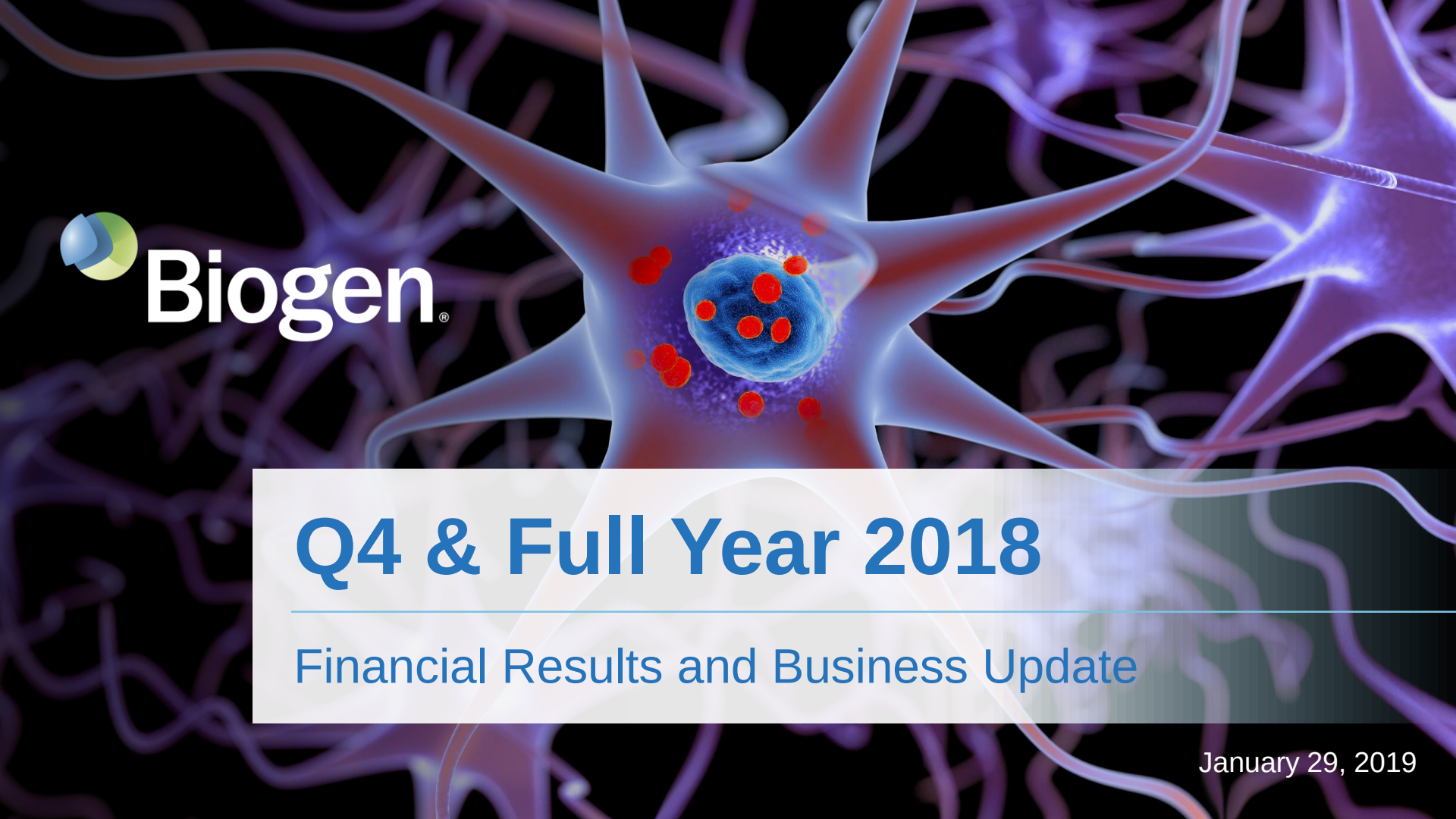


Q4 & Full Year 2018

Financial Results and Business Update

January 29, 2019

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 trials and data readouts and presentations; regulatory filings and the timing thereof; anticipated benefits and potential of investments, collaborations, and business development activities; and our 2019 financial guidance. 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. These forward-looking statements may be accompanied by such words as “aim,” “anticipate,” “believe,” “could,” “estimate,” “expect,” “forecast,” “intend,” “may,” “plan,” “potential,” “possible,” “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: our dependence on sales from our principal products; difficulties in obtaining and maintaining adequate coverage, pricing, and reimbursement for 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; 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 on our growth initiatives; risks relating to technology failures or breaches; 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; our dependence on collaborators and other third parties for the development, regulatory approval, and commercialization of products and other aspects of our business, which are outside of our control; risks associated with current and potential future healthcare reforms; failure to comply with legal and regulatory requirements; the risks of doing business internationally, including currency exchange rate fluctuations; risks relating to management and key personnel changes, including attracting and retaining key personnel; risks relating to investment in and expansion of manufacturing capacity for future clinical and commercial requirements; problems with our manufacturing processes; risks related to commercialization of biosimilars; 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 stock repurchase programs; risks relating to access to capital and credit markets; risks related to indebtedness; environmental risks; risks relating to the sale and distribution 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; risks relating to the spin-off of our hemophilia business, including exposure to claims and liabilities; 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 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.

Q4 & FY 2018 earnings call agenda

Introduction	**Matt Calistri** VP, Investor Relations
Overview	**Michel Vounatsos** Chief Executive Officer
R&D Update	**Michael Ehlers, M.D., Ph.D.** EVP, Research & Development
Financial Update	**Jeffrey Capello** EVP, Chief Financial Officer
Closing Remarks	**Michel Vounatsos** Chief Executive Officer
Available for Q&A	**Al Sandrock, M.D., Ph.D.** EVP, Chief Medical Officer

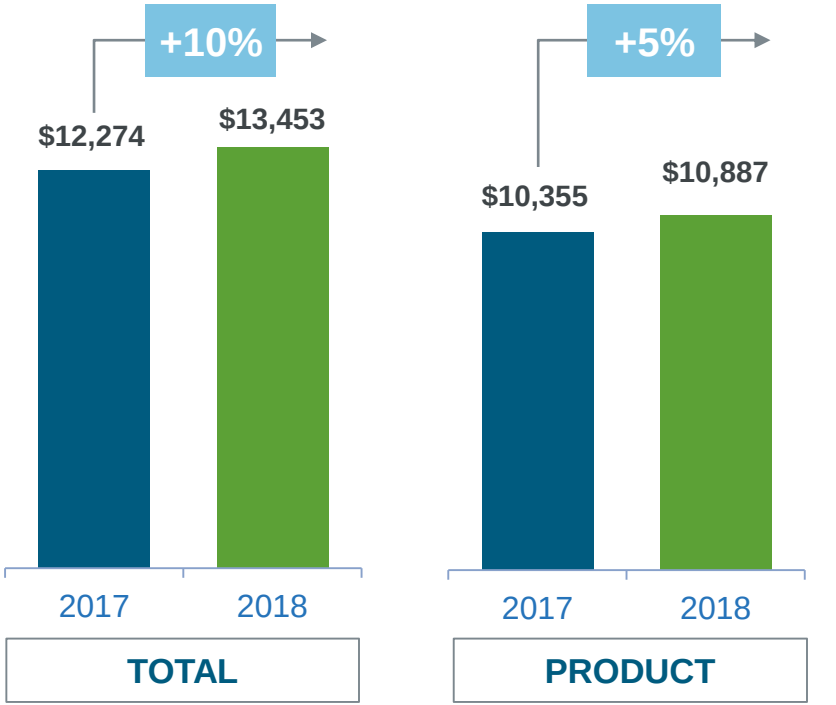
Overview

Michel Vounatsos

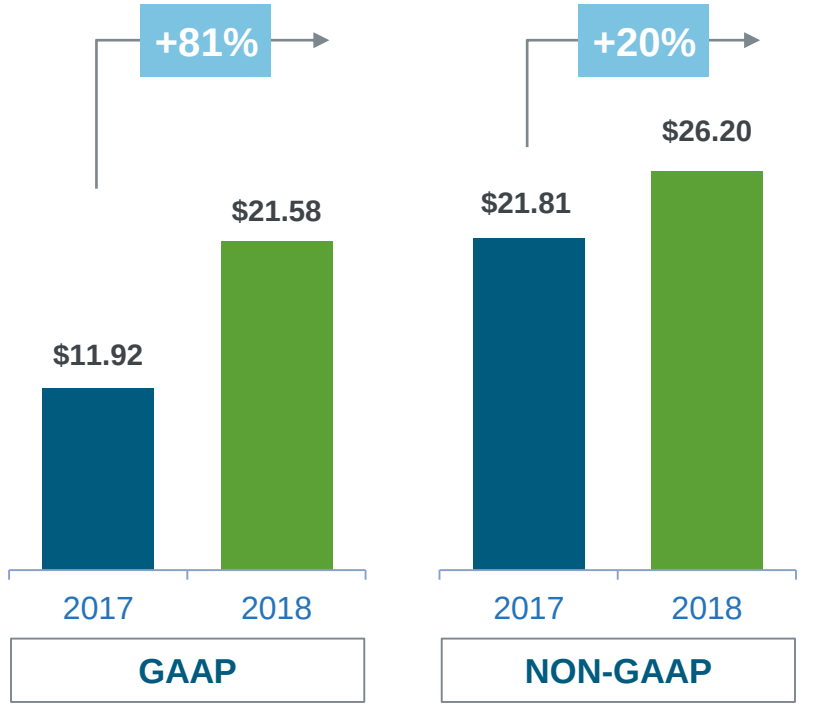
Chief Executive Officer

Strong performance in 2018

Revenues ($M)



Diluted EPS ($)



A reconciliation of our GAAP to Non-GAAP financial results is at the end of this presentation.

