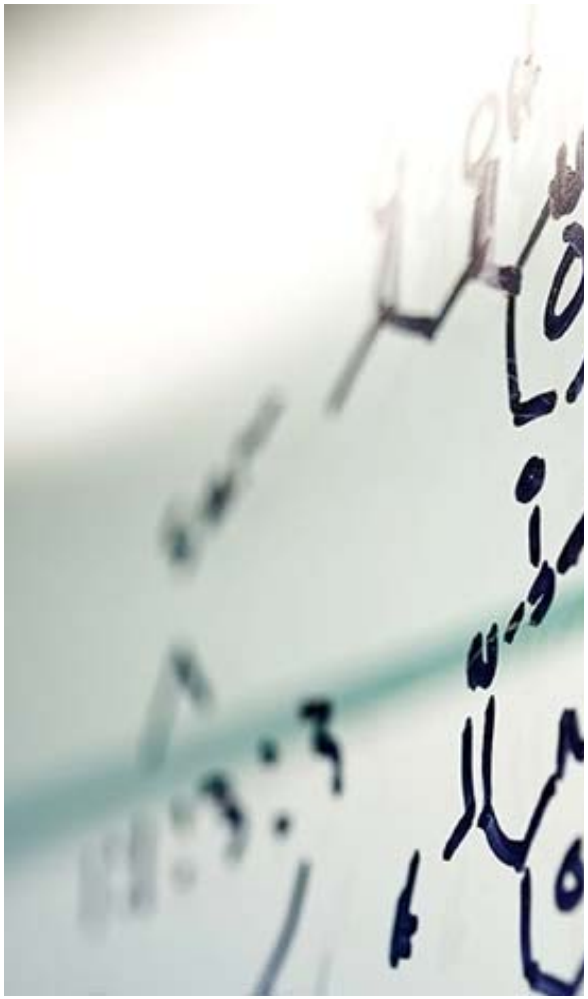

Biogen

J.P. Morgan 2018 Healthcare Conference

Michel Vounatsos, Chief Executive Officer

January 8, 2018

Forward-Looking Statements

This presentation contains forward-looking statements, including statements relating to Biogen's strategy and plans; corporate strategy update; potential of our commercial business and pipeline programs; the prospects of our product portfolio; pipeline potential and progress; anticipated clinical trials and data readouts; regulatory filings, product launches and the timing thereof; reimbursement activities; anticipated benefits and potential of investments, collaborations and business development activities; the timing and execution of stock repurchases; and other financial matters. These forward-looking statements may be accompanied by such words as "aim," "anticipate," "believe," "could," "estimate," "expect," "forecast," "intend," "may," "plan," "potential," "possible," "will" and other words and terms of similar meaning. You should not place undue reliance on these statements.

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; failure to compete effectively due to significant product competition in the markets for our products; difficulties in obtaining and maintaining adequate coverage, pricing and reimbursement for our products; risks associated with current and potential future healthcare reforms; the occurrence of adverse safety events, restrictions on use with our products or product liability claims; 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; 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; risks relating to management and key personnel changes, including attracting and retaining key personnel; problems with our manufacturing processes; 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; failure to successfully execute on our growth initiatives; risks relating to investment in and expansion of manufacturing capacity for future clinical and commercial requirements; risks relating to technology failures or breaches; failure to comply with legal and regulatory requirements; fluctuations in our effective tax rate; risks related to indebtedness; the risks of doing business internationally, including currency exchange rate fluctuations; risks related to commercialization of biosimilars; 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 relating to the spin-off of our hemophilia business, including risks of operational difficulties and exposure to claims and liabilities; environmental risks; risks relating to the sale and distribution by third parties of counterfeit 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 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.

Capitalizing on the Opportunity in Neuroscience

Why **Neuroscience?**

Why **Biogen?**

Why **Now?**

Capitalizing on the Opportunity in Neuroscience

- [x] Why **Neuroscience?**
- [ ] Why Biogen?
- [ ] Why Now?

