



# Second Quarter 2020

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Financial Results and Business Update

July 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, including the enrollment of our clinical trials, and data readouts and presentations; risks and uncertainties associated with drug development and commercialization; regulatory discussions, submissions, filings, and approvals 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; 2020 financial guidance; and 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. These forward-looking statements may be accompanied by such words as “aim,” “anticipate,” “believe,” “could,” “estimate,” “expect,” “forecast,” “goal,” “intend,” “may,” “plan,” “potential,” “possible,” “prospect,” “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 (SEC).

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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# Q2 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





## Leading in Alzheimer's disease

- **Completed submission of Biologics License Application (BLA) to FDA for aducanumab**
- **If approved, aducanumab would be the first therapy to reduce the devastating clinical decline and meaningfully change the course of Alzheimer's disease**
- **Progressed in U.S. launch readiness; cross-functional team dedicated to site readiness now operational**
- **Preparing to submit regulatory filing and beginning to ramp up launch readiness in Europe**

# Significant opportunities for value creation in areas of high unmet need

## High Unmet Patient Need

~50M patients with dementia

<5 years average life expectancy  
for patients with ALS

~ 800,000 individuals with lupus\*

Stroke: 5<sup>th</sup> leading cause  
of death in the U.S.

Up to 200,000 patients with inherited  
retinal disorders in the U.S.

## 7 Readouts Expected by End of 2021

### Phase 3 readouts

Tofersen  
SOD1 ALS

BIIB111  
Choroideremia

### Phase 2 readouts

Opicinumab  
MS

Gosuranemab  
Alzheimer's

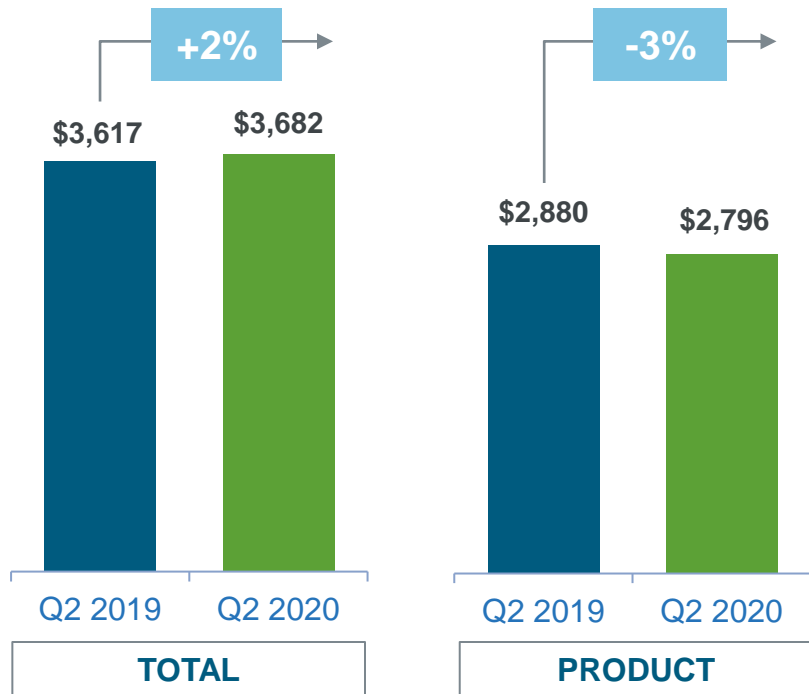
Cinpanemab  
Parkinson's

BIIB112  
XLRP

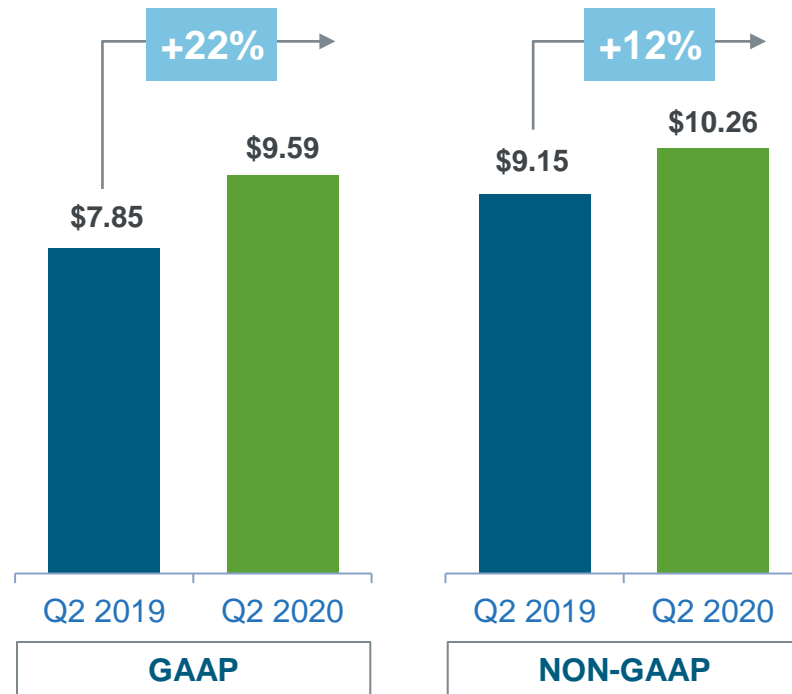
TMS-007#  
AIS

# Strong financial performance in Q2 2020

## Revenues (\$M)



## Diluted EPS (\$)



# Continued progress executing on our strategy

## Maximizing the resilience of our MS core business

- ✓ Q2 2020 MS revenues, including OCREVUS, of \$2.3 billion
- ✓ Global MS patients increased 3% versus Q2 2019
- ✓ Increasing resource allocation for VUMERITY in the U.S.
- ✓ Investing in lifecycle management and innovative new approaches for MS

## Accelerating our neuromuscular franchise

- ✓ Q2 2020 SPINRAZA revenues increased 1% vs. Q2 2019 to \$495 million
- ✓ Over 11,000 patients on therapy globally as of June 30, 2020\*
- ✓ New NURTURE data show unprecedented survival benefit for SPINRAZA in pre-symptomatic spinal muscular atrophy patients
- ✓ Planning to initiate new study of SPINRAZA following gene therapy

## Unlocking the potential of biosimilars

- ✓ Q2 2020 biosimilars revenues of \$172 million
- ✓ Contributed ~ €1.8 billion of healthcare savings in 2019 across Europe<sup>#</sup>
- ✓ Samsung Bioepis initiated New Phase 3 study for SB15, referencing EYLEA<sup>®</sup>



# Continued progress executing on our strategy

## Leading in Alzheimer's disease

- ☑ Completed submission of BLA to FDA for aducanumab
- ☑ Progressed in U.S. launch readiness
- ☑ Preparing to submit regulatory filing and beginning to ramp up launch readiness in Europe

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

- ☑ Initiated new Phase 1 study for BIIB101 (ION464)<sup>#</sup> in MSA
- ☑ Presented positive Phase 2 data for BIIB059 (anti-BDCA2) in CLE
- ☑ Positive Phase 1/2 results for tofersen (BIIB067) in *SOD1* ALS published in *The New England Journal of Medicine*

## Continuous improvement and diligent capital allocation

- ☑ Generated ~ \$1.95 billion in cash flow from operations in Q2 2020
- ☑ ~ \$5.3 billion in cash and marketable securities as of June 30, 2020
- ☑ Strong balance sheet and financial flexibility to allocate capital

# R&D Update

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

# 7 Near-term pipeline readouts expected by end of 2021 across a diversified neuroscience portfolio

		<u>Data Readout</u>	<u>Expected By*</u>	<u>Potential Value Creation</u>
Phase 3	Choroideremia	Phase 3 data for BIIB111	H1 2021	2 pivotal readouts
	ALS	Phase 3 data for tofersen	H2 2021	
Phase 2	Multiple sclerosis	Phase 2b data for opicinumab	H2 2020	5 Phase 2 readouts
	Parkinson's disease	Phase 2 data for BIIB054	H1 2021	
	XLRP	Phase 2/3 data for BIIB112	H1 2021	
	Stroke <sup>#</sup>	Phase 2 data for TMS-007 <sup>†</sup>	H1 2021	
	Alzheimer's disease	Phase 2 data for gosuranemab	H1 2021	

\*Current best estimate subject to change



**Leading in  
Alzheimer's disease**

## **Completed the BLA submission for aducanumab in the U.S.**

- Participated in a pre-BLA meeting where FDA reiterated submitting a BLA based on EMERGE, ENGAGE, and PRIME was reasonable

## **Eisai and the Alzheimer's Clinical Trials Consortium announced a Phase 3 study of BAN2401 in preclinical Alzheimer's disease**

- Study will evaluate whether BAN2401 can suppress progression of pathology and delay or prevent clinical onset of Alzheimer's disease