Strong progress implementing strategy

Maximizing the resilience of our MS core business

- ☑ Full year MS revenues, including OCREVUS royalties, of $9.1 billion
- ☑ Stable global MS patients in 2018 versus prior year
- ☑ Improved year-over-year trends for MS business in the U.S. throughout 2018

Accelerating progress in spinal muscular atrophy

- ☑ 2018 SPINRAZA performance driven by growth in both U.S. and ex-U.S.
- ☑ Over 6,600 patients on therapy globally as of Q4 2018*
- ☑ Standard of care in SMA with approval in over 40 countries#

Developing and expanding our neuroscience portfolio

- ☑ Building depth in core growth areas beyond MS, SMA, and Alzheimer's disease
- ☑ Pursuing multiple complementary modalities
- ☑ Positive interim data from Phase 1 study of BIIB067^ in SOD1 ALS

Re-prioritizing our capital allocation efforts

- ☑ Six BD transactions and Samsung Bioepis opt-in in 2018 for ~$1.8 billion
- ☑ Repurchased ~14.8 million shares in 2018 for ~$4.4 billion
- ☑ New collaboration with Skyhawk Therapeutics

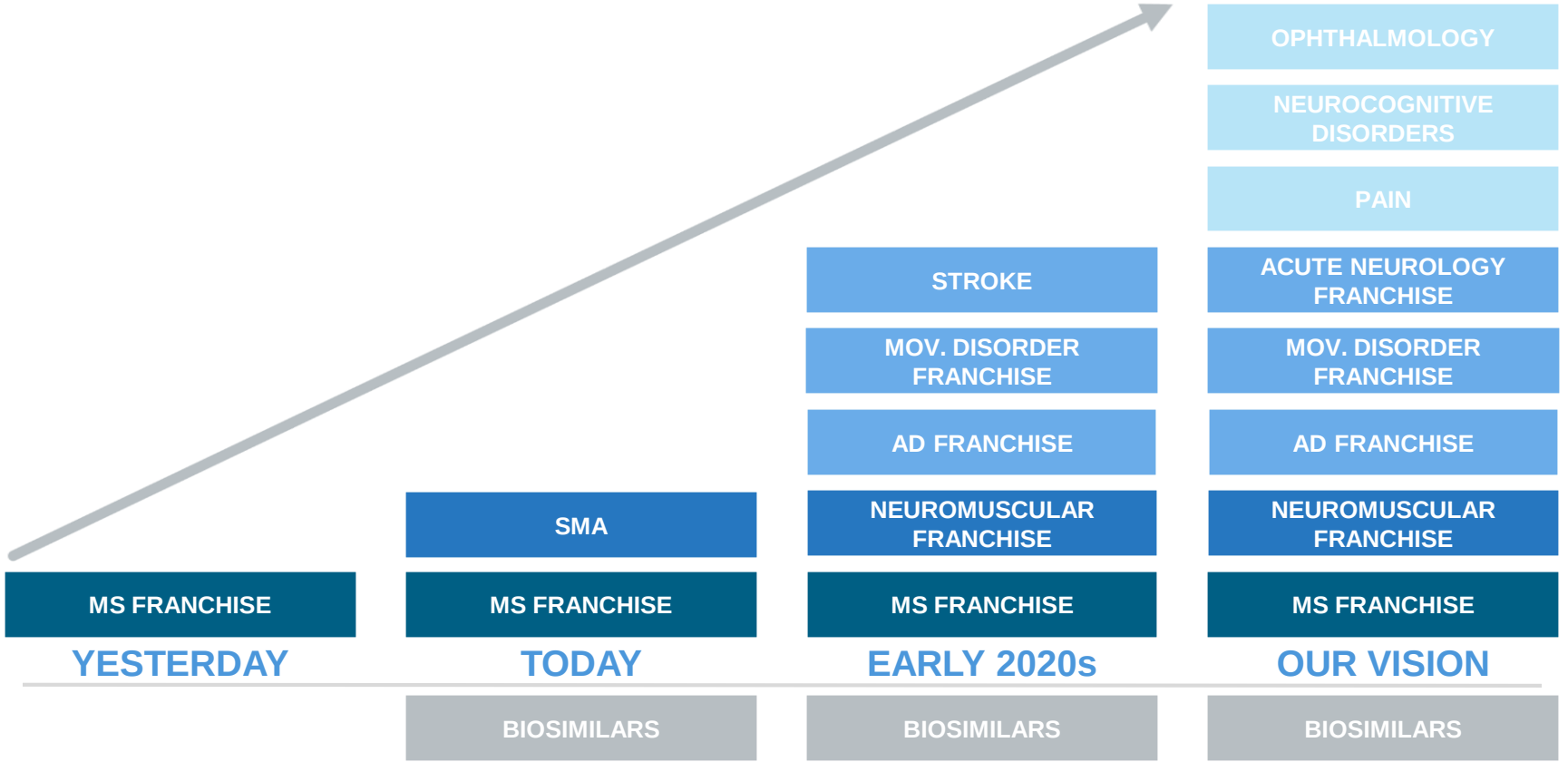
Creating a leaner and simpler operating model

- ☑ Focused on implementing a lean and simple operating model with the goal of continuous operational improvement

Biogen

* Includes patients on therapy across the post-marketing setting, the expanded access program, and clinical trials. #As of January 25, 2019. ^BIIB067 is being developed in collaboration with Ionis Pharmaceuticals.

Continuing to build a multi-franchise neuroscience portfolio



R&D Update

Michael Ehlers, M.D., Ph.D.

EVP, Research & Development

Biogen

Strategic collaborations expand suite of modalities

- Platform to discover small molecules that induce ubiquitination-mediated degradation of target proteins
- Potential indications include **Alzheimer's disease** and **Parkinson's disease**

- Platform to discover small molecules capable of modulating RNA splicing
- Potential indications include **SMA** and **MS**

These collaborations **broaden our capabilities across multiple modalities** and have the potential to identify therapeutic candidates for a range of CNS disorders

Positive phase 1 results for BIIB067 in SOD1 ALS

BIIB067 (SOD1 ASO)

- In SOD1 ALS, genetic mutations in SOD1 result in production of toxic protein
- Interim data from multiple ascending dose study demonstrated both **proof-of-biology and proof-of-concept**
- **Planning to add additional cohort with potential to support registration**
- **Exercised option** to obtain license from Ionis Pharmaceuticals to develop, manufacture, and commercialize
- Potential positive implications for our **growing ASO portfolio** with Ionis Pharmaceuticals

Lowering of SOD1 protein levels in CSF vs. placebo

(n=12 placebo, n=10 BIIB067;

p = 0.002)

Trend toward lowering of CSF neurofilament and slowing of clinical decline, as assessed by ALS-FRS, respiratory function, and muscle strength

(n=12 placebo, n=10 BIIB067)

Biogen

SPINRAZA: the standard of care in SMA

	Number of patients on whom data has been reported	Duration of follow-up period	Number of patients with real-world experience
SPINRAZA® (nusinersen) injection 12 mg/5 mL	> 300	Up to 6 years	> 6,000*
NOVARTIS avexis AVXS-101	15	Up to 2.5 years	0

Comparisons between the ENDEAR study of SPINRAZA and the Phase 1 study of AVXS-101 are not scientifically valid

nurture

Study of SPINRAZA in presymptomatic infants#

100%
Alive

None
Required tracheostomy or permanent ventilation

100%
Able to sit without support

88%
Able to walk either with assistance or independently

*Data as of December 31, 2018

#Data as of May 2018 (n=25)

Extending our leadership position in multiple sclerosis

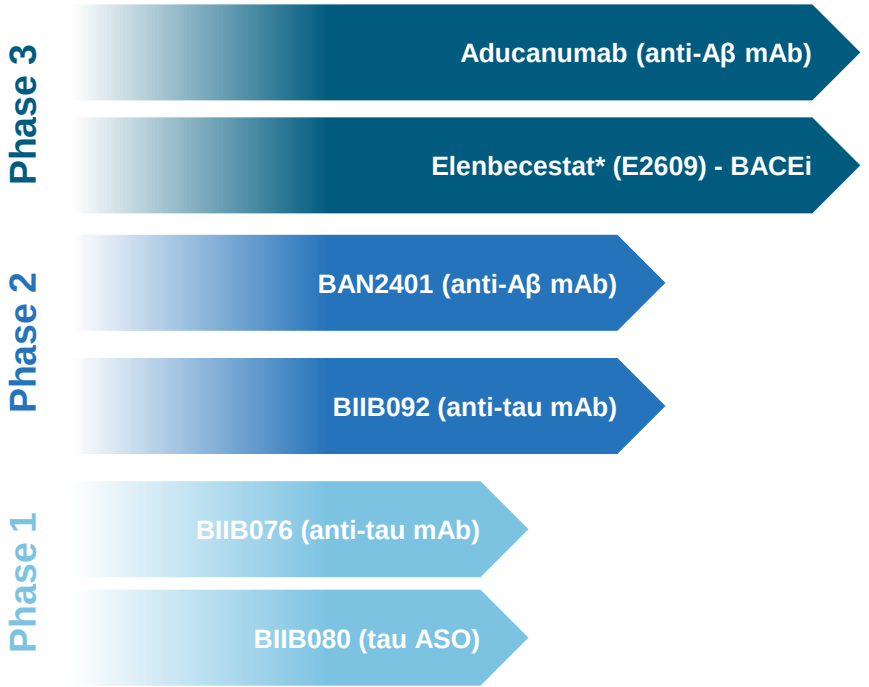
- Submitted NDA for diroximel fumarate (BIIB098), or VUMERITY*, in the U.S., with head-to-head data versus TECFIDERA expected mid-year
- Reinitiated development of BIIB061, a small molecule remyelination agent
- Dosed first patient in NOVA study examining efficacy of extended interval dosing of TYSABRI
- Dosed first patient in bioequivalence study of intramuscular formulation of PLEGRIDY

Biogen

* VUMERITY is being developed in collaboration with Alkermes. The name VUMERITY has been conditionally accepted by the FDA and will be confirmed upon approval.