Neuroscience Opportunity is Significant

#1 Cause of **disability** globally

#2 Cause of **deaths** worldwide

5th Leading cause of death **Stroke**

< 5 years Average life expectancy for **ALS**

~ 10M Patients with **Parkinson's disease**

~ 72M Patients with **dementia**

~ 2.5M **Multiple sclerosis** patients

SMA is a leading genetic cause of **infant mortality**

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Source: Lancet Neurology, 2017; DRG 2017, American Heart Association, American Parkinson's Disease Association, The ALS Association.

Capitalizing on the Opportunity in Neuroscience

- ☐ Why Neuroscience?
- ☑ Why **Biogen?**
- ☐ Why Now?

Strong Core Business and Investing for Future Growth

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

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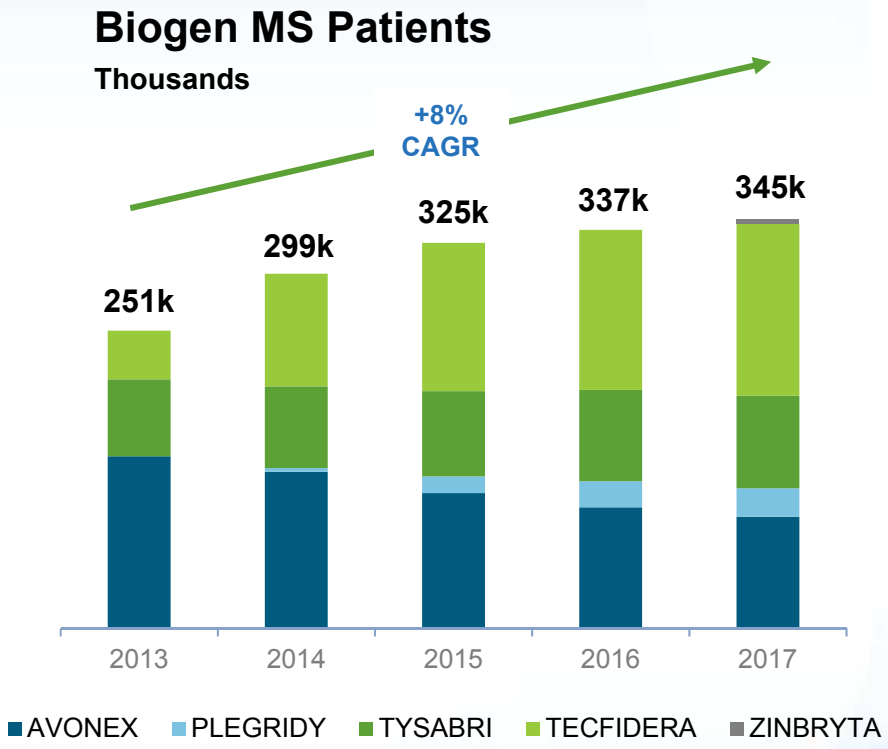
Demonstrating Resilience in our $9 Billion MS Franchise



HIGHLIGHTS

- ~$20B market with ~900k treated MS patients worldwide[1]
- Biogen products treat ~38% of all treated MS patients globally; ~42% in direct markets[1]
- Recently bolstered MS pipeline with in-licensing of BIIB098 (MMF prodrug) from Alkermes
- Advancing opicinumab into Phase 2b for remyelination in MS

