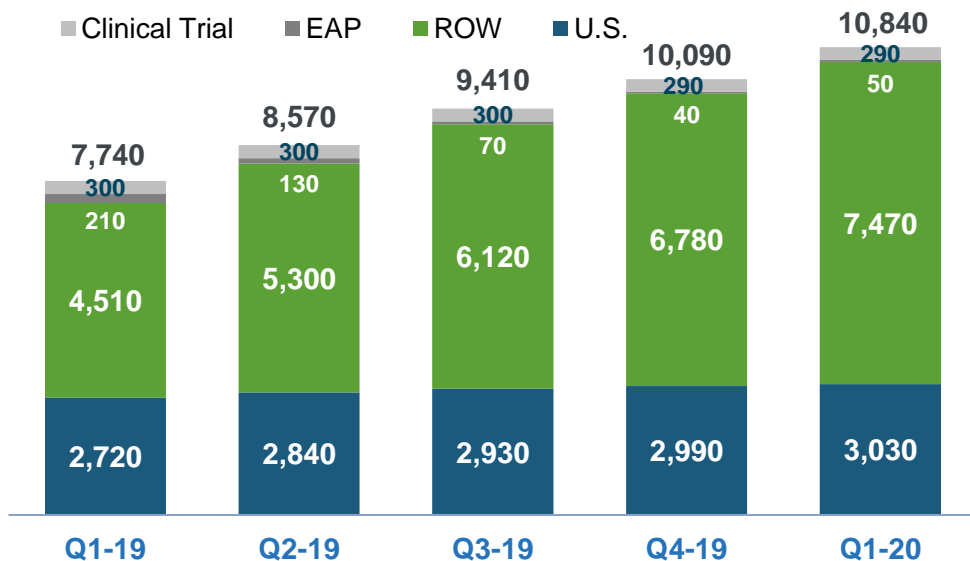


Approved in over 50 countries  
Formal reimbursement in 40 countries

# SPINRAZA patient dynamics



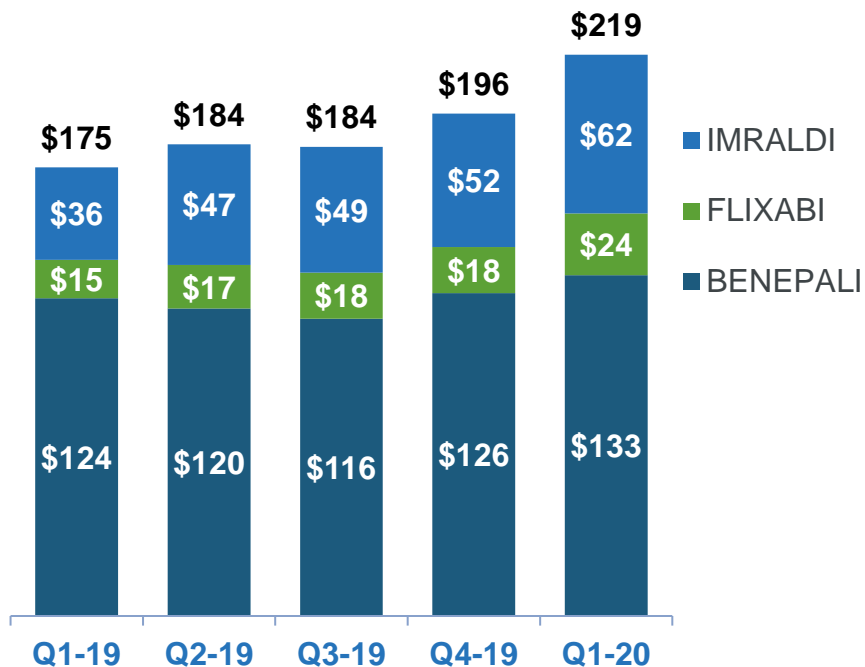
## SPINRAZA Patients



## Highlights

- As of March 31, 2020, ~ 10,800 patients on therapy across the post-marketing setting, the EAP, and clinical trials
- Biogen believes SPINRAZA revenues benefitted by ~ \$6 million in the U.S. and ~ \$5 million outside the U.S. due to COVID-19
- Despite some uncertainty in SPINRAZA's trajectory given COVID-19, Biogen believes there are continued opportunities for growth given the significant number of untreated patients, including in many established and emerging markets