Progressing an industry-leading Alzheimer's disease portfolio

- Presentations at CTAD 2018
  - Updated analyses of the LTE of Phase 1b PRIME study of **aducanumab**
  - Pre-specified subgroup analyses[#] of the Phase 2 study of **BAN2401**
  - Safety and efficacy data[#] from the Phase 2 study of **elenbecestat**
- Regulatory dialog ongoing and planning to initiate a confirmatory Phase 3 study of **BAN2401**
- Planning to initiate Phase 3 study to evaluate whether early use of **aducanumab** can prevent or delay clinical onset of AD[^]



*Generic name to be confirmed. [#]Data presented by Eisai. [^]This study will include patients with evidence of amyloid pathology in the brain with or without subjective cognitive complaints, otherwise referred to as Stages 1 and 2 in the FDA draft guidance on the treatment of early Alzheimer's disease.
Note: Aducanumab, elenbecestat, and BAN2401 are being developed in collaboration with Eisai. Biogen has an option to license BIIB080 from Ionis Pharmaceuticals.

Biogen

Progress across our emerging growth areas

Pain

Vixotrigine (BIIB074)

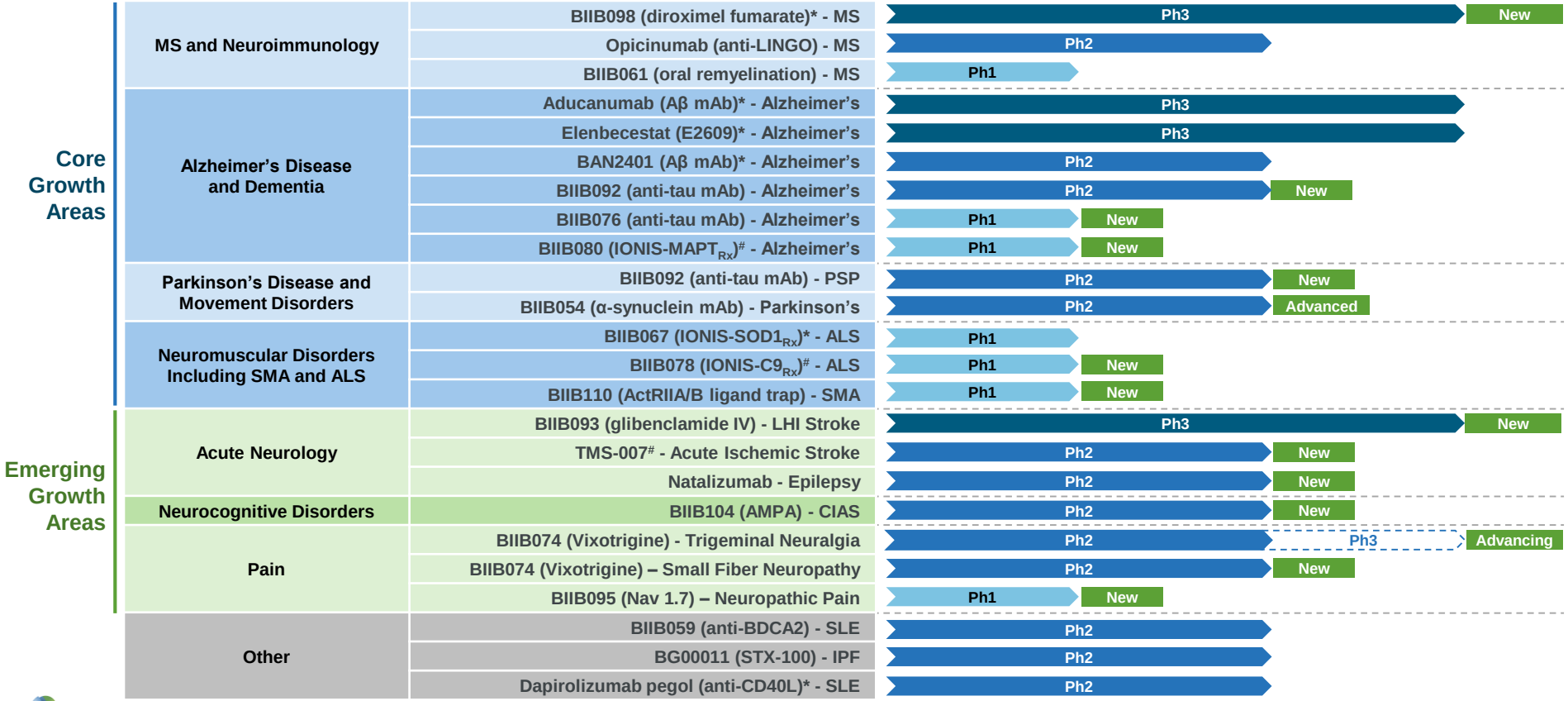
- Planning to initiate a Phase 3 program in trigeminal neuralgia by the end of 2019
- Enrolling a Phase 2 study for small fiber neuropathy

Neurocognitive Disorders

BIIB104 (AMPA potentiator)

- Dosed the first patient in the Phase 2b study in cognitive impairment associated with schizophrenia
- May have potential applicability in multiple diseases within our core and emerging growth areas

Added or advanced 14 clinical programs since beginning of 2017



* Collaboration programs # Option agreement

MS = multiple sclerosis; PSP = progressive supranuclear palsy; ALS = amyotrophic lateral sclerosis; SMA = spinal muscular atrophy; CIAS = cognitive impairment associated with schizophrenia; LHI = large hemispheric infarction; SLE = systemic lupus erythematosus; IPF = idiopathic pulmonary fibrosis

Financial Update

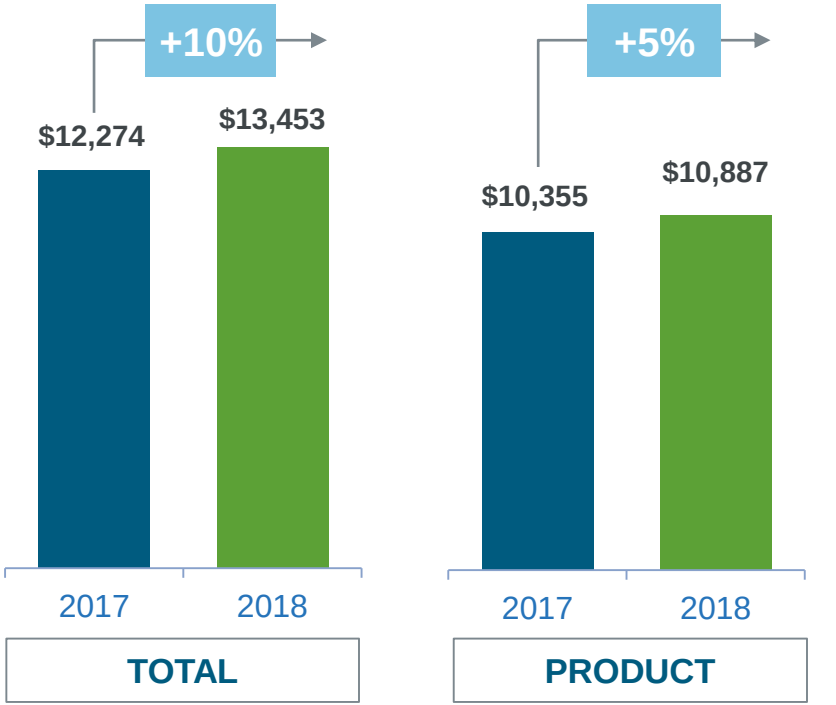
Jeffrey Capello

EVP, Chief Financial Officer

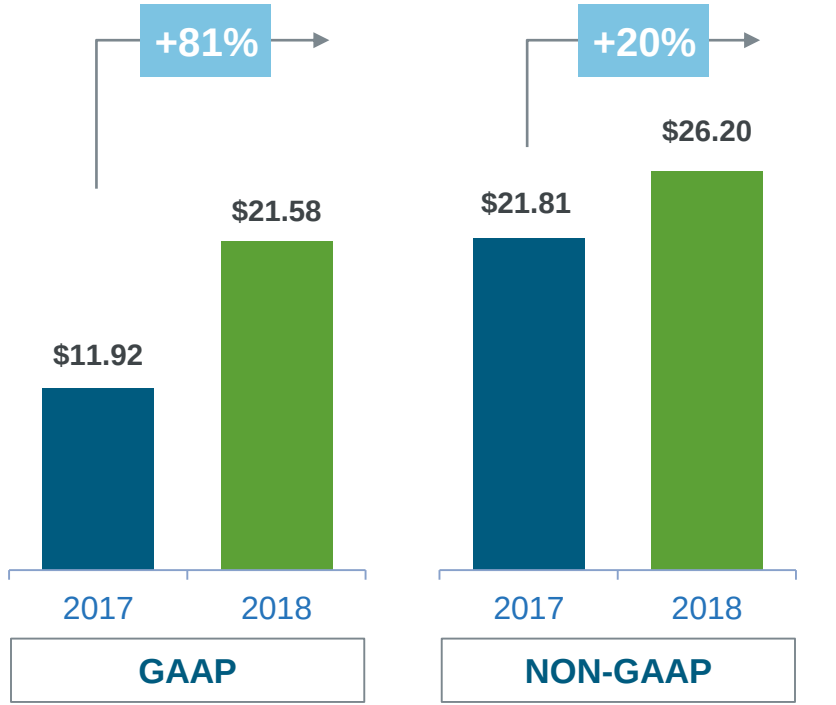
Biogen

Strong performance in 2018

Revenues ($M)



Diluted EPS ($)