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



**Continue to drive  
innovation in our  
market-leading MS  
portfolio**

## **New data presented at AAN suggests TYSABRI EID may not compromise efficacy**

- Real-world analysis (n=139) of RRMS patients on EID did not show significant difference in sNfL compared to standard dosing regimen
- NOVA study, assessing efficacy of TYSABRI EID, is expected to readout H1 2021

## **Pursuing restorative therapies in MS, including multiple assets targeting remyelination**

- Opicinumab (anti-LINGO) Phase 2b AFFINITY trial expected to read out in the H2 2020

## **BIIB091, a small molecule BTK inhibitor with a potentially best-in-class profile, currently in Phase 1**



## Building depth in neuromuscular disorders

**Data from ongoing NURTURE study** showed that 100% of children (n=25) up to 4.8 years of age treated pre-symptomatically with SPINRAZA were alive and free from permanent ventilation

- 88% of children (n=22) walking independently and 96% (n=24) able to walk with assistance

**NURTURE data added to SPINRAZA U.S. label**

**Final results from Phase 1/2 study of tofersen in SOD1 ALS published in *The New England Journal of Medicine***

- Treatment with tofersen resulted in a 36% reduction of SOD1 protein concentration in the CSF
- Exploratory clinical measures demonstrated trends towards slowing of clinical decline

# Advancing assets to address significant unmet need in lupus



Skin lesions in CLE

(Uva et al., 2012)

## Large market opportunity (~ 800,000 individuals in G7) with limited treatment options

- Cutaneous lupus erythematosus (CLE): primarily affects skin
- Systemic lupus erythematosus (SLE): systemic disease affecting multiple organs

## Presented positive BIIB059 (anti-BDCA2) Phase 2 LILAC CLE study results at EULAR

- CLE: Dose response of BIIB059 on percent change from baseline in CLASI-A\* score at week 16 ( $p < 0.001$ )

## Planning to initiate BIIB059 Phase 3 program in H1 2021

## Planning to initiate dapirolizumab pegol Phase 3 program in SLE in Q3 2020



**Continued progress  
in ophthalmology**

## **Data from 2 late-stage gene therapy assets in ophthalmology expected in H1 2021**

- **Phase 3 study of BIIB111** (AAV-based gene therapy targeting choroideremia)
- **Phase 2/3 study of BIIB112** (AAV-based gene therapy targeting XLRP)

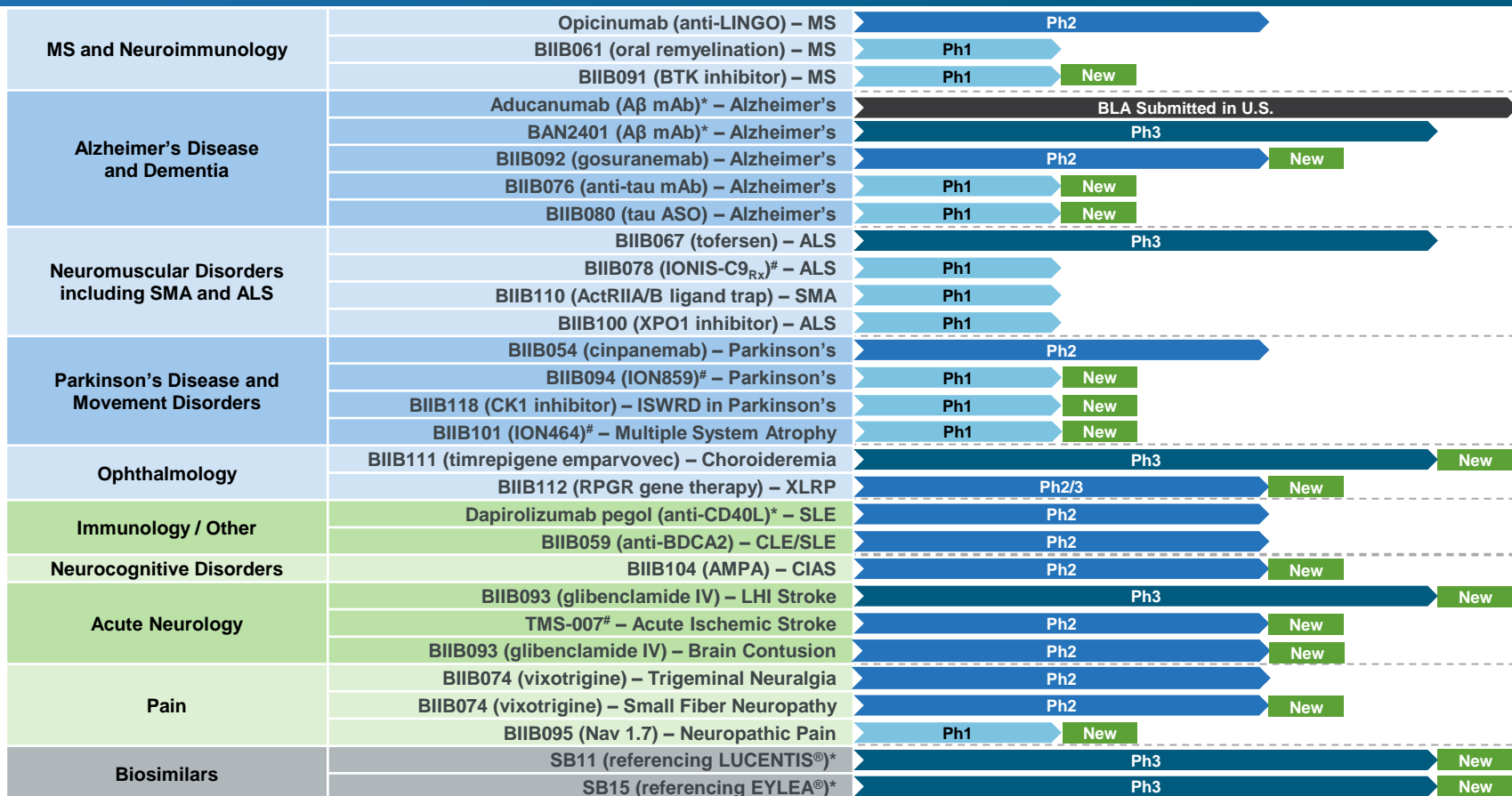
**Executed licensing agreement with  
Massachusetts Eye and Ear** to develop  
potential treatments for inherited retinal  
degeneration due to mutations in the  
*PRPF31* gene



# Deep pipeline to drive multi franchise strategy

17 new clinical programs since 2017 and 7 expected near term mid-late stage readouts

## Core Growth Areas



\*Collaboration program; #Option agreement; MS = multiple sclerosis; ALS = amyotrophic lateral sclerosis; SMA = spinal muscular atrophy; ISWRD = irregular sleep wake rhythm disorder; XLRP = X-linked retinitis pigmentosa; SLE = systemic lupus erythematosus; CLE = cutaneous lupus erythematosus; CIAS = cognitive impairment associated with schizophrenia; LHI = large hemispheric infarction

# Financial Update

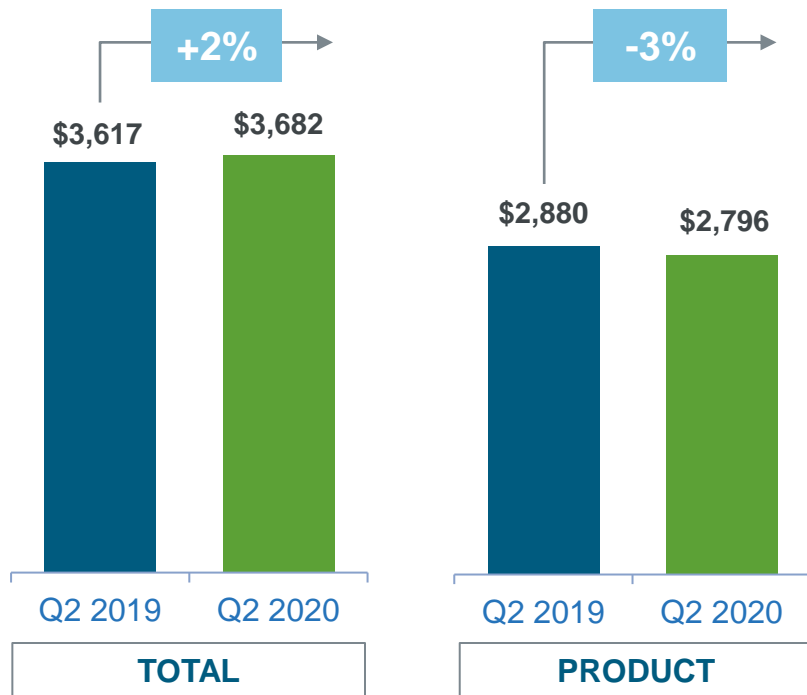
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Jeff Capello