### Biosimilars Revenues (\$M)



### Commercialization in Europe

- ~ 215,000 patients currently on biosimilars\*
- Biogen contributed ~ €1.8 billion of healthcare savings in 2019 across Europe<sup>#</sup>
- Estimated Q1 benefit of ~ \$15 million due to COVID-19

### 2019 Commercialization Agreement

- Biogen to commercialize potential ophthalmology biosimilars referencing LUCENTIS and EYLEA across the U.S., Canada, Europe, Japan, and Australia
  - Global market of almost \$11 billion in 2018<sup>^</sup>
- Commercialization rights to anti-TNFs in China

### Samsung Bioepis Joint Venture

- Equity stake ~49.9%

# Q1 2020 financial results highlights: revenues

\$ in Millions	Q1 2020	Q1 2019	Q4 2019	Δ Y/Y	Δ Q/Q
<b>Total MS Product Revenues<sup>1</sup></b>	<b>\$2,118</b>	<b>\$1,983</b>	<b>\$2,182</b>	<b>7%</b>	<b>(3%)</b>
SPINRAZA U.S.	\$235	\$223	\$243	5%	(3%)
SPINRAZA ROW <sup>1</sup>	\$330	\$295	\$300	12%	10%
<b>Total SPINRAZA Revenues<sup>1</sup></b>	<b>\$565</b>	<b>\$518</b>	<b>\$543</b>	<b>9%</b>	<b>4%</b>
Biosimilars Revenues	\$219	\$175	\$196	25%	12%
FUMADERM Revenues	\$3	\$4	\$4	(20%)	(9%)
<b>Total Product Revenues<sup>1</sup></b>	<b>\$2,905</b>	<b>\$2,680</b>	<b>\$2,925</b>	<b>8%</b>	<b>(1%)</b>
RITUXAN/GAZYVA Revenues	\$358	\$405	\$395	(12%)	(9%)
OCREVUS Royalties	\$162	\$112	\$205	45%	(21%)
<b>Revenues from Anti-CD20 Therapeutic Programs</b>	<b>\$520</b>	<b>\$517</b>	<b>\$601</b>	<b>1%</b>	<b>(13%)</b>
Other Revenues	\$109	\$292	\$146	(63%)	(25%)
<b>Total Revenues<sup>1</sup></b>	<b>\$3,534</b>	<b>\$3,490</b>	<b>\$3,671</b>	<b>1%</b>	<b>(4%)</b>

Numbers may not foot due to rounding. Percent changes represented as favorable/(unfavorable). For all periods, there were no adjustments between GAAP and Non-GAAP revenues.

<sup>1</sup> Net of Hedge

# Q1 2020 financial results highlights

\$ in Millions	Q1 2020	Q1 2019	Q4 2019	ΔY/Y	ΔQ/Q
GAAP Cost of Sales	\$454	\$602	\$447	25%	(2%)
% of Total Revenues	13%	17%	12%		
Non-GAAP Cost of Sales	\$454	\$602	\$447	25%	(2%)
% of Total Revenues	13%	17%	12%		
GAAP R&D Expenses	\$476	\$564	\$692	16%	31%
% of Total Revenues	13%	16%	19%		
Non-GAAP R&D Expenses	\$476	\$564	\$692	15%	31%
% of Total Revenues	13%	16%	19%		
GAAP SG&A Expenses	\$570	\$568	\$665	(0%)	14%
% of Total Revenues	16%	16%	18%		
Non-GAAP SG&A Expenses	\$569	\$563	\$662	(1%)	14%
% of Total Revenues	16%	16%	18%		
GAAP Divestiture of Assets	\$0	\$116	(\$40)	NMF	NMF
GAAP Amortization of Acquired Intangibles	\$72	\$68	\$68	(5%)	(6%)
Collaboration Profit (Loss) Sharing	\$72	\$58	\$60	(24%)	(20%)