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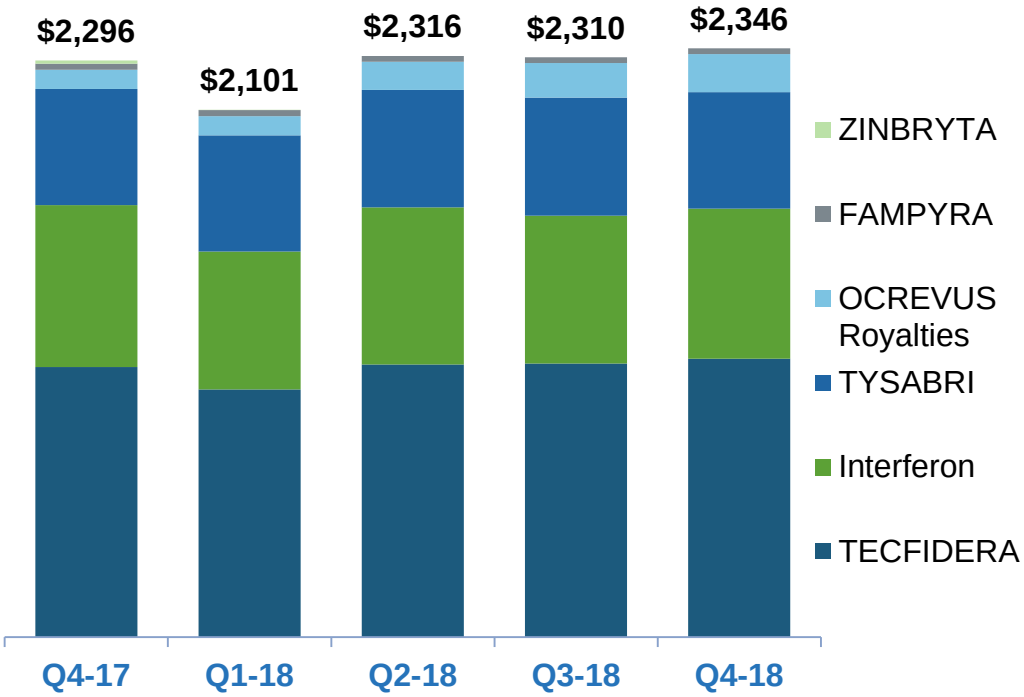
Global multiple sclerosis performance

MS Revenues ($M)



Highlights

- Revenues vs. Q4 2017 and Q3 2018

	ΔY/Y		ΔQ/Q
Total	+ 2%	and	+ 2%
U.S. Product	+ 1%	and	+ 2%
ROW Product	- 5%	and	- 1%
OCREVUS Royalties	+ 97%	and	+ 11%

- Improved year-over-year performance throughout Q1 to Q4 2018
- Increase in channel inventory in the U.S. of ~$115 million in Q4 2018 compared to increase of ~$50 million in Q4 2017
- Full year 2018 MS revenues benefitted by approximately $86 million due to changes in foreign exchange rates, net of hedging

Biogen

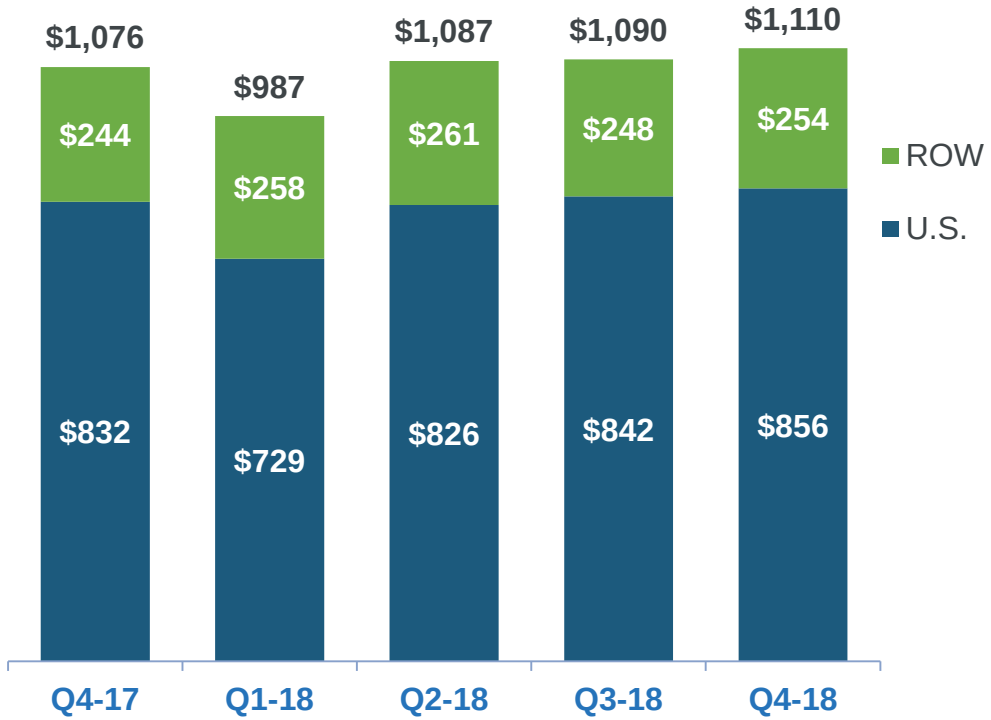
Numbers may not foot due to rounding.

Global TECFIDERA performance

Most Prescribed Oral MS Therapy Globally

Tecfidera (dimethyl fumarate) delayed-release capsules

TECFIDERA Revenues ($M)



Highlights

- Revenues vs. Q4 2017 and Q3 2018

	ΔY/Y		ΔQ/Q
WW	+ 3%	and	+ 2%
U.S.	+ 3%	and	+ 2%
ROW	+ 4%	and	+ 2%

- Increase in channel inventory in the U.S. of ~$65 million in Q4 2018 compared to increase of ~$40 million in Q4 2017

Biogen

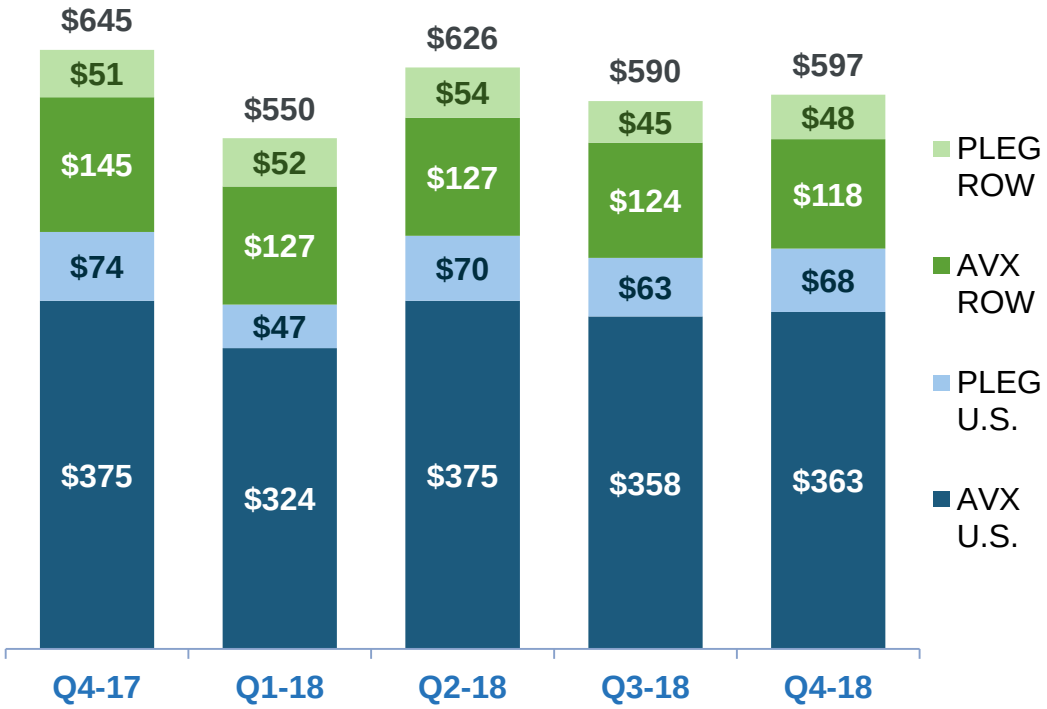
Numbers may not foot due to rounding.

Global interferon performance

Market Leading Interferon Franchise for MS Globally

AVONEX (interferon beta-1a) | plegridy (peginterferon beta-1a)

Interferon Revenues ($M)



Highlights

- Revenues vs. Q4 2017 and Q3 2018

	ΔY/Y		ΔQ/Q
WW	- 7%	and	+ 1%
U.S.	- 4%	and	+ 2%
ROW	- 15%	and	- 1%

- Increase in channel inventory in the U.S. of ~$40 million in Q4 2018 compared to increase of ~$10 million in Q4 2017

Biogen

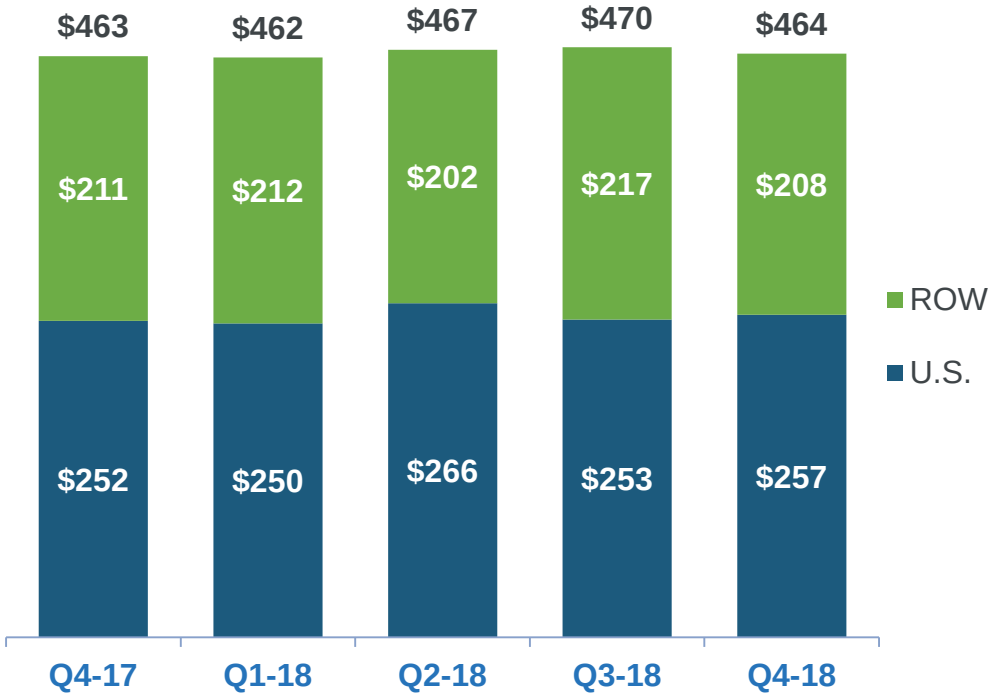
Numbers may not foot due to rounding.