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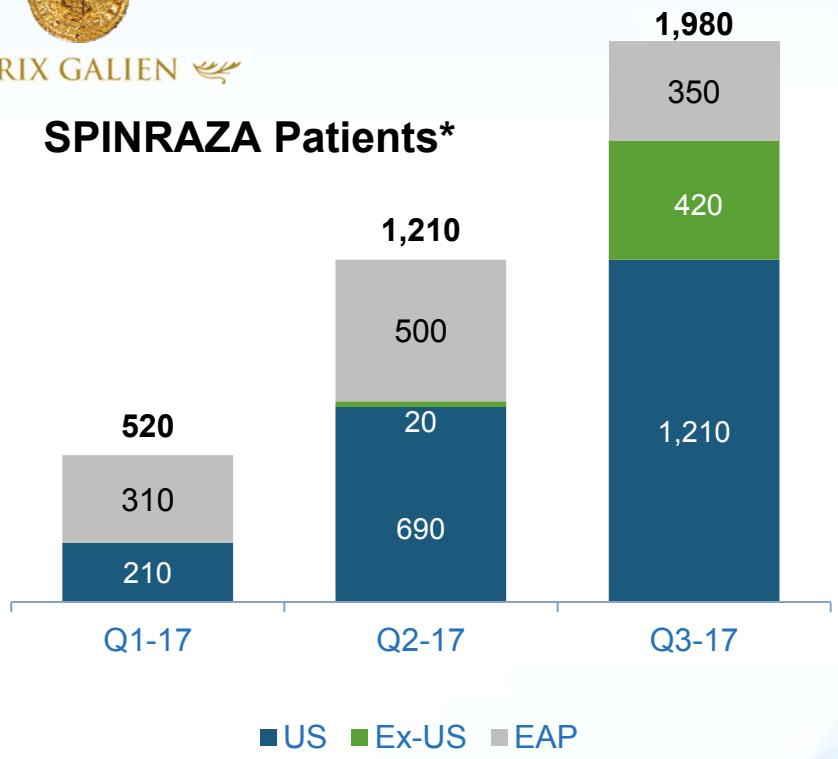
Note: Patient numbers represent estimated ending patient count as of December 31st of each year, except for 2017 which represents patients as of September 30th, 2017.
1. Biogen data on file.

Strong Global Launch for SPINRAZA

PRIX GALIEN



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* Note: U.S. and Ex-US SPINRAZA patients represent the total 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 Q3-17, there were an additional ~ 310 patients enrolled in ongoing clinical studies of SPINRAZA.

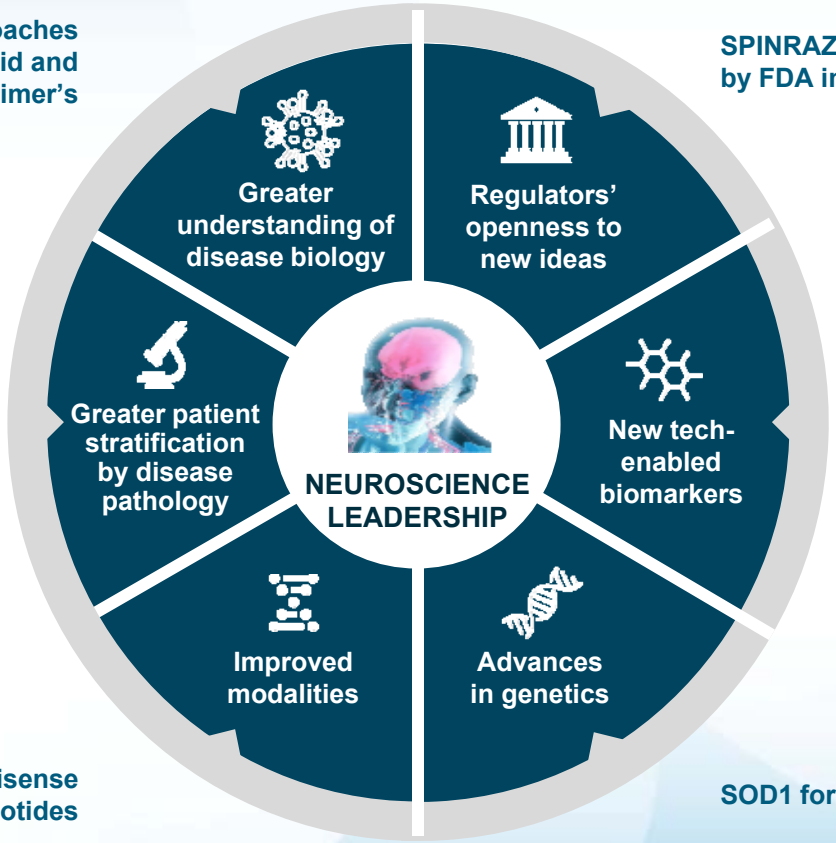
HIGHLIGHTS

- ~ 20,000 SMA patients across US, Europe, and Japan with additional opportunity in other markets
  - Incidence: 1/10,000 live births
- First and only approved treatment
- Opportunity across patient types
  - ~ 2/3 of U.S. SPINRAZA patients are Type 2 or Type 3
- Approved and reimbursed across 12 countries
- Recent collaboration to identify new ASO drug candidates for SMA
- Gene therapy program expected to enter Phase 1 by mid-2018