# Q1 2020 financial results highlights

\$ in Millions except EPS, Shares in Millions	Q1 2020	Q1 2019	Q4 2019	Δ Y/Y	Δ Q/Q
GAAP Other Income (Expense)	(\$120)	\$357	(\$49)	(134%)	(144%)
Non-GAAP Other Income (Expense)	(\$60)	(\$19)	(\$50)	(216%)	(19%)
GAAP Tax Rate	17%	23%	16%		
Non-GAAP Tax Rate	17%	18%	16%		
GAAP JV Equity Income (Loss)	(\$15)	(\$29)	(\$13)	49%	(18%)
Non-GAAP JV Equity Income (Loss)	\$6	(\$14)	\$8	NMF	(24%)
GAAP Net Income (Loss) Attributable to Noncontrolling Interests	(\$7)	(\$0)	\$0	NMF	NMF
Non-GAAP Net Income (Loss) Attributable to Noncontrolling Interests	(\$3)	(\$0)	\$0	NMF	NMF
Weighted average diluted shares used in calculating diluted EPS	173	197	178	12%	3%
GAAP Net Income Attributable to Biogen Inc.	\$1,399	\$1,409	\$1,440	(1%)	(3%)
<b>GAAP Diluted EPS</b>	<b>\$8.08</b>	<b>\$7.15</b>	<b>\$8.08</b>	<b>13%</b>	<b>0%</b>
Non-GAAP Net Income Attributable to Biogen Inc.	\$1,582	\$1,374	\$1,486	15%	6%
<b>Non-GAAP Diluted EPS</b>	<b>\$9.14</b>	<b>\$6.98</b>	<b>\$8.34</b>	<b>31%</b>	<b>10%</b>