Global TYSABRI performance

Market Leading High Efficacy Therapy for MS Globally

TYSABRI (natalizumab)

TYSABRI Revenues ($M)



Highlights

- Revenues vs. Q4 2017 and Q3 2018

	ΔY/Y		ΔQ/Q
WW	+ 0%	and	- 1%
U.S.	+ 2%	and	+ 1%
ROW	- 1%	and	- 4%

- Increase in channel inventory in the U.S. of ~$10 million in Q4 2018 compared to relatively stable inventory in Q4 2017

Biogen

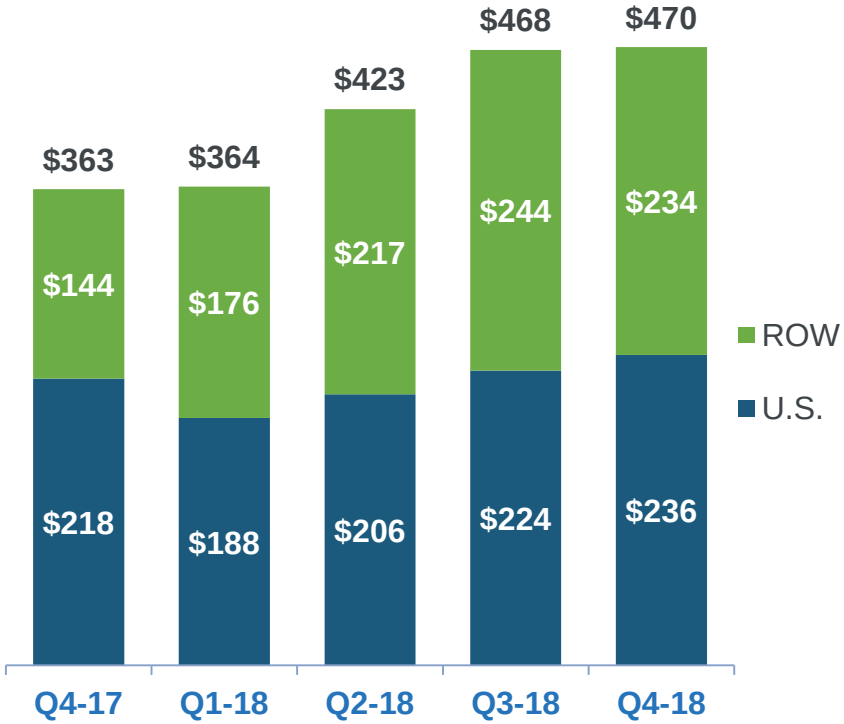
Numbers may not foot due to rounding.

Global SPINRAZA performance

Strong Global Launch Continued

SPINRAZA® (nusinersen) injection 12 mg/5 mL

SPINRAZA Revenues ($M)



Dosing Schedule

Highlights

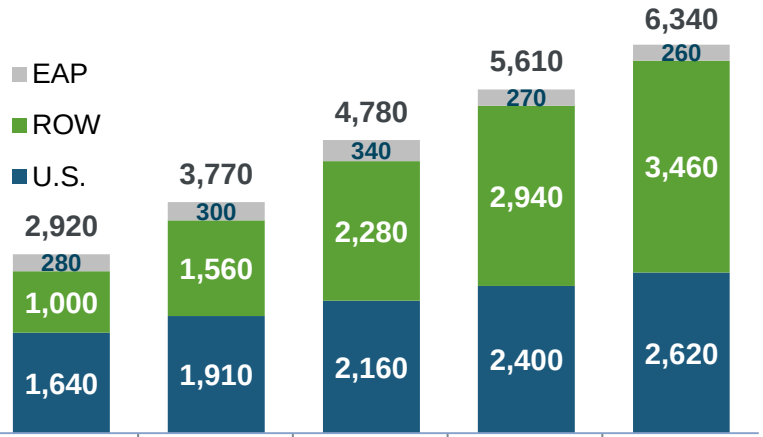
- Approved in over 40 countries*
- Formal reimbursement in 30 countries*
- Recorded revenue from over 40 markets in Q4 2018

Biogen

Numbers may not foot due to rounding.
* As of January 25, 2019

SPINRAZA patient dynamics

SPINRAZA Patients



U.S. Patient Dynamics	Q4-17	Q1-18	Q2-18	Q3-18	Q4-18
Total patients	1,640	1,910	2,160	2,400	2,620
New patient starts	420	290	270	260	240
Avg. doses per patient	1.6	1.1	1.1	1.0	1.0
% Loading doses	75%	60%	45%	40%	35%
% Maintenance doses	25%	40%	55%	60%	65%
% Free doses	20%	20%	15%	15%	15%

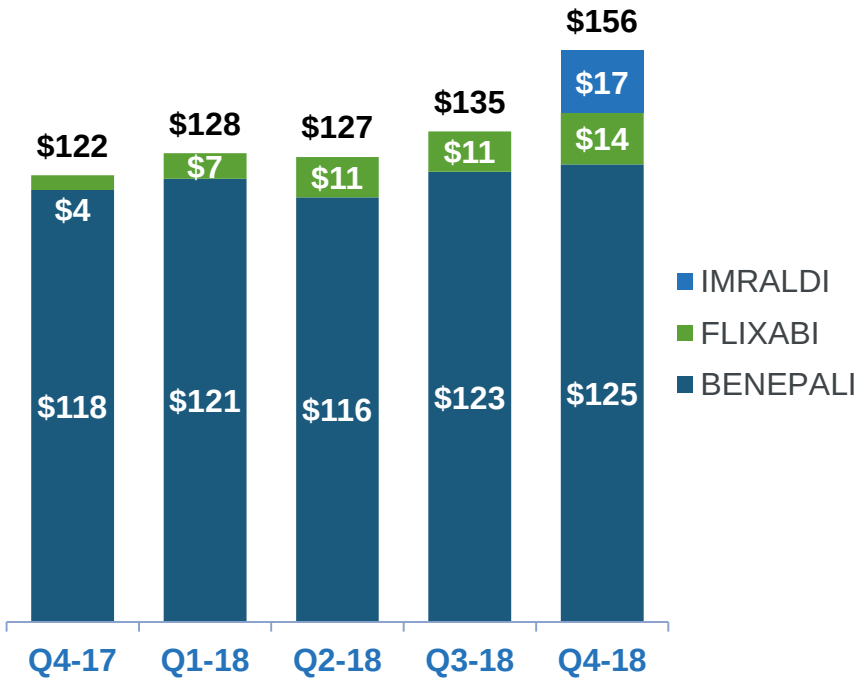
Highlights

- As of December 31, 2018, over 6,600 patients on therapy across the post-marketing setting, the EAP, and clinical trials
- Low discontinuations
- ~ 1,000 adults on therapy in the U.S., an increase of ~ 20% versus Q3 2018
  - > 50% of new patient starts in Q4 2018 were adults
- ~ 50% of infant (< 2 years old), ~ 50% of pediatric (2-17), and > 15% of adult (18+) SMA patients are on therapy in the U.S.

Numbers may not foot due to rounding. U.S. and Ex-U.S. SPINRAZA patients represent the total estimated number of patients on therapy in the post-marketing setting as of the end of each quarter, including free patients in the U.S. EAP patients represent patients actively enrolled in the Expanded Access Program (EAP) as of the end of each quarter. As of the end of Q4 2018 there were an additional ~ 300 patients enrolled in ongoing clinical studies.

Biosimilars business

Biosimilars Revenues ($M)



Commercialization in Europe

- > 100,000 patients currently on Biogen biosimilars*
- IMRALDI launched in Europe on October 17, 2018
- Biogen is now able to offer biosimilars of all three major anti-TNFs in Europe

Samsung Bioepis Joint Venture

- Increased equity stake to ~49.9%
- Leveraging expertise in protein engineering and biologics manufacturing
- Advancing biosimilars of trastuzumab and bevacizumab

Biogen

* Biogen data on file.