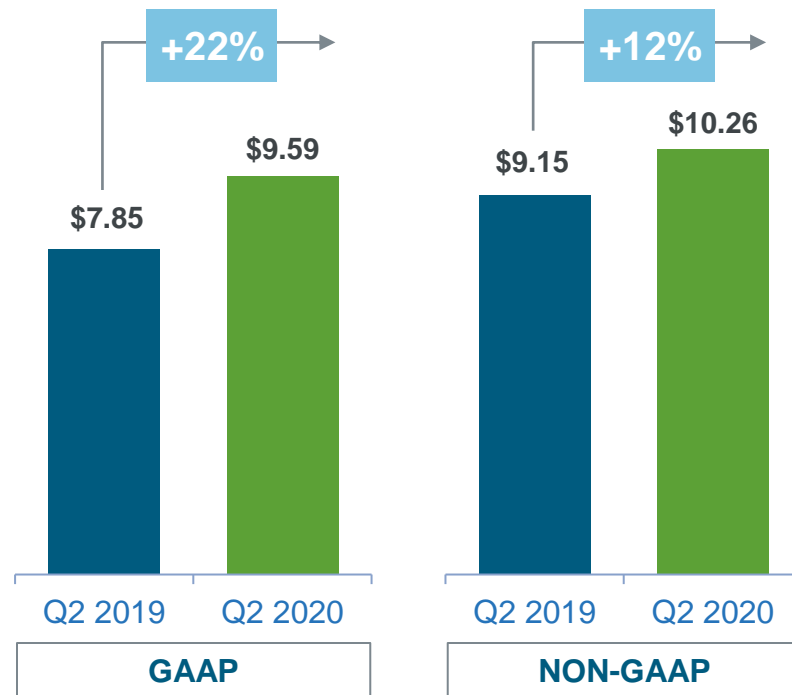
EVP, Chief Financial Officer

# Strong financial performance in Q2 2020

## Revenues (\$M)

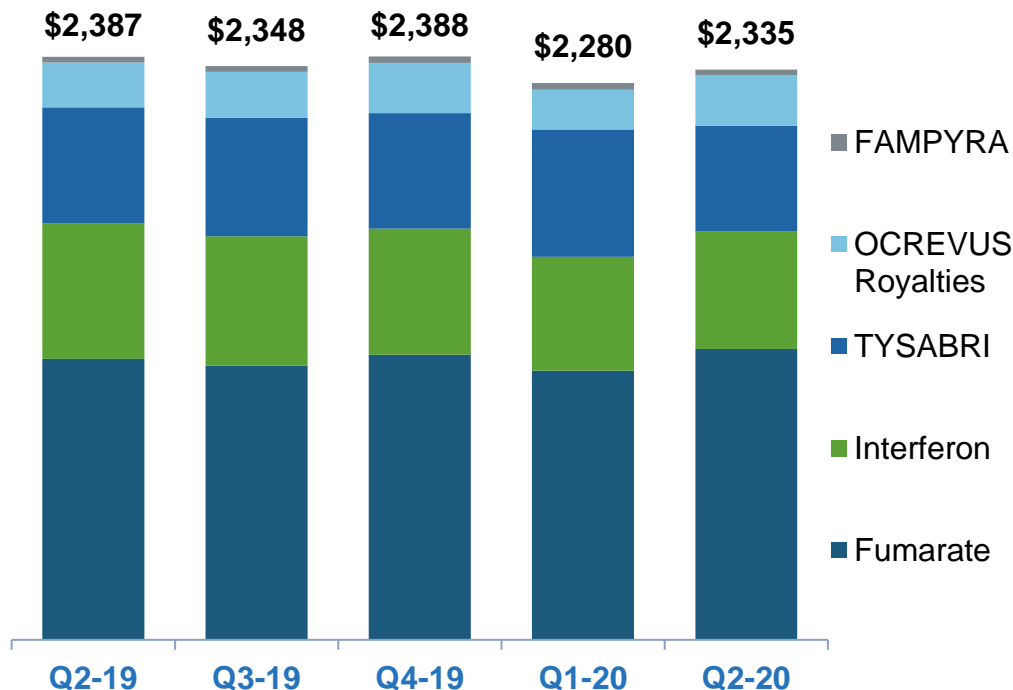


## Diluted EPS (\$)



# Global multiple sclerosis performance

## MS Revenues (\$M)



## Q2 2020 Highlights

- Revenues vs. Q2 2019 and Q1 2020

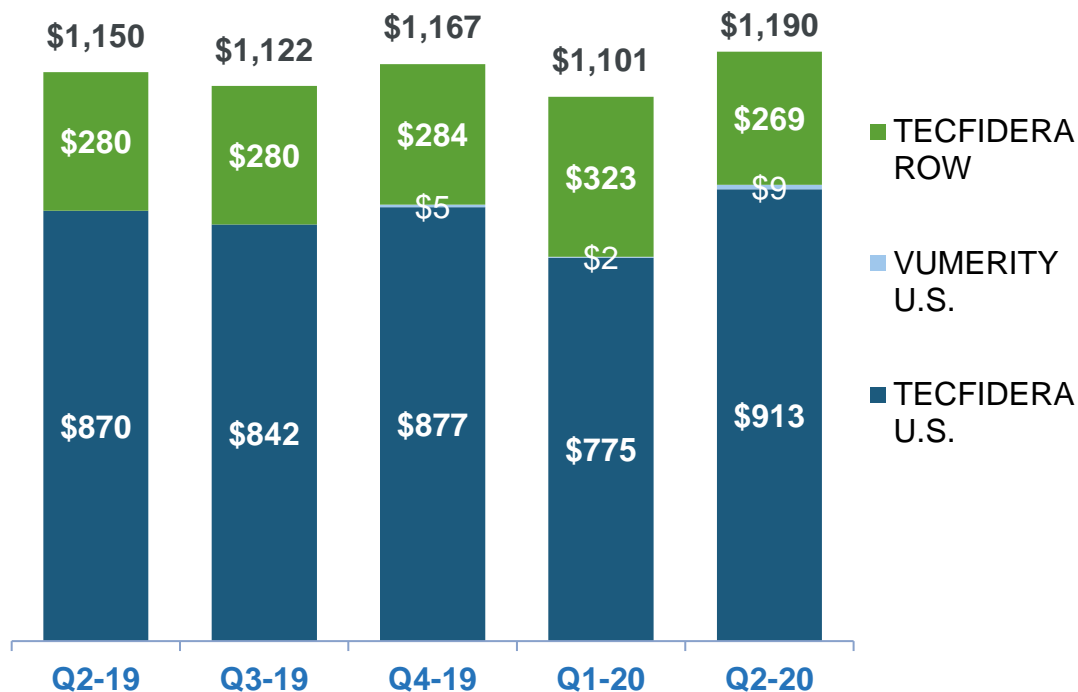
	$\Delta Y/Y$	and	$\Delta Q/Q$
Total	- 2%		+ 2%
U.S. Product	0%		+ 12%
ROW Product	- 11%		- 20%
OCREVUS Royalties	+ 14%		+ 28%

- Increase in channel inventory in the U.S. of ~ \$10 million in Q2 2020 compared to decrease of ~ \$30 million in Q2 2019 and decrease of ~ \$115 million in Q1 2020
- Biogen believes that MS revenues in Q1 2020 benefitted by ~ \$15 million in the U.S. and ~ \$59 million outside the U.S. from accelerated sales due to the COVID-19 pandemic, of which ~ \$15 million in the U.S. and ~ \$37 million outside the U.S. were utilized in Q2 2020
- Q1 2020 MS revenues in the U.S. benefitted by ~ \$54 million due to extra shipping days, roughly half of which impacted channel inventory