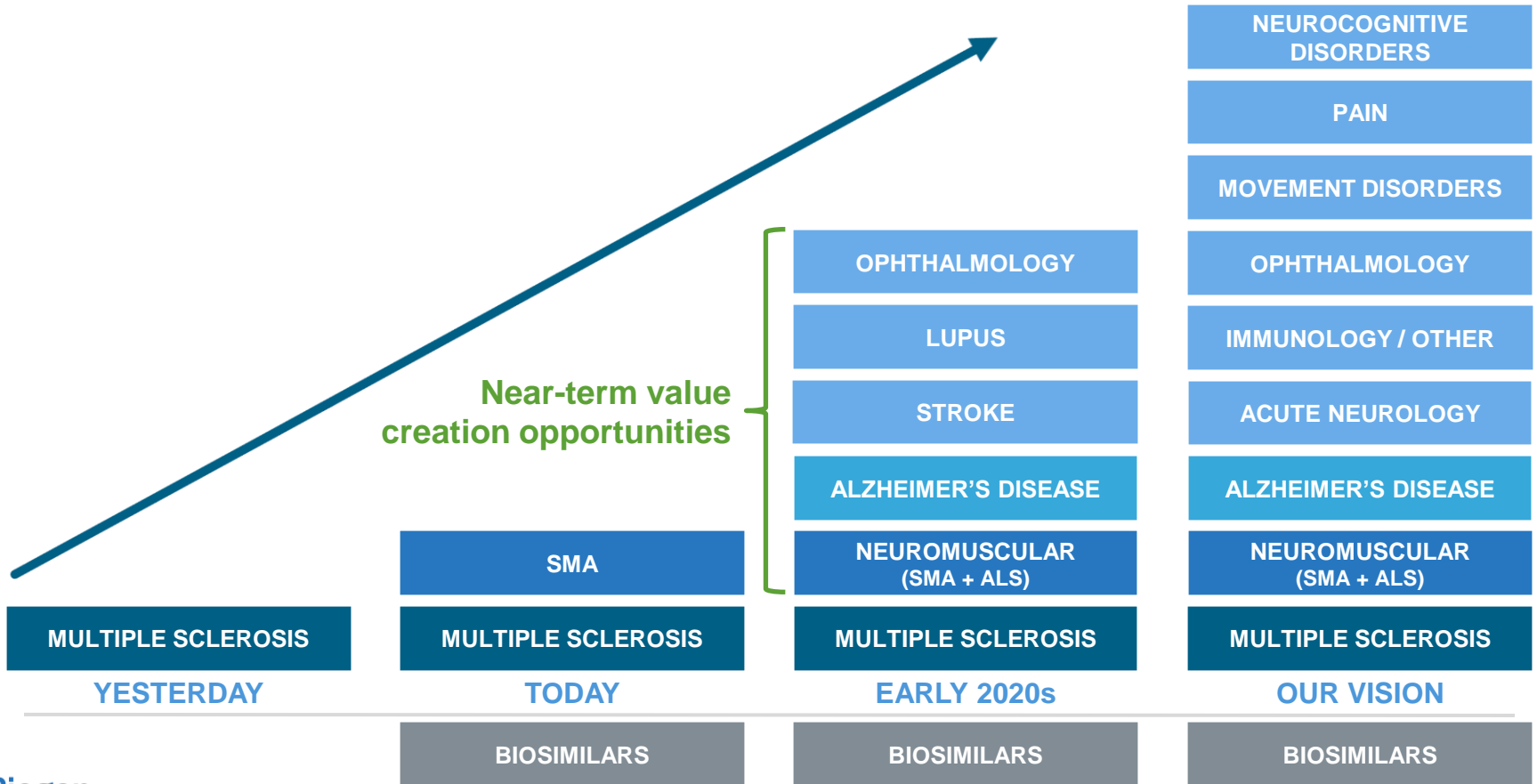


# Closing Remarks

Michel Vounatsos  
Chief Executive Officer



# Continuing to build a multi-franchise portfolio



# Where science meets humanity at Biogen

## PATIENTS



Science that transforms patient lives by improving brain health, mobility, breathing, and vision.

~ 215,000 Patients treated with biosimilars<sup>^</sup>

1 in 10 MS Patients across 10 Global Markets utilize digital applications (Aby/CLEO)<sup>^^</sup>

Driving Health Equity in clinical trial participation

Donated to n-Lorem Foundation to support its mission of providing access to experimental ASOs\* for ultra-rare diseases

## EMPLOYEES



Science that is inspired by the diversity and passion of our people.

46% women in director-level positions and above<sup>^^</sup>

26% ethnic or racial minorities U.S. director-level roles and above<sup>^^</sup>

Signed CEO Action Pledge to advance diversity & inclusion goals

'Best Place to Work for Disability Inclusion' 3 consecutive years

100% on Human Rights Campaign Equality Index

## ENVIRONMENT



Science that acts with purpose to address the urgent and long-term challenges facing humankind.

3 consecutive years as #1 Biotech on Dow Jones Sustainability Index<sup>\*\*</sup>

RobecoSAM Gold Award Winner for our work in sustainability

Reduced environmental footprint in 2019 as we grew the business -1.6% energy / -3% water / -7% waste

Joined EV100 to transition fleet to electric vehicles

Green chemistry principles lowered impact and costs

## COMMUNITY



Science that seeks to solve societal problems and create access to innovation.