Q4 & FY 2018 financial results summary: revenues

$ in Millions	Q4 2018	Q3 2018	Q4 2017	Δ Q/Q	Δ Y/Y	FY 2018	FY 2017	Δ FY/FY
Total MS Product Revenues[1]	**$2,195**	**$2,173**	**$2,219**	**1%**	**(1%)**	**$8,595**	**$8,977**	**(4%)**
SPINRAZA U.S.	$236	$224	$218	5%	8%	$854	$657	30%
SPINRAZA ROW	$234	$244	$144	(4%)	62%	$870	$227	284%
Total SPINRAZA Sales	**$470**	**$468**	**$363**	**0%**	**30%**	**$1,724**	**$884**	**95%**
Hemophilia Sales	$0	$0	$0	NMF	NMF	$0	$74	(100%)
Biosimilars Sales	$156	$135	$122	16%	28%	$545	$380	44%
FUMADERM Sales	$5	$5	$9	4%	(44%)	$22	$40	(44%)
Total Product Sales[1]	$2,826	$2,780	$2,712	2%	4%	$10,887	$10,355	5%
RITUXAN/GAZYVA Revenues	$383	$375	$338	2%	13%	$1,502	$1,400	7%
OCREVUS Royalties	$152	$137	$77	11%	97%	$478	$159	200%
Revenues from Anti-CD20 Therapeutic Programs	**$535**	**$512**	**$415**	**5%**	**29%**	**$1,980**	**$1,559**	**27%**
Other Revenues	$166	$147	$180	13%	(8%)	$586	$360	63%
Total Revenues[1]	**$3,526**	**$3,439**	**$3,307**	**3%**	**7%**	**$13,453**	**$12,274**	**10%**

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.

[1] Net of hedge

Q4 & FY 2018 financial results summary

$ in Millions	Q4 2018	Q3 2018	Q4 2017	Δ Q/Q	Δ Y/Y	FY 2018	FY 2017	Δ FY/FY
GAAP Cost of Sales	$489	$461	$509	(6%)	4%	$1,816	$1,630	(11%)
% of Total Revenues	14%	13%	15%			14%	13%	
Non-GAAP Cost of Sales	$489	$461	$509	(6%)	4%	$1,816	$1,630	(11%)
% of Total Revenues	14%	13%	15%			14%	13%	
GAAP R&D Expenses	$612	$508	$588	(21%)	(4%)	$2,597	$2,254	(15%)
% of Total Revenues	17%	15%	18%			19%	18%	
Non-GAAP R&D Expenses	$602	$508	$588	(18%)	(2%)	$2,425	$2,251	(8%)
% of Total Revenues	17%	15%	18%			18%	18%	
GAAP SG&A Expenses	$591	$498	$572	(19%)	(3%)	$2,106	$1,934	(9%)
% of Total Revenues	17%	14%	17%			16%	16%	
Non-GAAP SG&A Expenses	$591	$495	$554	(19%)	(7%)	$2,095	$1,899	(10%)
% of Total Revenues	17%	14%	17%			16%	15%	
GAAP Amortization of Acquired Intangibles	$254	$282	$140	10%	(82%)	$747	$815	8%
Collaboration Profit Sharing	$56	$47	$30	(18%)	(87%)	$185	$112	(65%)

Numbers may not foot due to rounding. Percent changes represented as favorable & (unfavorable). A reconciliation of our GAAP to Non-GAAP financial results is at the end of this presentation.

Q4 & FY 2018 financial results summary

$ in Millions except EPS Shares in Millions	Q4 2018	Q3 2018	Q4 2017	Δ Q/Q	Δ Y/Y	FY 2018	FY 2017	Δ FY/FY
GAAP other Income (Expense)	($29)	$115	($66)	(125%)	57%	$11	($217)	NMF
Non-GAAP other Income (Expense)	($16)	($26)	($66)	37%	75%	($117)	($217)	46%
GAAP Tax Rate	33%	20%	112%			24%	48%	
Non-GAAP Tax Rate	21%	21%	29%			21%	25%	
GAAP Net Income (Loss) Attributable to Noncontrolling Interests	($2)	($2)	$131	NMF	NMF	$43	$131	NMF
Non-GAAP Net Income (Loss) Attributable to Noncontrolling Interests	($0)	$0	($1)	NMF	NMF	($0)	($1)	NMF
Weighted average diluted shares used in calculating diluted EPS	200	202	212	1%	6%	205	213	4%
GAAP Net Income Attributable to Biogen Inc.	$947	$1,444	($297)	(34%)	NMF	$4,431	$2,539	75%
GAAP Diluted EPS	**$4.73**	**$7.15**	**($1.40)**	**(34%)**	**NMF**	**$21.58**	**$11.92**	**81%**
Non-GAAP Net Income Attributable to Biogen Inc.	$1,400	$1,494	$1,116	(6%)	25%	$5,378	$4,645	16%
Non-GAAP Diluted EPS	**$6.99**	**$7.40**	**$5.26**	**(6%)**	**33%**	**$26.20**	**$21.81**	**20%**

Numbers may not foot due to rounding. Percent changes represented as favorable & (unfavorable). A reconciliation of our GAAP to Non-GAAP financial results is at the end of this presentation.

Biogen 2019 full year financial guidance

Expense ratios apply to both GAAP and Non-GAAP 2019 Full Year Guidance	2018 Actual	2019 Guidance
Revenues	$13.5 billion	**$13.6 to $13.8 billion**
R&D Expense (as a % of revenues)	19% (GAAP) 18% (non-GAAP)	**16% to 17%**
SG&A Expense (as a % of revenues)	16%	**16% to 17%**
Tax Rate	24% (GAAP) 21% (non-GAAP)	**18.5% to 19.5% (GAAP)** **18% to 19% (non-GAAP)**
GAAP Diluted EPS	$21.58	**$26.65 to $27.65**
Non-GAAP Diluted EPS	$26.20	**$28.00 to $29.00**

Additional 2019 Assumptions:

- Does not include any impact from potential acquisitions or large business development transactions, as both are hard to predict
- Expect capital expenditures to be between $500 million and $600 million

Biogen may incur charges, realize gains or losses, or experience other events in 2019 that could cause actual results to vary from this guidance. A reconciliation of our GAAP to non-GAAP financial results is at the end of this presentation.

Closing Remarks

Michel Vounatsos

Chief Executive Officer

Biogen

Remain focused on executing on strategic priorities

Executing on the core business

- Maximizing the resilience of our MS core business
- Accelerating progress in spinal muscular atrophy
- Creating a leaner and simpler operating model

Creating new sources of value

- Developing and expanding our neuroscience portfolio
- Re-prioritizing our capital allocation efforts

Expected pipeline progress over the next 12-18 months

	Expected Milestone
MS and Neuroimmunology	• **BIIB098** head-to-head data and potential U.S. approval • Phase 2b data for **opicinumab**
Neuromuscular Disorders	• Initiation of a potentially pivotal cohort for **BIIB067** in ALS
Alzheimer's Disease / Dementia	• Phase 1 data for anti-tau antibody **BIIB076** • Final Phase 3 data for **aducanumab**
Movement Disorders	• Potentially pivotal Phase 2 data for **BIIB092** in PSP
Pain	• Phase 3 initiation for **BIIB074** in trigeminal neuralgia

Expect up to 5 assets to enter the clinic in 2019

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Questions & Answers

Appendix

Robust clinical data for SPINRAZA has led to fast access in many markets

The robustness and extensiveness of SPINRAZA's clinical data package in combination with Biogen's responsible access strategy have provided access to over 6,000 SMA patients worldwide in ~ 2 years

Available in 44 countries world-wide just ~ 2 years after first regulatory approval for Spinraza.*

Successful assessments from rigorous payers:

- **US: ~** 95% of commercial and ~ 80% of state Medicaid lives have policies. ~ 75% of lives have no age of initiation criteria.
- **Germany:** First orphan drug ever deemed to have major added benefit & third product with major added benefit since AMNOG exists, out of 246 assessments.
- **France:** One of the few rare drugs to be recognized as bringing a high level of medical innovation, receiving an ASMR III for Type I and Type II.
- **HTA[#] markets** (Australia, Sweden, Scotland, Canada/INESS) **recognized the value** and gave access driven by clinical benefit and the robustness of the clinical data.

Reduced uncertainty: These results were driven by robustness of the clinical data (2 RCTs, 7 total trials, >300 patients).

Rapid geographic expansion in markets difficult to achieve access, especially for rare disease drugs e.g., Poland.

*Access through formal reimbursement, individual reimbursement, or a named-patient sales program. [#]HTA = Health technology assessment

Q4 & FY 2018 financial results summary: MS revenues

$ in Millions	Q4 2018	Q3 2018	Q4 2017	Δ Q/Q	Δ Y/Y	FY 2018	FY 2017	Δ FY/FY
TECFIDERA U.S.	$856	$842	$832	2%	3%	$3,253	$3,294	(1%)
TECFIDERA ROW[1]	$254	$248	$244	2%	4%	$1,021	$920	11%
Total TECFIDERA Sales[1]	**$1,110**	**$1,090**	**$1,076**	2%	3%	**$4,274**	**$4,214**	1%
AVONEX U.S.	$363	$358	$375	1%	(3%)	$1,420	$1,594	(11%)
AVONEX ROW[1]	$118	$124	$145	(5%)	(18%)	$495	$558	(11%)
Total AVONEX Sales[1]	**$481**	**$482**	**$520**	(0%)	(8%)	**$1,915**	**$2,152**	(11%)
PLEGRIDY U.S.	$68	$63	$74	8%	(8%)	$248	$296	(16%)
PLEGRIDY ROW[1]	$48	$45	$51	8%	(6%)	$199	$199	0%
Total PLEGRIDY Sales[1]	**$116**	**$108**	**$125**	8%	(7%)	$448	**$494**	(9%)
Total Interferon Sales[1]	**$597**	**$590**	**$645**	**1%**	**(7%)**	**$2,363**	**$2,646**	**(11%)**
TYSABRI U.S.	$257	$253	$252	1%	2%	$1,025	$1,114	(8%)
TYSABRI ROW[1]	$208	$217	$211	(4%)	(1%)	$839	$859	(2%)
Total TYSABRI Sales[1]	**$464**	**$470**	**$463**	(1%)	0%	$1,864	**$1,973**	(6%)
FAMPYRA[1]	$23	$23	$24	1%	(6%)	$93	$92	1%
ZINBRYTA ROW	$0	$0	$12	NMF	(100%)	$1	$53	(97%)
Total MS Product Sales[1]	**$2,195**	**$2,173**	**$2,219**	**1%**	**(1%)**	**$8,595**	**$8,977**	**(4%)**
OCREVUS Royalties	$152	$137	$77	11%	97%	$478	$159	200%
MS Product Sales[1] + OCREVUS Royalties	**$2,346**	**$2,310**	**$2,296**	**2%**	**2%**	**$9,073**	**$9,137**	**(1%)**

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.