# Global fumarate performance



## Fumarate Revenues (\$M)



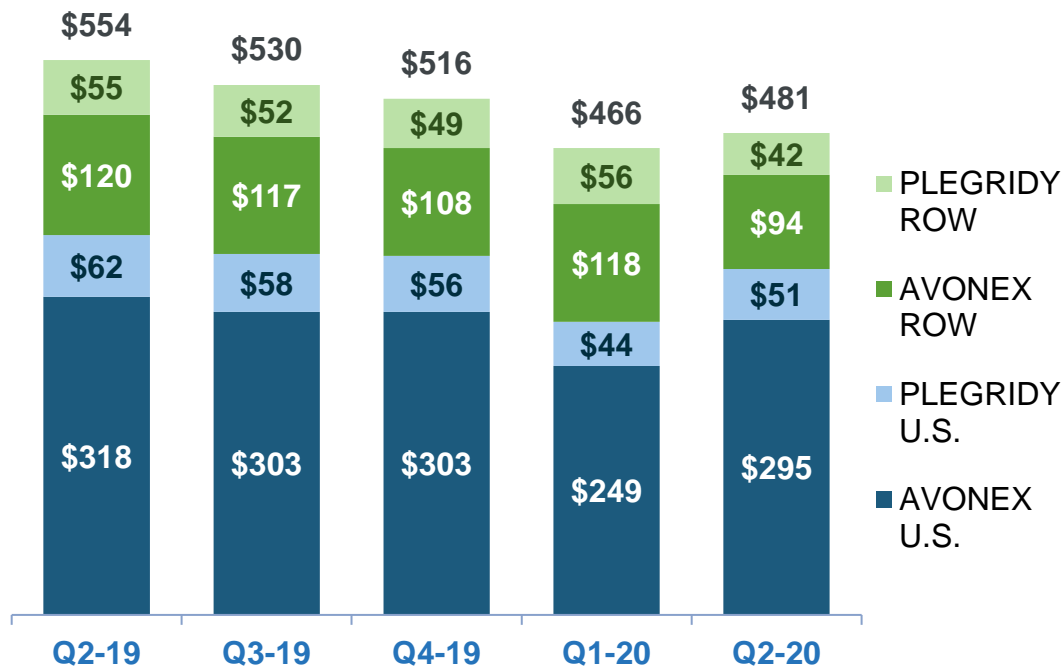
## Q2 2020 Highlights

- Revenues vs. Q2 2019 and Q1 2020

	<u>ΔYY</u>	and	<u>ΔQ/Q</u>
WW	+ 3%		+ 8%
U.S.	+ 6%		+ 19%
ROW	- 4%		- 17%

- Increase in channel inventory in the U.S. of ~ \$15 million in Q2 2020 compared to decrease of ~ \$15 million in Q2 2019 and decrease of ~ \$85 million in Q1 2020
- Biogen believes that Q1 2020 TECFIDERA revenues outside the U.S. benefitted by ~ \$28 million from accelerated sales due to the COVID-19 pandemic, of which ~ \$17 million was utilized in Q2 2020
- Q1 2020 fumarate revenues in the U.S. benefitted by ~ \$23 million due to extra shipping days

## Interferon Revenues (\$M)



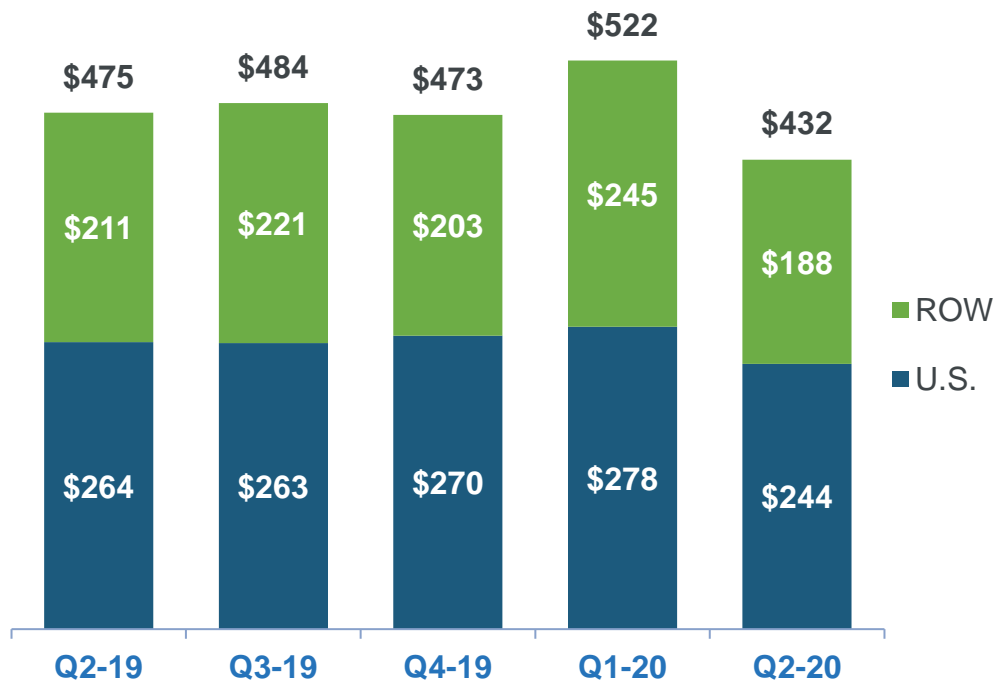
## Q2 2020 Highlights

- Revenues vs. Q2 2019 and Q1 2020

	$\Delta Y/Y$	and	$\Delta Q/Q$
WW	- 13%		+ 3%
U.S.	- 9%		+ 18%
ROW	- 22%		- 22%

- Increase in channel inventory in the U.S. of ~ \$10 million in Q1 2020 compared to decrease of ~ \$5 million in Q2 2019 and decrease of ~ \$35 million in Q1 2020
- Biogen believes that Q1 2020 interferon revenues outside the U.S. benefitted by ~ \$21 million from accelerated sales due to the COVID-19 pandemic, of which ~ \$15 million was utilized in Q2 2020
- Q1 2020 interferon revenues in the U.S. benefitted by ~ \$11 million due to extra shipping days

## TYSABRI Revenues (\$M)



## Q2 2020 Highlights

- Revenues vs. Q2 2019 and Q1 2020

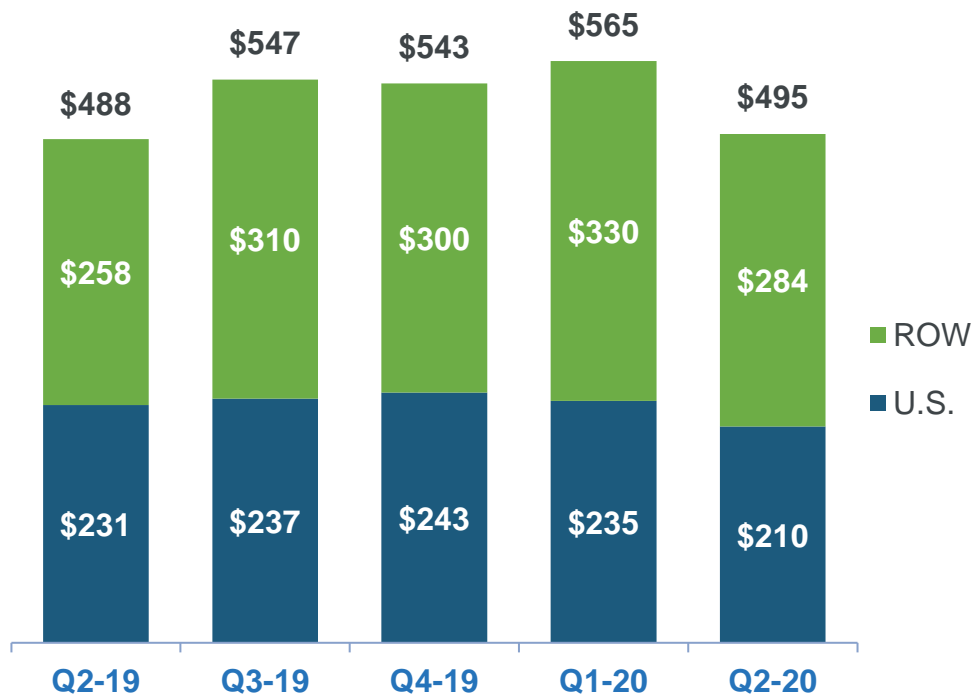
	<u>ΔY/Y</u>	and	<u>ΔQ/Q</u>
WW	- 9%		- 17%
U.S.	- 8%		- 12%
ROW	- 11%		- 23%

- Decrease in channel inventory in the U.S. of ~ \$15 million in Q2 2020 compared to decrease of ~ \$10 million in Q2 2019 and increase of ~ \$5 million in Q1 2020
- Biogen believes that Q1 2020 TYSABRI revenues outside the U.S. benefitted by ~ \$7 million from accelerated sales due to the COVID-19 pandemic, of which ~ \$5 million was utilized in Q2 2020
- Q1 2020 TYSABRI revenues in the U.S. benefitted by ~ \$20 million due to extra shipping days
- Q1 2020 TYSABRI revenues benefitted by ~ \$20 million due to a pricing adjustment in Italy related to prior periods

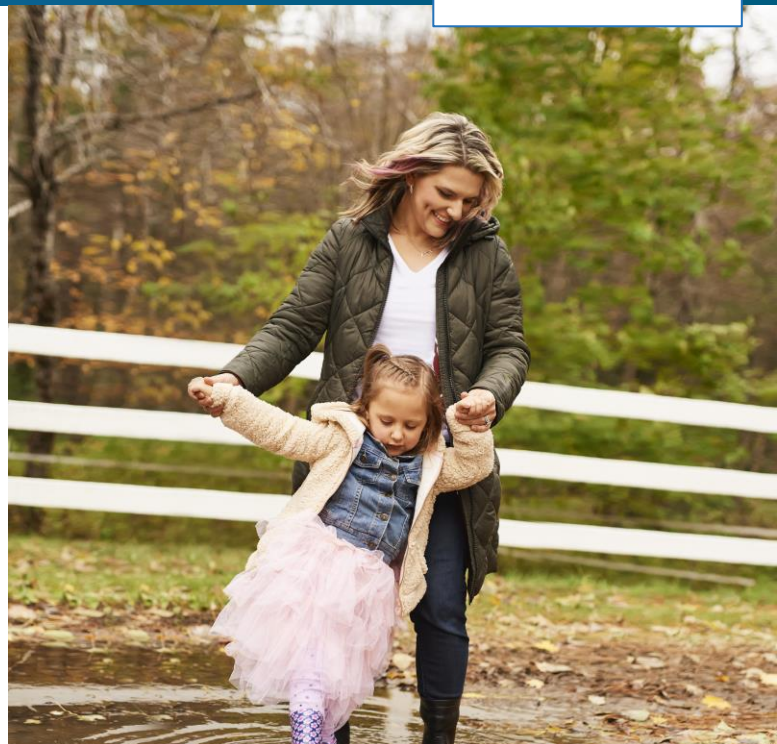
# Global SPINRAZA performance



## SPINRAZA Revenues (\$M)



Numbers may not foot due to rounding.