\$10M donated by Biogen Foundation for COVID-19 relief currently supporting 46 non-profits globally

55k+ students engaged in Community Lab since inception<sup>^^</sup>

54% summer Community Lab students from underrepresented groups and/or low-income households in 2019<sup>^^</sup>

35% increase in 2019 total volunteer hours including 30+ countries for Care Deeply Day

Biogen Foundation is supporting MGH Youth Neurology Program to inspire underrepresented youth in STEM

# Questions & Answers

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# Appendix

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# Q1 2020 financial results highlights: MS revenues

\$ in Millions	Q1 2020	Q1 2019	Q4 2019	Δ Y/Y	Δ Q/Q
TECFIDERA U.S.	\$775	\$718	\$877	8%	(12%)
TECFIDERA ROW <sup>1</sup>	\$323	\$281	\$284	15%	14%
<b>Total TECFIDERA Revenues<sup>1</sup></b>	<b>\$1,098</b>	<b>\$999</b>	<b>\$1,161</b>	<b>10%</b>	<b>(5%)</b>
VUMERITY U.S.	\$2	-	\$5	NMF	NMF
<b>Total Fumarate Revenues<sup>1</sup></b>	<b>\$1,101</b>	<b>\$999</b>	<b>\$1,167</b>	<b>10%</b>	<b>(6%)</b>
AVONEX U.S.	\$249	\$278	\$303	(11%)	(18%)
AVONEX ROW <sup>1</sup>	\$118	\$119	\$108	(1%)	9%
<b>Total AVONEX Revenues<sup>1</sup></b>	<b>\$366</b>	<b>\$397</b>	<b>\$411</b>	<b>(8%)</b>	<b>(11%)</b>
PLEGRIDY U.S.	\$44	\$49	\$56	(11%)	(22%)
PLEGRIDY ROW <sup>1</sup>	\$56	\$55	\$49	2%	13%
<b>Total PLEGRIDY Revenues<sup>1</sup></b>	<b>\$100</b>	<b>\$104</b>	<b>\$106</b>	<b>(4%)</b>	<b>(6%)</b>
<b>Total Interferon Revenues<sup>1</sup></b>	<b>\$466</b>	<b>\$501</b>	<b>\$516</b>	<b>(7%)</b>	<b>(10%)</b>
TYSABRI U.S.	\$278	\$245	\$270	13%	3%
TYSABRI ROW <sup>1</sup>	\$245	\$215	\$203	14%	20%
<b>Total TYSABRI Revenues<sup>1</sup></b>	<b>\$522</b>	<b>\$460</b>	<b>\$473</b>	<b>13%</b>	<b>10%</b>
FAMPYRA <sup>1</sup>	\$28	\$23	\$26	24%	10%
<b>Total MS Product Revenues<sup>1</sup></b>	<b>\$2,118</b>	<b>\$1,983</b>	<b>\$2,182</b>	<b>7%</b>	<b>(3%)</b>
OCREVUS Royalties	\$162	\$112	\$205	45%	(21%)
<b>MS Product Revenues<sup>1</sup> + OCREVUS Royalties</b>	<b>\$2,280</b>	<b>\$2,095</b>	<b>\$2,388</b>	<b>9%</b>	<b>(5%)</b>