Strong Foundation Creates Asymmetric Capabilities

Complementary approaches targeting beta amyloid and tau for Alzheimer's

SPINRAZA approved by FDA in ~ 3 months



Patient stratification for natalizumab and BIIB093 in stroke

PET imaging for beta amyloid plaque

Intrathecal antisense oligonucleotides

SOD1 for ALS

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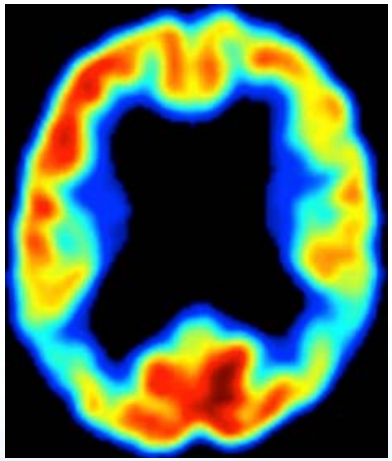
Continuing to Progress the Industry's Leading Alzheimer's Portfolio

Aducanumab Phase 3 Anti-amyloid antibody AMYLOID PATHWAY	**Elenbecestat* (E2609)** Phase 3 Oral inhibitor of β secretase REDUCE AMYLOID PRODUCTION
BAN2401* Phase 2 Anti-amyloid antibody AMYLOID PATHWAY	**BIIB092^** Phase 2 ready Anti-tau antibody REDUCE SPREAD OF TAU
BIIB076 Phase 1 Anti-tau antibody REDUCE SPREAD OF TAU	**BIIB080#** Phase 1 antisense oligonucleotide REDUCE PRODUCTION OF TAU

- Expect to complete **aducanumab** Phase 3 enrollment by mid-year
- 18 month data for **BAN2401** Phase 2 expected in second half of 2018



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* Generic name to be confirmed ^ Formerly known as BMS-986168 # Also known as IONIS-MAPT$_{Rx}$
Note: Aducanumab, E2609, and BAN2401 are being developed in collaboration with Eisai. BIIB080 is being developed in collaboration with Ionis Pharmaceuticals.

Establishing Strong Pipeline in Acute Neurology

Acute Neurology

Key Highlights

- **Phase 2b study** in natalizumab for acute ischemic stroke, ACTION2, **fully enrolled; data expected soon**
- Planning to **initiate Phase 3 study for BIIB093** in large hemispheric infarction by **mid-year**
- **Initiated OPUS, Phase 2** study for natalizumab in **drug-resistant focal epilepsy**

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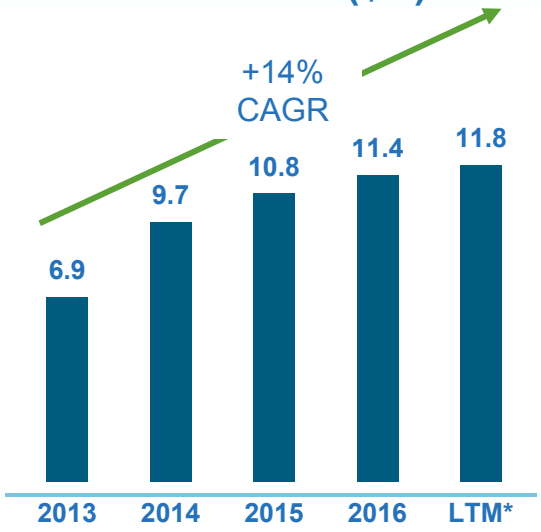
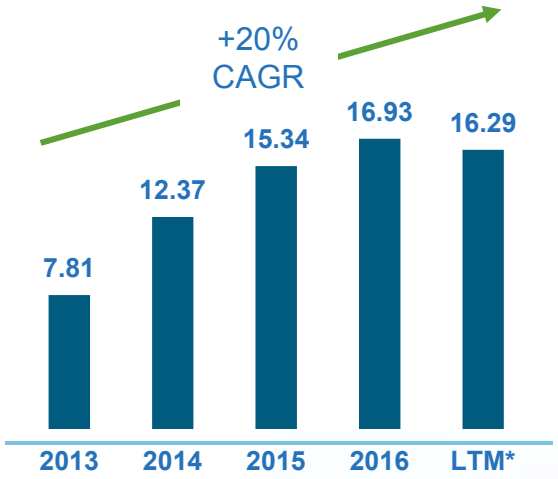
Strong Financial Track Record