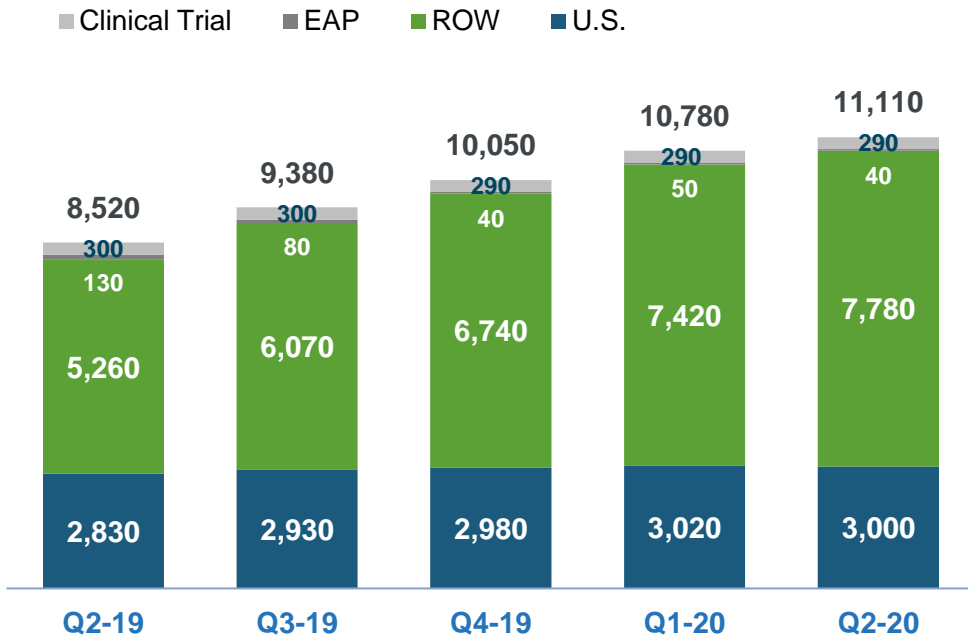


Approved in over 50 countries

Formal reimbursement in over 40 countries



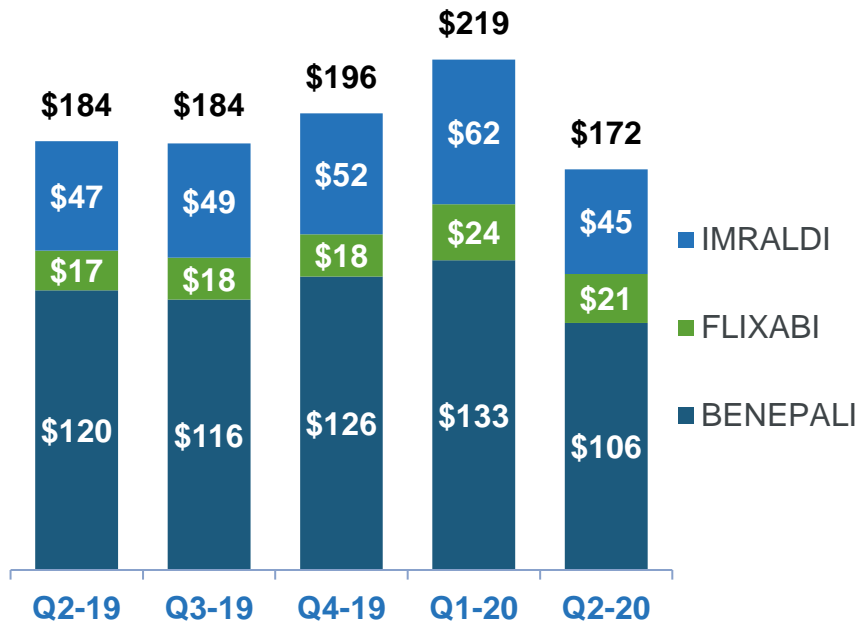
## SPINRAZA Patients



## Highlights

- Now estimate there are over 60,000 SMA patients in markets where Biogen expects to commercialize SPINRAZA\*
- As of June 30, 2020, > 11,000 patients on therapy across the post-marketing setting, the EAP, and clinical trials
- Biogen believes that SPINRAZA revenues in Q1 2020 benefitted by ~ \$6 million in the U.S. and ~ \$5 million outside the U.S. from accelerated sales due to the COVID-19 pandemic, of which ~ \$6 million in the U.S. and ~ \$4 million outside the U.S. were utilized in Q2 2020

### Biosimilars Revenues (\$M)



### Commercialization in Europe

- ~ 215,000 patients currently on biosimilars\*
- Biogen contributed ~ €1.8 billion of healthcare savings in 2019 across Europe#
- Estimated Q1 2020 benefit of ~ \$15 million from accelerated sales due to the COVID-19 pandemic, of which ~ \$9 million was utilized in Q2 2020

### 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^
- Commercialization rights to anti-TNFs in China

### Samsung Bioepis Joint Venture

- Equity stake ~49.9%

# Q2 2020 financial results highlights: revenues

\$ in Millions	Q2 2020	Q2 2019	Q1 2020	Δ Y/Y	Δ Q/Q
<b>Total MS Product Revenues<sup>1</sup></b>	<b>\$2,127</b>	<b>\$2,204</b>	<b>\$2,118</b>	<b>(4%)</b>	<b>0%</b>
SPINRAZA U.S.	\$210	\$231	\$235	(9%)	(11%)
SPINRAZA ROW <sup>1</sup>	\$284	\$258	\$330	10%	(14%)
<b>Total SPINRAZA Revenues<sup>1</sup></b>	<b>\$495</b>	<b>\$488</b>	<b>\$565</b>	<b>1%</b>	<b>(12%)</b>
Biosimilars Revenues	\$172	\$184	\$219	(7%)	(22%)
FUMADERM Revenues	\$3	\$4	\$3	(26%)	(16%)
<b>Total Product Revenues<sup>1</sup></b>	<b>\$2,796</b>	<b>\$2,880</b>	<b>\$2,905</b>	<b>(3%)</b>	<b>(4%)</b>
RITUXAN/GAZYVA Revenues	\$270	\$394	\$358	(31%)	(25%)
OCREVUS Royalties	\$208	\$183	\$162	14%	28%
<b>Revenues from Anti-CD20 Therapeutic Programs</b>	<b>\$478</b>	<b>\$576</b>	<b>\$520</b>	<b>(17%)</b>	<b>(8%)</b>
Other Revenues	\$408	\$160	\$109	155%	273%
<b>Total Revenues<sup>1</sup></b>	<b>\$3,682</b>	<b>\$3,617</b>	<b>\$3,534</b>	<b>2%</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

# Q2 2020 financial results highlights

\$ in Millions	Q2 2020	Q2 2019	Q1 2020	ΔY/Y	ΔQ/Q
GAAP Cost of Sales	\$411	\$476	\$454	14%	10%
% of Total Revenues	11%	13%	13%		
Non-GAAP Cost of Sales	\$411	\$476	\$454	14%	10%
% of Total Revenues	11%	13%	13%		
GAAP R&D Expenses	\$648	\$485	\$476	(34%)	(36%)
% of Total Revenues	18%	13%	13%		
Non-GAAP R&D Expenses	\$564	\$477	\$476	(18%)	(18%)
% of Total Revenues	15%	13%	13%		
GAAP SG&A Expenses	\$555	\$588	\$570	6%	3%
% of Total Revenues	15%	16%	16%		
Non-GAAP SG&A Expenses	\$555	\$553	\$569	(0%)	3%
% of Total Revenues	15%	15%	16%		
GAAP Divestiture of Assets	\$0	(\$2)	\$0	NMF	NMF
GAAP Amortization of Acquired Intangibles	\$62	\$70	\$72	12%	14%
Collaboration Profit (Loss) Sharing	\$22	\$64	\$72	66%	70%