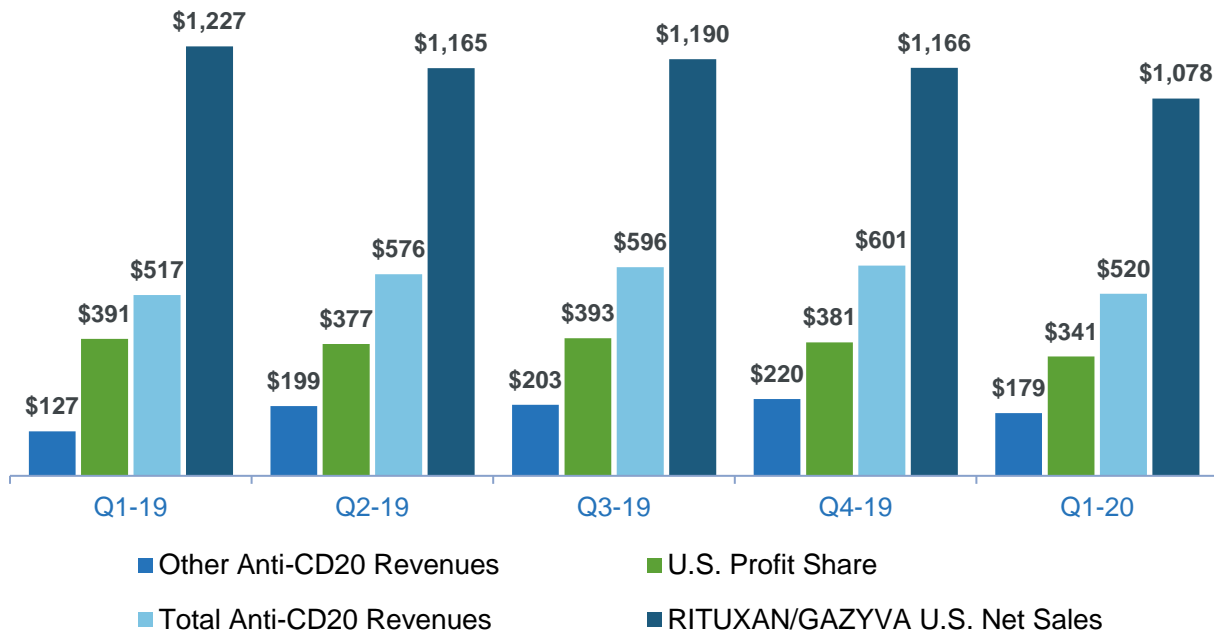
# Q1 2020 impact of foreign exchange and hedging

	Actuals	Hedge Gains (Losses) in the Quarter			FX Impact w/o Hedge Favorable/ (Unfavorable)		Hedge Impact Favorable/ (Unfavorable)		Total Impact Favorable/ (Unfavorable)	
	Q1'20	Q1'20	Q1'19	Q4'19	Vs. Q1'19	Vs. Q4'19	Vs. Q1'19	Vs. Q4'19	Vs. Q1'19	Vs. Q4'19
<b>Total Revenues</b>	<b>\$3,534</b>	<b>\$34</b>	<b>\$18</b>	<b>\$32</b>	<b>(\$34)</b>	<b>(\$7)</b>	<b>\$15</b>	<b>\$0</b>	<b>(\$18)</b>	<b>(\$7)</b>
TECFIDERA	\$1,098	\$16	\$8	\$16	(\$7)	(\$1)	\$8	\$0	\$0	(\$1)
Interferon	\$466	\$7	\$4	\$7	(\$6)	(\$1)	\$3	\$0	(\$3)	(\$0)
TYSABRI	\$522	\$9	\$6	\$10	(\$7)	(\$1)	\$3	(\$2)	(\$4)	(\$3)
SPINRAZA	\$565	\$2	\$0	(\$0)	(\$12)	(\$3)	\$2	\$2	(\$11)	(\$1)
Biosimilars	\$219	N/A	N/A	N/A	(\$3)	(\$1)	\$0	\$0	(\$3)	(\$1)



# Anti-CD20 performance

## Revenues from Anti-CD20 Therapeutic Programs (\$M)



## Highlights

- Revenues vs. Q1 2019 and Q4 2019

	<u>ΔY/Y</u>	<u>ΔQ/Q</u>
U.S. Net Sales	- 12%	and - 8%
U.S. Profit Share <sup>1</sup>	- 13%	and - 10%
Other Anti-CD20	+ 41%	and - 18%
Total Anti-CD20 Revenues	+ 1%	and - 13%

- Other anti-CD20 revenues consist of royalty revenues on sales of OCREVUS and our share of pre-tax copromotion profits on RITUXAN in Canada