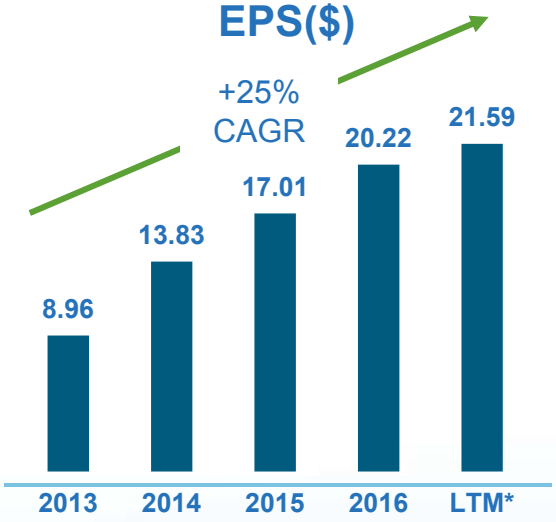
Revenues ($B)



GAAP Diluted EPS($)



Non-GAAP Diluted EPS($)



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*LTM = last 12 months, sum of quarterly as-reported results Q4 2016 through Q3 2017. A reconciliation of our GAAP to non-GAAP financial results is at the end of this presentation.

Capitalizing on the Opportunity in Neuroscience

- ☐ Why Neuroscience?
- ☐ Why Biogen?
- ☑ Why **Now?**

Biogen

Strong Execution in 2017

Maximizing the resilience of our MS core business	✓ Continued to grow our core business ✓ Strengthened IP position for TECFIDERA ✓ Brought in BIIB098 as next-generation fumarate
Accelerating progress in spinal muscular atrophy	✓ Executed strong global launch of SPINRAZA ✓ Launched collaboration for new ASOs ✓ Executed partnership for delivery device
Developing and expanding our neuroscience portfolio	✓ In-licensed BIIB092 (anti-tau) for PSP and AD ✓ Acquired BIIB093, bolstering our stroke pipeline ✓ Transitioned 5 assets from research to development
Re-prioritizing our capital allocation efforts	✓ One of our most productive years for BD ✓ Improved aducanumab collaboration arrangements with Eisai and Neurimmune
Creating a leaner and simpler operating model	✓ Transforming to an industry leading operating model to help fund further investment in R&D and commercial opportunities