# Q2 2020 financial results highlights

\$ in Millions except EPS, Shares in Millions	Q2 2020	Q2 2019	Q1 2020	Δ Y/Y	Δ Q/Q
GAAP Other Income (Expense)	\$63	(\$197)	(\$120)	132%	152%
Non-GAAP Other Income (Expense)	(\$30)	(\$19)	(\$60)	(61%)	49%
GAAP Tax Rate	22%	14%	17%		
Non-GAAP Tax Rate	19%	14%	17%		
GAAP JV Equity Income (Loss)	\$15	(\$16)	(\$15)	193%	202%
Non-GAAP JV Equity Income (Loss)	\$17	\$5	\$6	216%	181%
GAAP Net Income (Loss) Attributable to Noncontrolling Interests	\$64	\$0	(\$7)	NMF	NMF
Non-GAAP Net Income (Loss) Attributable to Noncontrolling Interests	\$68	\$0	(\$3)	NMF	NMF
Weighted average diluted shares used in calculating diluted EPS	161	190	173	16%	7%
GAAP Net Income Attributable to Biogen Inc.	\$1,542	\$1,494	\$1,399	3%	10%
<b>GAAP Diluted EPS</b>	<b>\$9.59</b>	<b>\$7.85</b>	<b>\$8.08</b>	<b>22%</b>	<b>19%</b>
Non-GAAP Net Income Attributable to Biogen Inc.	\$1,651	\$1,742	\$1,582	(5%)	4%
<b>Non-GAAP Diluted EPS</b>	<b>\$10.26</b>	<b>\$9.15</b>	<b>\$9.14</b>	<b>12%</b>	<b>12%</b>

# Updated 2020 full year financial guidance

	Prior FY 2020 Guidance	Updated FY 2020 Guidance
<b>Revenues</b>	<b>\$14.0 billion to \$14.3 billion</b>	<b>\$13.8 billion to \$14.2 billion</b>
<b>R&amp;D Expense</b> (as a % of revenues)	<b>15% to 16%</b> <b>(GAAP and Non-GAAP)</b>	<b>16% to 17%</b> <b>(GAAP and Non-GAAP)</b>
<b>SG&amp;A Expense</b> (as a % of revenues)	<b>19.5% to 20.5%</b> <b>(GAAP and Non-GAAP)</b>	<b>17.5% to 18.5%</b> <b>(GAAP and Non-GAAP)</b>
<b>Tax Rate</b>	<b>18% to 19%</b> <b>(GAAP and Non-GAAP)</b>	<b>18.5% to 19.5% (GAAP)</b> <b>18% to 19% (Non-GAAP)</b>
<b>GAAP Diluted EPS</b>	<b>\$29.50 to \$31.50</b>	<b>\$32.00 to \$34.00</b>
<b>Non-GAAP Diluted EPS</b>	<b>\$31.50 to \$33.50</b>	<b>\$34.00 to \$36.00</b>

## 2020 Guidance Assumptions:

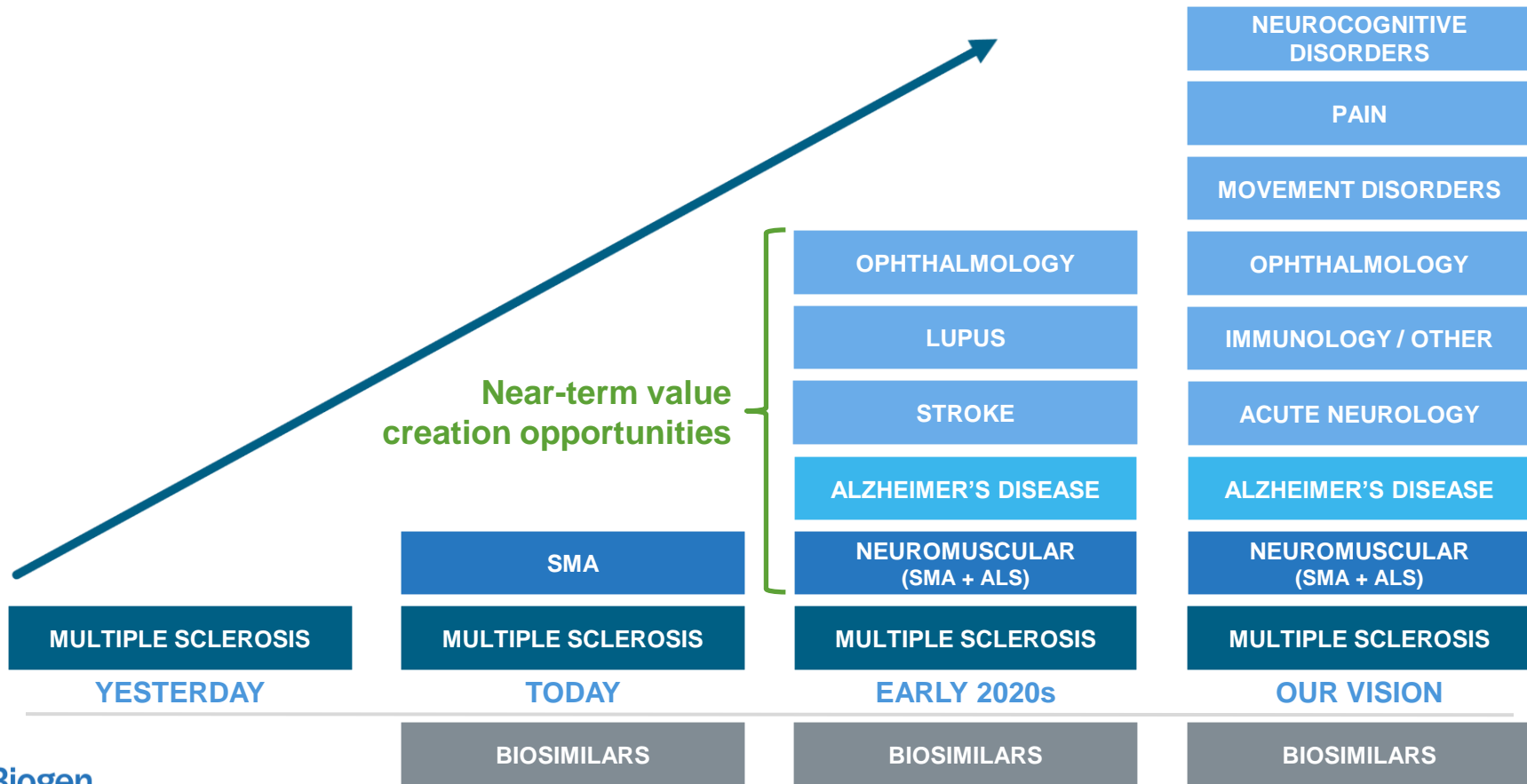
- Does not include any operational impact from the potential entry of generic versions of TECFIDERA in the U.S. in 2020
- Does not include any impact from potential acquisitions or large business development transactions, as both are hard to predict
- Assumes additional SG&A expense in the second half of 2020 related to aducanumab
- Assumes a stable share count and no change to foreign exchange rates for the remainder of the year
- Expect capital expenditures to be between \$350 million and \$400 million

# Closing Remarks

Michel Vounatsos  
Chief Executive Officer



# Continuing to build a multi-franchise portfolio





# Continuing to create value through pioneering science

**Aducanumab BLA submitted**  
Advancing broad Alzheimer's portfolio



**Biogen poised to potentially lead in Alzheimer's**

**Building breadth and depth across the pipeline**



**Working to create multiple franchises**

**7 mid- to late-stage data readouts expected by end of 2021**



**Multiple value creation inflection points**

**The leader in neuroscience**



**Significant market opportunity with high unmet need**

# 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 through the product lifecycle with a focus on clinical trial participation and access

Donated to n-Lorem Foundation in Q1 2020 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.

47% women in director-level positions and above<sup>^</sup>  
26% ethnic or racial minorities U.S. director-level roles and above<sup>^</sup>

Signed MassBio CEO Pledge for a more equitable and inclusive life sciences industry

'Best Place to Work for Disability Inclusion'  
4 consecutive years with 100% score

100% on Human Rights Campaign Corporate Equality Index for LGBTQ+ Inclusion

## 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

Joined 50 companies in advocating for a green recovery from COVID-19 by asking EU leaders to boost renewable energy