# GAAP to Non-GAAP Reconciliation

## Net Income Attributable to Biogen Inc. and Diluted Earnings Per Share

(unaudited, in millions, except per share amounts)

An itemized reconciliation between diluted earnings per share on a GAAP and Non-GAAP basis is as follows:

	For the Three Months Ended		
	March 31, 2020	March 31, 2019	December 31, 2019
GAAP earnings per share - Diluted	\$ 8.08	\$ 7.15	\$ 8.08
Adjustments to GAAP net income attributable to Biogen Inc. (as detailed below)	1.06	(0.17)	0.26
Non-GAAP earnings per share - Diluted	\$ 9.14	\$ 6.98	\$ 8.34

An itemized reconciliation between net income attributable to Biogen Inc. on a GAAP and Non-GAAP basis is as follows:

	For the Three Months Ended		
	March 31, 2020	March 31, 2019	December 31, 2019
GAAP net income attributable to Biogen Inc.	\$ 1,399.1	\$ 1,408.8	\$ 1,439.7
Adjustments:			
Acquisition and divestiture related costs:			
Amortization and impairment of acquired intangible assets <sup>A</sup>	71.5	68.2	67.7
Acquired in-process research and development	75.0	—	—
(Gain) loss on fair value remeasurement of contingent consideration	(4.6)	11.5	2.6
Loss on divestiture of <del>Hillerød</del> , Denmark manufacturing operations <sup>B</sup>	—	115.5	(40.2)
Net distribution to noncontrolling interests	—	—	—
Acquisition-related transaction and integration costs	1.2	4.3	4.5
Subtotal: Acquisition and divestiture related costs	143.1	199.5	34.6
Restructuring, business transformation and other cost saving initiatives:			
2017 corporate strategy implementation <sup>C</sup>	—	1.0	0.5
Restructuring charges <sup>C</sup>	—	0.4	—
Subtotal: Restructuring, business transformation and other cost saving initiatives	—	1.4	0.5
(Gain) loss on equity security investments	60.9	(376.1)	(2.9)
Income tax effect related to reconciling items	(38.4)	126.1	(6.9)
Amortization included in Equity in loss of investee, net of tax <sup>D</sup>	17.3	14.7	20.6
Non-GAAP net income attributable to Biogen Inc.	\$ 1,582.0	\$ 1,374.4	\$ 1,485.6

## Use of Non-GAAP Financial Measures

We supplement our consolidated financial statements presented on a GAAP basis by providing additional measures which may be considered "Non-GAAP" financial measures under applicable SEC rules. We believe that the disclosure of these Non-GAAP financial measures provides additional insight into the ongoing economics of our business and reflects how we manage our business internally, set operational goals and form the basis of our management incentive programs. These Non-GAAP financial measures are not in accordance with generally accepted accounting principles in the United States and should not be viewed in isolation or as a substitute for reported, or GAAP, net income attributable to Biogen Inc. and diluted earnings per share.

Our "Non-GAAP net income attributable to Biogen Inc." and "Non-GAAP earnings per share - Diluted" financial measures exclude the following items from "GAAP net income attributable to Biogen Inc." and "GAAP earnings per share - Diluted":

### 1. Acquisition and divestiture related costs

We exclude transaction, integration and certain other costs related to the acquisition and divestiture of businesses. We exclude certain purchase accounting related items associated with the acquisition of assets and amounts in relation to the consolidation or deconsolidation of variable interest entities. These adjustments include, but are not limited to, charges for in-process research and development and certain milestones, the amortization and impairment of intangible assets, charges or credits from the fair value remeasurement of our contingent consideration obligations and losses on assets and liabilities held for sale.

### 2. Restructuring, business transformation and other cost saving initiatives

We exclude costs associated with our execution of certain strategies and initiatives to streamline operations, achieve targeted cost reductions, rationalize manufacturing facilities or refocus research and development activities. These costs may include employee separation costs, retention bonuses, facility closing and exit costs, asset impairment charges or additional depreciation when the expected useful life of certain assets have been shortened due to changes in anticipated usage and other costs or credits that management believes do not have a direct correlation to our ongoing or future business operations.