[1] Net of hedge

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Q4 2018 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)	
	Q4'18	Q4'18	Q3'18	Q4'17	Vs. Q3'18	Vs. Q4'17	Vs. Q3'18	Vs. Q4'17	Vs. Q3'18	Vs. Q4'17
Total Revenues	**$3,526**	**$13**	**($8)**	**($17)**	**($18)**	**($38)**	**$21**	**$30**	**$3**	**($8)**
TECFIDERA	$1,110	$5	($3)	($6)	($4)	($8)	$9	$12	$4	$3
Interferon	$597	$3	($2)	($5)	($3)	($8)	$5	$8	$2	($1)
TYSABRI	$464	$4	($2)	($6)	($4)	($9)	$6	$10	$3	$1
SPINRAZA	$470	N/A	N/A	N/A	($4)	($6)	-	-	($4)	($6)
Biosimilars	$156	N/A	N/A	N/A	($2)	($4)	-	-	($2)	($4)

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Amounts are in millions and are GAAP and Non-GAAP. Numbers may not foot due to rounding.

FY 2018 impact of foreign exchange and hedging

	Actuals	Hedge Gains (Losses) in the Year		FX Impact w/o Hedge Favorable/ (Unfavorable)	Hedge Impact Favorable/ (Unfavorable)	Total Impact Favorable/ (Unfavorable)
	FY 18	FY 18	FY 17	Vs. FY 17	Vs. FY 17	Vs. FY 17
Total Revenues	**$13,453**	**($32)**	**($32)**	**$89**	**$1**	**$89**
TECFIDERA	$4,274	($12)	($12)	$31	$1	$31
Interferon	$2,363	($9)	($9)	$22	($0)	$22
TYSABRI	$1,864	($11)	($11)	$28	$0	$28
SPINRAZA	$1,724	N/A	N/A	($10)	-	($10)
Biosimilars	$545	N/A	N/A	$9	-	$9

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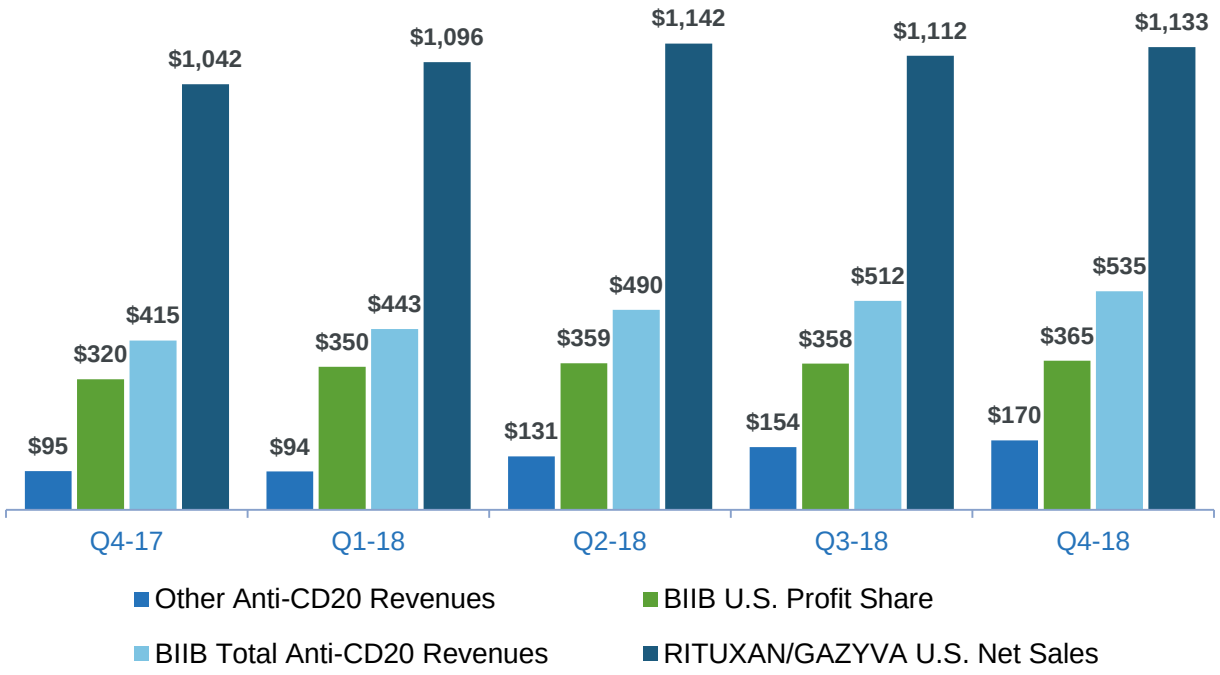
Amounts are in millions and are GAAP and Non-GAAP. Numbers may not foot due to rounding.

Anti-CD20 performance

Revenues from Anti-CD20 Therapeutic Programs ($M)



Highlights

- Revenues vs. Q3 2018 and Q4 2017

	ΔQ/Q		ΔY/Y
U.S. Net Sales	+ 2%	and	+ 9%
U.S. Profit Share[1]	+ 2%	and	+ 14%
Other Anti-CD20	+ 10%	and	+ 79%
BIIB Total Anti-CD20 Revenues	+ 5%	and	+ 29%

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

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Note: In collaboration with Roche and Genentech. Numbers may not foot due to rounding.
[1] BIIB U.S. profit share = U.S. profit share + expense reimbursement.

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		
	December 31, 2018	September 30, 2018	December 31, 2017
GAAP earnings per share - Diluted	$ 4.73	$ 7.15	$ (1.40)
Adjustments to GAAP net income attributable to Biogen Inc. (as detailed below)	2.26	0.25	6.66
Non-GAAP earnings per share - Diluted	$ 6.99	$ 7.40	$ 5.26

	For the Twelve Months Ended	
	December 31, 2018	December 31, 2017
GAAP earnings per share - Diluted	$ 21.58	$ 11.92
Adjustments to GAAP net income attributable to Biogen Inc. (as detailed below)	4.62	9.89
Non-GAAP earnings per share - Diluted	$ 26.20	$ 21.81

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		
	December 31, 2018	September 30, 2018	December 31, 2017
GAAP net income attributable to Biogen Inc.	$ 946.8	$ 1,444.4	$ (297.4)
Adjustments:			
Amortization of acquired intangible assets [A, B]	254.1	281.9	139.8
Acquired in-process research and development	–	27.5	–
Research and development [C]	10.0	–	–
(Gain) loss on fair value remeasurement of contingent consideration [D]	79.3	(87.9)	1.5
(Gain) loss on equity security investments	12.2	(141.2)	–
Net distribution to noncontrolling interests [E]	(1.6)	(1.5)	132.4
Restructuring, business transformation and other cost saving initiatives:			
2017 corporate strategy implementation [F]	–	3.1	18.5
Restructuring charges [F]	2.8	6.0	0.9
Income tax effect related to reconciling items	(49.8)	(19.3)	(53.2)
Elimination of deferred tax asset [G]	10.6	–	–
Tax reform [H]	135.8	(18.5)	1,173.6
Non-GAAP net income attributable to Biogen Inc.	$ 1,400.2	$ 1,494.5	$ 1,116.1

	For the Twelve Months Ended	
	December 31, 2018	December 31, 2017 (1)
GAAP net income attributable to Biogen Inc.	$ 4,430.7	$ 2,539.1
Adjustments:		
Amortization of acquired intangible assets [A, B]	747.3	814.7
Acquired in-process research and development	112.5	120.0
Research and development [C]	10.0	–
(Gain) loss on fair value remeasurement of contingent consideration [D]	(12.3)	62.7
Premium paid on purchase of Ionis common stock [I]	162.1	–
(Gain) loss on equity security investments	(128.0)	–
Net distribution to noncontrolling interests [E]	43.7	132.4
Restructuring, business transformation and other cost saving initiatives:		
2017 corporate strategy implementation [F]	10.9	18.5
Restructuring charges [F]	12.0	0.9
Hemophilia business separation costs	–	19.2
Income tax effect related to reconciling items	(146.6)	(235.7)
Elimination of deferred tax asset [G]	10.6	–
Tax reform [H]	124.9	1,173.6
Non-GAAP net income attributable to Biogen Inc.	$ 5,377.8	$ 4,645.4

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

(1) On February 1, 2017, we completed the spin-off of our hemophilia business. Our consolidated results of operations reflect the financial results of our hemophilia business through January 31, 2017.

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GAAP to Non-GAAP Reconciliation
Net Income Attributable to Biogen Inc. and Diluted Earnings Per Share
(unaudited, in millions, except per share amounts)

2019 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:

	$	Shares	Diluted EPS
GAAP net income attributable to Biogen Inc.	$ 5,365.0	197.6	$ 27.15
Adjustments:			
Amortization of acquired intangible assets	270.0		
Loss (gain) on fair value remeasurement of contingent consideration	12.0		
Restructuring charges	5.0		
Remeasurement of holding discount - investment in Ionis [J]	(40.0)		
Amortization of intangibles - Samsung Bioepis [K]	40.0		
Income tax effect related to reconciling items	(20.0)		
Non-GAAP net income attributable to Biogen Inc.	$ 5,632.0	197.6	$ 28.50

Footnotes referenced in the table 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. Purchase accounting, merger-related and other adjustments

We exclude certain purchase accounting related items associated with the acquisition of businesses, assets and amounts in relation to the consolidation or deconsolidation of variable interest entities for which we are the primary beneficiary. These adjustments include, but are not limited to, charges for in-process research and development and certain milestones, the amortization of intangible assets and charges or credits from the fair value remeasurement of our contingent consideration obligations.