Joined EV100 to transition fleet to electric vehicles

#1 Biotech on Climate by 100 Corporate Best Citizens annual ranking

## COMMUNITY



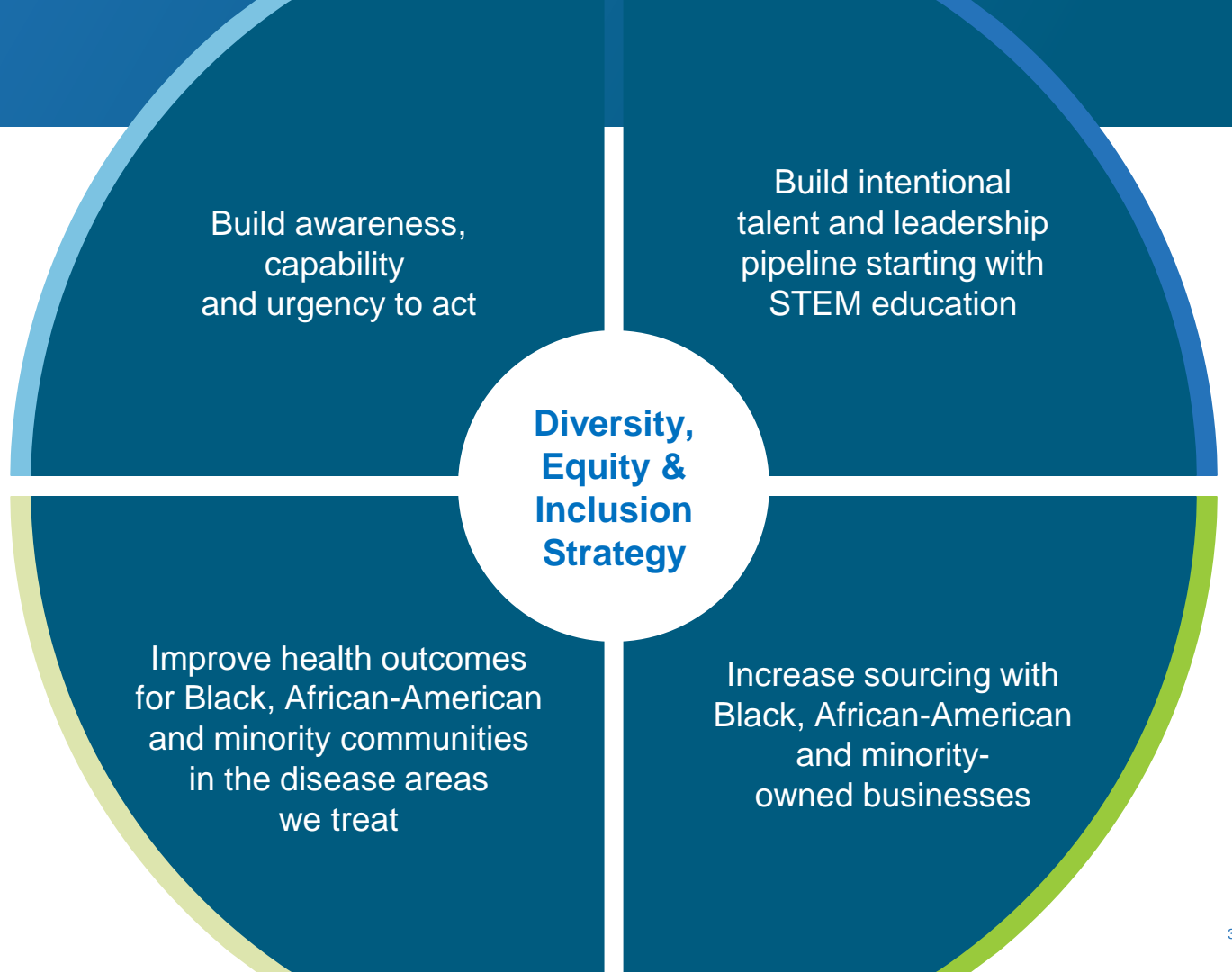
Science that seeks to solve societal problems and create access to innovation.

\$10M donated by Biogen Foundation for COVID-19 relief currently supporting 61 non-profits globally

Launched Virtual Summer Lab with Lemelson-MIT serving ~ 400 students historically underrepresented in science  
>\$340k raised in employee matching gifts for racial injustice and LGBTQ+ causes

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

**Our commitment  
to diversity &  
inclusion**



# Questions & Answers

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# Appendix

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# Q2 2020 financial results highlights: MS revenues

\$ in Millions	Q2 2020	Q2 2019	Q1 2020	Δ Y/Y	Δ Q/Q
TECFIDERA U.S.	\$913	\$870	\$775	5%	18%
TECFIDERA ROW <sup>1</sup>	\$269	\$280	\$323	(4%)	(17%)
<b>Total TECFIDERA Revenues<sup>1</sup></b>	<b>\$1,182</b>	<b>\$1,150</b>	<b>\$1,098</b>	<b>3%</b>	<b>8%</b>
VUMERITY U.S.	\$9	\$0	\$2	NMF	NMF
<b>Total Fumarate Revenues<sup>1</sup></b>	<b>\$1,190</b>	<b>\$1,150</b>	<b>\$1,101</b>	<b>3%</b>	<b>8%</b>
AVONEX U.S.	\$295	\$318	\$249	(7%)	19%
AVONEX ROW <sup>1</sup>	\$94	\$120	\$118	(22%)	(20%)
<b>Total AVONEX Revenues<sup>1</sup></b>	<b>\$389</b>	<b>\$438</b>	<b>\$366</b>	<b>(11%)</b>	<b>6%</b>
PLEGRIDY U.S.	\$51	\$62	\$44	(18%)	16%
PLEGRIDY ROW <sup>1</sup>	\$42	\$55	\$56	(23%)	(25%)
<b>Total PLEGRIDY Revenues<sup>1</sup></b>	<b>\$93</b>	<b>\$116</b>	<b>\$100</b>	<b>(20%)</b>	<b>(7%)</b>
<b>Total Interferon Revenues<sup>1</sup></b>	<b>\$481</b>	<b>\$554</b>	<b>\$466</b>	<b>(13%)</b>	<b>3%</b>
TYSABRI U.S.	\$244	\$264	\$278	(8%)	(12%)
TYSABRI ROW <sup>1</sup>	\$188	\$211	\$245	(11%)	(23%)
<b>Total TYSABRI Revenues<sup>1</sup></b>	<b>\$432</b>	<b>\$475</b>	<b>\$522</b>	<b>(9%)</b>	<b>(17%)</b>
FAMPYRA <sup>1</sup>	\$23	\$24	\$28	(5%)	(19%)
<b>Total MS Product Revenues<sup>1</sup></b>	<b>\$2,127</b>	<b>\$2,204</b>	<b>\$2,118</b>	<b>(4%)</b>	<b>0%</b>
OCREVUS Royalties	\$208	\$183	\$162	14%	28%
<b>MS Product Revenues<sup>1</sup> + OCREVUS Royalties</b>	<b>\$2,335</b>	<b>\$2,387</b>	<b>\$2,280</b>	<b>(2%)</b>	<b>2%</b>

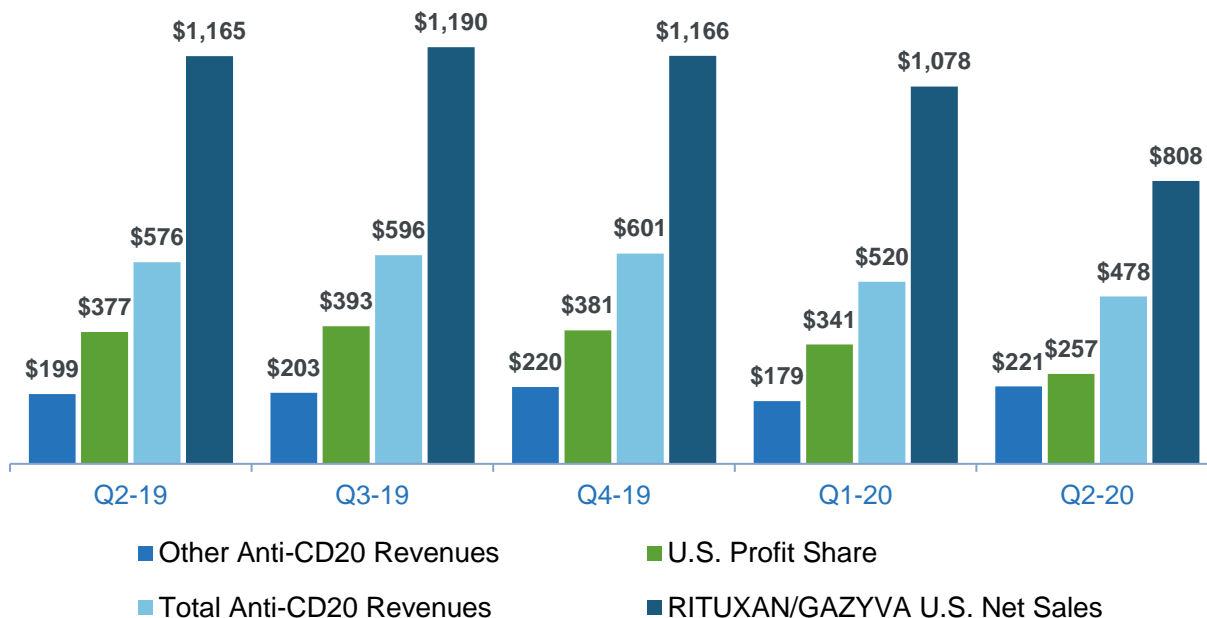
# Q2 2020 impact of foreign exchange and hedging