### 3. (Gain) loss on equity security investments

We exclude unrealized and realized gains and losses and discounts or premiums on our equity security investments as we do not believe that these components of income or expense have a direct correlation to our ongoing or future business operations.

### 4. Other items

We evaluate other items of income and expense on an individual basis and consider both the quantitative and qualitative aspects of the item, including (i) its size and nature, (ii) whether or not it relates to our ongoing business operations and (iii) whether or not we expect it to occur as part of our normal business on a regular basis. We also include an adjustment to reflect the related tax effect of all reconciling items within our reconciliation of our GAAP to Non-GAAP net income attributable to Biogen Inc. and earnings per share - diluted.

## Notes to GAAP to Non-GAAP Reconciliation

<sup>A</sup> Amortization and impairment of acquired intangible assets for the three months ended March 31, 2020, compared to the prior periods, increased primarily due to a net overall increase in our expected rate of amortization for acquired intangible assets.

<sup>B</sup> In March 2019 we entered into a share purchase agreement with FUJIFILM Corporation (FUJIFILM) to sell all of the outstanding shares of our subsidiary that owned our biologics manufacturing operations in Hillerød, Denmark. The transaction closed in August 2019.

In the first quarter of 2019 we recorded a loss of approximately \$174.6 million in our condensed consolidated statements of income. This estimated loss, which was subsequently remeasured each reporting period, included a pre-tax loss of \$115.5 million reflecting our estimated fair value of the assets and liabilities held for sale as of March 31, 2019, adjusted for our expected costs to sell our Hillerød, Denmark manufacturing operations of approximately \$10.0 million and includes our initial estimate of the fair value of an adverse commitment of approximately \$120.0 million associated with the guarantee of future minimum batch production at the Hillerød facility. The value of this adverse commitment was determined using a probability-weighted estimate of future manufacturing activity. In addition, we recorded a tax expense of \$59.1 million related to the planned transaction in the first quarter of 2019.

In August 2019 this transaction closed and we received approximately \$881.9 million in cash, which may be adjusted based on contractual terms, which are discussed below. We determined that the operations disposed of in this transaction did not meet the criteria to be classified as discontinued operations under the applicable guidance.

During the fourth quarter of 2019 we recorded a \$40.2 million reduction in our estimate of the future minimum batch commitment utilizing our revised manufacturing forecast, which reflects the impact of forecasted batches of aducanumab, an anti-amyloid beta antibody candidate for the potential treatment of AD that we are developing in collaboration with Eisai Co., Ltd., resulting in a reduction in the pre-tax loss on divestiture to \$55.3 million for 2019. Our estimate of the adverse commitment obligation is approximately \$74.0 million as of March 31, 2020 and December 31, 2019. We developed this estimate using a probability-weighted estimate of future manufacturing activity and may adjust this estimate based upon changes in business conditions, which may result in the increase or reduction of this adverse commitment obligation in subsequent periods. We also may be obligated to indemnify FUJIFILM for liabilities that existed relating to certain business activities incurred prior to the closing of this transaction.

In addition, we may earn certain contingent payments based on future manufacturing activities at the Hillerød facility. For the disposition of a business, our policy is to recognize contingent consideration when the consideration is realizable. Consistent with our assessment as of the transaction date, we currently believe the probability of earning these payments is remote and therefore we did not include these contingent payments in our calculation of the fair value of the operations

<sup>C</sup> 2017 corporate strategy implementation and restructuring charges are related to our efforts to create a leaner and simpler operating model.

<sup>D</sup> Amortization included in equity in loss of investee, net of tax represents the amortization of the differences between the fair value of our investment in Samsung Bioepis Co., Ltd. and the carrying value of our interest in the underlying net assets of the investee. These basis differences are amortized over their economic life.