2. Hemophilia business separation costs

We have excluded costs that are directly associated with the set up and spin-off of our hemophilia business on February 1, 2017. These costs represent incremental third-party costs attributable solely to the hemophilia spin-off and set up activities.

3. 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 R&D 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.

4. (Gain) loss on equity security investments

Effective January 2018 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.

5. 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 diluted earnings per share.

Notes to GAAP to Non-GAAP Reconciliation

[A] In January 2017 we entered into a settlement and license agreement among Biogen Swiss Manufacturing GmbH, Biogen International Holding Ltd., Forward Pharma A/S (Forward Pharma) and certain related parties, which was effective February 1, 2017. Pursuant to this agreement, we obtained U.S. and rest of world licenses to Forward Pharma's intellectual property, including Forward Pharma's intellectual property related to TECFIDERA. In exchange, we paid Forward Pharma $1.25 billion in cash, of which $795.2 million was recognized as an intangible asset in the first quarter of 2017.

We have two intellectual property disputes with Forward Pharma, one in the U.S. and one in the European Union, concerning intellectual property related to TECFIDERA.

In March 2017 the U.S. intellectual property dispute was decided in our favor. Forward Pharma appealed to the U.S. Court of Appeals for the Federal Circuit. We evaluated the recoverability of the U.S. asset acquired from Forward Pharma and recorded a $328.2 million impairment charge in the first quarter of 2017 to adjust the carrying value of the acquired U.S. asset to fair value reflecting the impact of the developments in the U.S. legal dispute and continued to amortize the remaining net book value of the U.S. intangible asset in our consolidated statements of income utilizing an economic consumption model. The U.S. Court of Appeals for the Federal Circuit upheld the U.S. Patent and Trademark Office's March 2017 ruling and in January 2019 denied Forward Pharma's petition for rehearing. We evaluated the recoverability of the U.S. asset based upon these most recent developments and recorded a $176.8 million impairment charge in the fourth quarter of 2018 to reduce the remaining net book value of the U.S. asset to zero.

In March 2018 the European Patent Office (EPO) revoked Forward Pharma's European Patent No. 2 801 355. Forward Pharma has filed an appeal to the Technical Board of Appeal of the EPO and the appeal is pending. Based upon our assessment of this ruling, we continue to amortize the remaining net book value of the rest of world intangible asset in our consolidated statements of income utilizing an economic consumption model.

Amortization of acquired intangible assets for the three and twelve months ended December 31, 2017, also includes a $31.2 million pre-tax impairment charge related to our acquired and in-licensed rights and patents intangible asset associated with ZINBRYTA after the initiation of an European Medicines Agency review (referred to as an Article 20 Procedure) of ZINBRYTA following the report of a case of fatal fulminant liver failure, as well as four cases of serious liver injury.

[B] Amortization of acquired intangible assets for the three months ended September 30, 2018, and the twelve months ended December 31, 2018, includes the impact of impairment charges totaling $189.3 million related to certain in-process research and development (IPR&D) assets associated with our vixotrigine (BIIB074) program.

During the third quarter of 2018 we completed a Phase 2b study of vixotrigine for the treatment of painful lumbosacral radiculopathy (PLSR). The study did not meet its primary or secondary efficacy endpoints; therefore, we discontinued development of vixotrigine for the treatment of PLSR and we recognized an impairment charge of approximately $60.0 million during the third quarter of 2018 to reduce the fair value of the related IPR&D intangible asset to zero. In addition, we delayed the initiation of the Phase 3 studies of vixotrigine for the treatment of trigeminal neuralgia (TGN) as we awaited the outcome of ongoing interactions with the U.S. Food and Drug Administration (FDA) regarding the design of the Phase 3 studies, a more detailed review of the data from the Phase 2b study of vixotrigine for the treatment of PLSR and insights from the Phase 2 study of vixotrigine for the treatment of small fiber neuropathy (SFN). We reassessed the fair value of our vixotrigine program for the treatment of TGN using reduced expected lifetime revenues, higher expected clinical development costs and a lower cumulative probability of success and, as a result of that assessment, we recognized an impairment charge of $129.3 million during the third quarter of 2018 to reduce the fair value of the IPR&D intangible asset associated with our vixotrigine program for the treatment of TGN to $41.8 million.

[C] GAAP research and development expense for the three and twelve months ended December 31, 2018, include a $10.0 million contingent consideration payment accrued in relation to the acquisition of an asset.

[D] During the third quarter 2018, we adjusted the fair value of our contingent consideration obligations related to our vixotrigine program for the treatment of TGN to reflect the lower cumulative probabilities of success, which resulted in a gain of $89.6 million.

In late December 2018 we received feedback from the FDA regarding the design of the Phase 3 studies of vixotrigine for the treatment of TGN. Following this feedback, we are now planning to initiate the Phase 3 studies for our vixotrigine program for the treatment of TGN and, as a result, we adjusted the fair value of our contingent consideration obligations related to our vixotrigine program for the treatment of TGN to reflect the increased probabilities of success and recognized a loss of $80.6 million in the fourth quarter of 2018.

Notes to GAAP to Non-GAAP Reconciliation (Continued)

[E] In October 2017 we amended the terms of our collaboration and license agreement with Neurimmune SubOne AG (Neurimmune). Under the amended agreement, we made a $150.0 million payment to Neurimmune in exchange for a 15% reduction in the previously negotiated royalty rates payable on products developed under this agreement, including royalties payable on potential commercial sales of aducanumab, our anti-amyloid beta antibody candidate for the treatment of Alzheimer's disease. In May 2018 we made an additional $50.0 million payment to Neurimmune to further reduce the previously negotiated royalty rates payable on products developed under this agreement, including royalties payable on potential commercial sales of aducanumab, by an additional 5%.

Net distribution to noncontrolling interest for the twelve months ended December 31, 2018, reflects the $50.0 million payment made to Neurimmune, net of Neurimmune's tax, in May 2018.

Net distribution to noncontrolling interest for the three and twelve months ended December 31, 2017, reflects the $150.0 million payment made to Neurimmune, net of Neurimmune's tax, in October 2017.

[F] 2017 corporate strategy implementation and restructuring charges are related to our efforts to create a leaner and simpler operating model.

[G] Elimination of deferred tax asset due to Samsung Bioepis Co., Ltd. (Samsung Bioepis) qualifying as a corporate joint venture for accounting purposes.

[H] The Tax Cuts and Jobs Act of 2017 (2017 Tax Act) resulted in significant changes to the U.S. corporate income tax system. These changes include a federal statutory rate reduction from 35% to 21%, the elimination or reduction of certain domestic deductions and credits and limitations on the deductibility of interest expense and executive compensation. The 2017 Tax Act also transitions international taxation from a worldwide system to a modified territorial system and includes base erosion prevention measures on non-U.S. earnings, which has the effect of subjecting certain earnings of our foreign subsidiaries to U.S. taxation as global intangible low-taxed income (GILTI). During the fourth quarter of 2018 we elected to recognize deferred taxes for the basis differences expected to reverse as GILTI is incurred and have established initial deferred tax balances, as of the enactment date of the 2017 Tax Act.

During the fourth quarter of 2017 we recognized within our provision for income taxes a $1.2 billion provisional estimate pursuant to the U.S. Securities and Exchange Commission Staff Accounting Bulletin No. 118. Our provisional estimate included an amount of $989.6 million associated with a one-time mandatory deemed repatriation tax on accumulated foreign subsidiaries' previously untaxed foreign earnings (the Transition Toll Tax) and $184.0 million related to the impact of remeasuring our deferred tax balances to reflect the new federal statutory rate and other changes to U.S. tax law.

Tax reform amounts for the three months ended September 30, 2018, reflects the effect of a net reduction of $34.6 million to our 2017 preliminary Transition Toll Tax estimate, an expense of $5.1 million for the remeasurement of our deferred tax balances and an $11.0 million expense to reflect other aspects of the 2017 Tax Act.

Tax reform amounts for the three and twelve months ended December 31, 2018, reflects the effect of an expense of $135.8 million related to the establishment of GILTI deferred taxes.

Tax reform amounts for the twelve months ended December 31, 2018, also reflects the effect of a net reduction of $34.6 million to our 2017 preliminary Transition Toll Tax estimate, an expense of $12.7 million for the remeasurement of our deferred tax balances and an $11.0 million expense to reflect other aspects of the 2017 Tax Act.

The final determination of the Transition Toll Tax and remeasurement of our deferred assets and liabilities was completed in the fourth quarter of 2018.

[I] In June 2018 we closed a new ten-year exclusive agreement with Ionis Pharmaceuticals, Inc. (Ionis) to develop novel antisense oligonucleotide drug candidates for a broad range of neurological diseases for a total payment of $1.0 billion consisting of an upfront payment of $375.0 million and the purchase of approximately 11.5 million shares of Ionis' common stock at a cost of $625.0 million.

The 11.5 million shares of Ionis' common stock were purchased at a premium to their fair value at the transaction closing date. The premium consisted of acquiring the shares at a price above the fair value based on the trailing 10-day weighted-average close price prior to entering into the agreement in April 2018 and the effect of certain holding period restrictions. We recorded an asset of $462.9 million in investments and other assets in our consolidated balance sheets reflecting the fair value of the common stock as of the purchase date and a charge of $162.1 million to research and development expense in our consolidated statements of income during the second quarter of 2018 reflecting the premium paid for the common stock.

[J] Our investment in Ionis' common stock, which is subject to certain holding period restrictions, is remeasured each reporting period and carried at fair value. The effects of the holding period restrictions are estimated using an option pricing valuation model.

[K] Amortization of intangibles - Samsung Bioepis represents the amortization of the difference reflecting the application of equity method accounting.