	Actuals	Hedge Gains (Losses) in the Quarter			FX Impact w/o Hedge Favorable/ (Unfavorable)		Hedge Impact Favorable/ (Unfavorable)		Total Impact Favorable/ (Unfavorable)	
	Q2'20	Q2'20	Q2'19	Q1'20	Vs. Q2'19	Vs. Q1'20	Vs. Q2'19	Vs. Q1'20	Vs. Q2'19	Vs. Q1'20
<b>Total Revenues</b>	<b>\$3,682</b>	<b>\$19</b>	<b>\$33</b>	<b>\$34</b>	<b>(\$32)</b>	<b>(\$23)</b>	<b>(\$14)</b>	<b>(\$15)</b>	<b>(\$46)</b>	<b>(\$38)</b>
TECFIDERA	\$1,182	\$8	\$14	\$16	(\$6)	(\$3)	(\$6)	(\$8)	(\$13)	(\$11)
Interferon	\$481	\$5	\$8	\$7	(\$4)	(\$1)	(\$4)	(\$2)	(\$8)	(\$3)
TYSABRI	\$432	\$5	\$10	\$9	(\$7)	(\$3)	(\$5)	(\$4)	(\$12)	(\$7)
SPINRAZA	\$495	\$2	\$0	\$2	(\$11)	(\$12)	\$2	\$0	(\$10)	(\$12)
Biosimilars	\$172	N/A	N/A	N/A	(\$2)	(\$4)	\$0	\$0	(\$2)	(\$4)



# Anti-CD20 performance

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



## Highlights

- Revenues vs. Q2 2019 and Q1 2020

	<u>ΔY/Y</u>	<u>ΔQ/Q</u>
U.S. Net Sales	- 31%	and - 25%
U.S. Profit Share <sup>1</sup>	- 32%	and - 25%
Other Anti-CD20	+ 11%	and + 23%
Total Anti-CD20 Revenues	- 17%	and - 8%

- 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		
	June 30, 2020	June 30, 2019	March 31, 2020
GAAP earnings per share - Diluted	\$ 9.59	\$ 7.85	\$ 8.08
Adjustments to GAAP net income attributable to Biogen Inc. (as detailed below)	0.67	1.30	1.06
Non-GAAP earnings per share - Diluted	\$ 10.26	\$ 9.15	\$ 9.14

	For the Six Months Ended June 30,	
	June 30, 2020	June 30, 2019
GAAP earnings per share - Diluted	\$ 17.61	\$ 14.99
Adjustments to GAAP net income attributable to Biogen Inc. (as detailed below)	1.75	1.10
Non-GAAP earnings per share - Diluted	\$ 19.36	\$ 16.09

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		
	June 30, 2020	June 30, 2019	March 31, 2020
GAAP net income attributable to Biogen Inc.	\$ 1,542.1	\$ 1,494.1	\$ 1,399.1
Adjustments:			
Acquisition and divestiture related costs:			
Amortization and impairment of acquired intangible assets <sup>A</sup>	61.5	70.1	71.5
Acquired in-process research and development	—	—	75.0
(Gain) loss on fair value remeasurement of contingent consideration	10.0	(20.0)	(4.6)
Loss on assets and liabilities held for sale <sup>B</sup>	—	(2.3)	—
Stock option expense <sup>C</sup>	—	26.2	—
Acquisition-related transaction and integration costs	0.6	19.4	1.2
Subtotal: Acquisition and divestiture related costs	72.1	93.4	143.1
Restructuring, business transformation and other cost saving initiatives:			
2017 corporate strategy implementation <sup>D</sup>	—	0.7	—
Restructuring charges <sup>D</sup>	—	0.8	—
Subtotal: Restructuring, business transformation and other cost saving initiatives	—	1.5	—
(Gain) loss on equity security investments	(102.9)	174.2	60.9
Premium paid on the purchase of Sangamo common stock <sup>E</sup>	83.2	—	—
Premium paid on early debt redemption	9.4	—	—
Valuation allowance associated with deferred tax assets <sup>F</sup>	56.0	—	—
Income tax effect related to reconciling items	(7.4)	(43.1)	(38.4)
Amortization included in equity in loss of investee, net of tax <sup>G</sup>	(1.5)	21.7	17.3
Non-GAAP net income attributable to Biogen Inc.	\$ 1,651.0	\$ 1,741.8	\$ 1,582.0

Footnotes referenced in the tables above are included at the end of this presentation.

## 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.

# GAAP to Non-GAAP Reconciliation Net Income Attributable to Biogen Inc. and Diluted Earnings Per Share

(unaudited, in millions, except per share amounts)

	For the Six Months Ended June 30,	
	June 30, 2020	June 30, 2019
GAAP net income attributable to Biogen Inc.	\$ 2,941.2	\$ 2,902.9
Adjustments:		
Acquisition and divestiture related costs:		
Amortization and impairment of acquired intangible assets <sup>A</sup>	133.0	138.3
Acquired in-process research and development	75.0	—
(Gain) loss on fair value remeasurement of contingent consideration	5.4	(8.5)
Loss on assets and liabilities held for sale <sup>B</sup>	—	113.2
Stock option expense <sup>C</sup>	—	26.2
Acquisition-related transaction and integration costs	1.6	23.7
Subtotal: Acquisition and divestiture related costs	215.0	292.9
Restructuring, business transformation and other cost saving initiatives:		
2017 corporate strategy implementation <sup>D</sup>	—	1.7
Restructuring charges <sup>D</sup>	—	1.2
Subtotal: Restructuring, business transformation and other cost saving initiatives	—	2.9
(Gain) loss on equity security investments	(41.9)	(201.9)
Premium paid on the purchase of Sangamo common stock <sup>E</sup>	83.2	—
Premium paid on early debt redemption	9.4	—
Valuation allowance associated with deferred tax assets <sup>F</sup>	56.0	—
Income tax effect related to reconciling items	(45.8)	83.0
Amortization included in equity in loss of investee, net of tax <sup>G</sup>	15.8	36.4
Non-GAAP net income attributable to Biogen Inc.	\$ 3,232.9	\$ 3,116.2

## 2020 Full Year Guidance: GAAP to Non-GAAP Reconciliation

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

	2020 Full Year Guidance		
	\$	Shares	Diluted EPS
GAAP net income attributable to Biogen Inc.	\$ 5,375.0	162.9	\$ 33.00
Adjustments:			
Amortization of acquired intangible assets	260.0		
Loss (gain) on fair value remeasurement of contingent consideration	8.0		
Acquired in-process research and development	35.0		
Amortization included in equity in loss of investee, net of tax <sup>C</sup>	36.0		
Other	(10.0)		
Valuation allowance associated with deferred tax assets <sup>F</sup>	56.0		
Income tax effect related to reconciling items	(59.0)		
Non-GAAP net income attributable to Biogen Inc.	\$ 5,701.0	162.9	\$ 35.00

## 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 and six months ended June 30, 2020, compared to the same periods in 2019, decreased primarily due to a lower 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.

For the six months ended June 30, 2019, we recorded a loss of approximately \$174.5 million in our condensed consolidated statements of income. This estimated loss included a pre-tax loss of \$113.2 million, which reflected a \$2.3 million decrease to our original estimate as of March 31, 2019, reflecting our estimated fair value of the assets and liabilities held for sale as of June 30, 2019, adjusted for our expected costs to sell our Hillerød, Denmark manufacturing operations of approximately \$10.0 million and included 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 \$61.3 million related to the planned transaction during the six months ended June 30, 2019.

In August 2019 this transaction closed and we received approximately \$881.9 million in cash, which may be adjusted based on contractual terms. 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.

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> Stock option expense reflects the accelerated vesting of stock options previously granted to Nightstar Therapeutics plc (NST) employees as a result of our acquisition of NST in the second quarter of 2019.

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

## Notes to GAAP to Non-GAAP Reconciliation

<sup>E</sup> In February 2020 we entered into a collaboration and license agreement with Sangamo Therapeutics, Inc. (Sangamo) to develop and commercialize ST-501 for tauopathies, including Alzheimer's disease; ST-502 for synucleinopathies, including Parkinson's disease; a third neuromuscular disease target; and up to nine additional neurological disease targets to be identified and selected within a five-year period. In connection with the closing of this transaction in April 2020 we purchased \$225.0 million of Sangamo common stock, or approximately 24 million shares at \$9.21 per share, which are subject to transfer restrictions. We recorded an asset in investments and other assets in our condensed consolidated balance sheets to reflect the initial fair value of the Sangamo common stock acquired and a charge of approximately \$83.0 million to research and development expense in our condensed consolidated statements of income to reflect the premium paid for the Sangamo common stock.

<sup>F</sup> Income tax expense for the three and six months ended June 30, 2020, included \$56.0 million in income tax expense related to a net valuation allowance against certain deferred tax assets, due to the decision of the U.S. District Court of the Northern District of West Virginia that the asserted claims of U.S. patent No. 8,399,514, which cover the treatment of MS with TECFIDERA, are invalid.

<sup>G</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.