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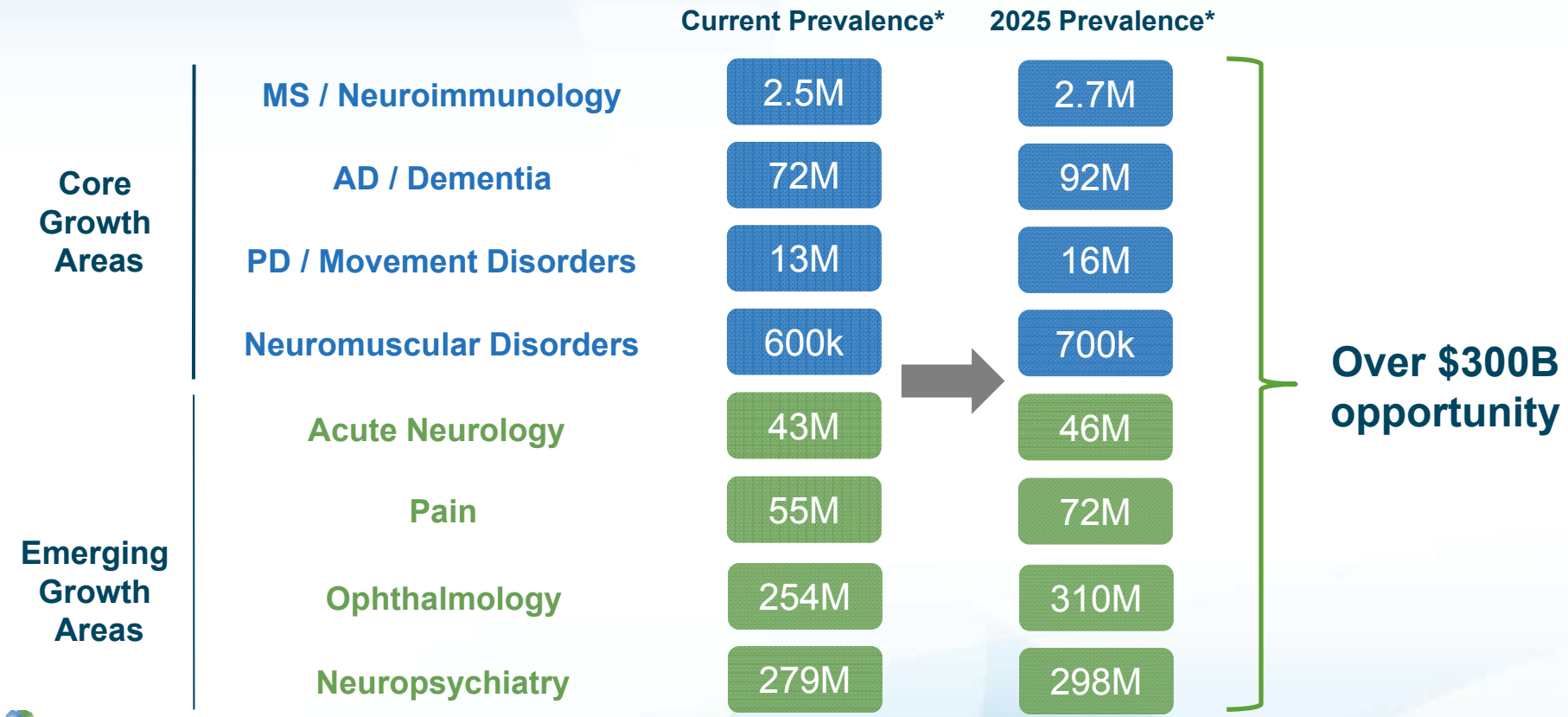
Strategic Focus on Core and Emerging Growth Areas



Source: DRG, 2017; Evaluate Pharma, 2017; clinicaltrials.gov

* Note: Prevalence numbers are estimates for entire disease categories. Do not represent addressable market sizes for Biogen.

Added 7 New Clinical Programs in 2017

		Additions in 2017	Clinical Programs	Data Readouts within 12-18 months
Core Growth Areas	MS / Neuroimmunology	+1	2	BIIB098 (MMF Prodrug) Ph 3 in MS
	AD / Dementia	+3	6	BAN2401 Ph 2 in Alzheimer's
	PD / Movement Disorders	+1	2	BIIB054 Ph 1 in Parkinson's
	Neuromuscular Disorders		1	BIIB067 Ph 1 in ALS
Emerging Growth Areas	Acute Neurology	+2	3	Natalizumab Ph 2 in stroke
	Pain		2	BIIB074 (Vixotrigine) Ph 2 in PLSR
	Ophthalmology		1	BIIB087 Ph 1 in XLRS
	Neuropsychiatry		0	
	Total	+7	17	

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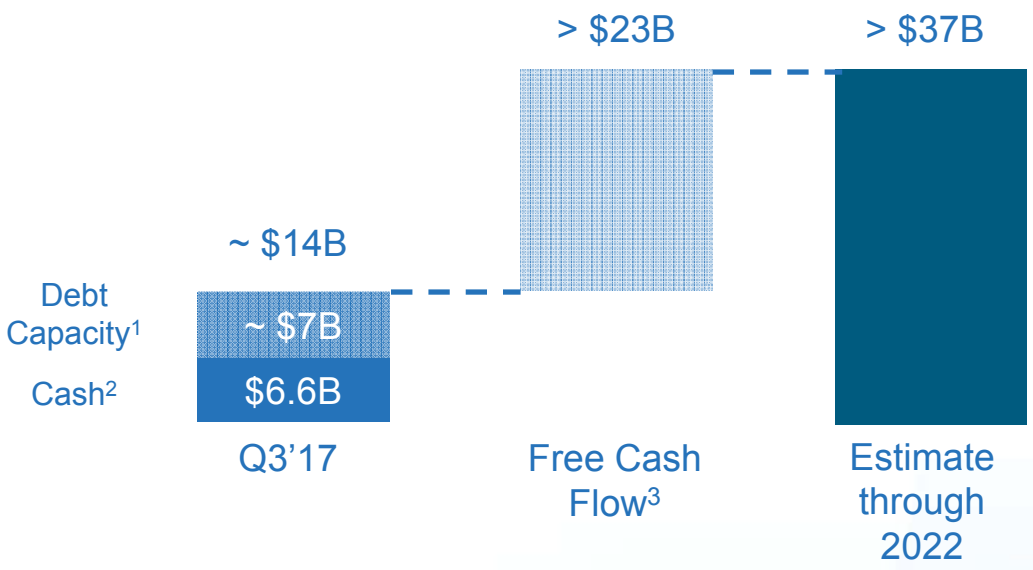
Significant Opportunity for Capital Allocation

For Illustrative Purposes Only



Potential uses of cash:

- Business development / M&A
- Share repurchases

A reconciliation of our GAAP to non-GAAP financial results is at the end of this presentation.
[1] Debt capacity estimate based on gross debt of 2x EBITDA, less current debt outstanding.
[2] Cash, cash equivalents, and marketable securities.
[3] Free cash flow defined as cash flow from operations, less capital expenditures (at maintenance level of $250M / year) and less estimated remaining contingent consideration related to the Fumapharm AG acquisition. Cash flow from operations estimated by extrapolating LTM cash flows through 2022, excluding the impact of the Forward Pharma payment in Q1 2017.

Capitalizing on the Opportunity in Neuroscience

Why **Neuroscience?**

- Massive unmet need
- Epidemiologic priority
- Breaking science

Why **Biogen?**

- Strong core business to fund future growth
- Substantial core competencies to apply across new opportunities

Why **Now?**

- Demonstrating strong execution
- Broadening opportunity set
- Multiple upcoming data readouts
- Significant opportunity for capital allocation

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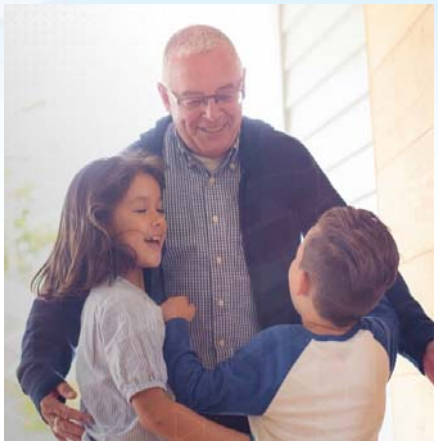


There is no leader in neuroscience.

Our goal is to be that leader.

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GAAP to Non-GAAP Reconciliation

Diluted EPS and Net Income to Biogen Inc.

(Unaudited, $ in millions, except per share amounts)

	FY 2013	FY 2014	FY 2015	FY 2016	LTM
GAAP EPS - Diluted	**$ 7.81**	**$ 12.37**	**$ 15.34**	**$ 16.93**	**$ 16.29**
Adjustment to net income attributable to Biogen Inc. (see below)	1.15	1.46	1.67	3.29	5.31
Non-GAAP EPS - Diluted	**$ 8.96**	**$ 13.83**	**$ 17.01**	**$ 20.22**	**$ 21.59**
GAAP Net Income Attributable to Biogen Inc.	**$ 1,862**	**$ 2,935**	**$ 3,547**	**$ 3,703**	**$ 3,486**
TECFIDERA litigation settlement and license charges	-	-	-	455	455
Amortization of acquired intangible assets	331	473	365	374	777
Acquired in-process research and development	-	-	-	-	120
(Gain)/ loss on fair value remeasurement of contingent consideration	(1)	(39)	31	15	57
(Gain)/ loss on deconsolidation of variable interest entities	-	-	-	(4)	(4)
Hemophilia business separation costs	-	-	-	18	32
Restructuring, business transformation and other cost saving initiatives					-
Weston exit costs	27	-	-	-	-
Restructuring charges	-	-	93	33	12
Cambridge manufacturing facility rationalization costs	-	-	-	55	18
Donation to Biogen Foundation	-	35	-	-	-
Stock option expense and other	10	12	-	-	-
Income tax effect primarily related to reconciling items	(93)	(135)	(104)	(225)	(329)
Non-GAAP Net Income Attributable to Biogen Inc.	**$ 2,136**	**$ 3,281**	**$ 3,932**	**$ 4,423**	**$ 4,623**

Free Cash Flow Reconciliation

(unaudited, $ in millions)

	LTM	Q4 2017 - 2022
Net cash flows provided by operating activities	$ 4,609	$ 26,587
Forward Pharma litigation settlement charge	455	-
Purchases of property, plant and equipment (Capital Expenditures)	(819)	(1,313)
Contingent Consideration related to Fumapharm AG acquisition	(1,200)	(2,100)
Free Cash Flow	**$ 3,045**	**$ 23,174**

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 forms 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 and merger-related 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, the amortization of certain acquired 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 into an independent, publicly-traded company. These costs represent incremental third party costs attributable solely to hemophilia separation and set up activities.

3. Restructuring, business transformation and other cost saving initiatives

We exclude costs associated with the company's 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 on-going or future business operations.

4. Weston Exit Costs

As a result of our decision to relocate our headquarters to Cambridge, MA, we vacated a portion of our Weston, MA facility in the fourth quarter of 2013. This charge represents our remaining lease obligation for the vacated portion of our Weston facility, net of sublease income.

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.

Numbers may not foot due to rounding. LTM = last 12 months, sum of quarterly as-reported results Q4 2016 through Q3 2017.

Free Cash Flow

Free cash flow defined as cash flow from operations, less capital expenditures (at maintenance level of $250M / year) and less estimated remaining contingent consideration related to the Fumapharm AG acquisition. Cash flow from operations estimated by extrapolating LTM cash flows through 2022, excluding the impact of the Forward Pharma payment in Q1 2017.

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Progress in Expanding Our Pipeline

Core Growth Areas	MS and Neuroimmunology	BIIB098 (monomethyl fumarate prodrug)* - MS	Ph3 → New
		Opicinumab (anti-LINGO) - MS	Ph2
	Alzheimer's Disease and Dementia	Aducanumab (Aβ mAb)* - Alzheimer's	Ph3
		Elenbecestat (E2609)* - Alzheimer's	Ph3
		BAN2401 (Aβ mAb)* - Alzheimer's	Ph2
		BIIB092 (anti-tau mAb) - Alzheimer's	Ph1 → New
		BIIB076 (anti-tau mAb) - Alzheimer's	Ph1 → New
		BIIB080 (IONIS-MAPT$_{Rx}$)* - Alzheimer's	Ph1 → New
	Parkinson's Disease and Movement Disorders	BIIB092 (anti-tau mAb) - PSP	Ph2 → New
		BIIB054 (α-synuclein mAb) - Parkinson's	Ph2 → Advanced
	Neuromuscular Disease Including SMA and ALS	BIIB067 (IONIS-SOD1$_{Rx}$)* - ALS	Ph1
Emerging Growth Areas	Pain	BIIB074 (Vixotrigine) - Trigeminal Neuralgia	Ph2
		BIIB074 (Nav1.7) - PLSR	Ph2
	Ophthalmology	BIIB087 (gene therapy)* - XLRS	Ph1/2
	Acute Neurology	BIIB093 (glibenclamide IV) - LHI Stroke	Ph2 → New
		Natalizumab - AI Stroke	Ph2
		Natalizumab - Epilepsy	Ph2 → New
	Other	Dapirolizumab pegol (anti-CD40L)* - SLE	Ph2
		BG00011 (STX-100) - IPF	Ph2
		BIIB059 (anti-BDCA2) - SLE	Ph2

* Collaboration programs