Biogen Inc. Deep Dive Research Report

March 2026 | Ada Cockpit Analysis

Executive Summary

2025 Revenue	Non-GAAP EPS	Market Cap
$9.9B	**$15.28**	**$27-28B**
Employees	Free Cash Flow	Growth Products Rev
7,605	**$2.1B**	**$3.3B**

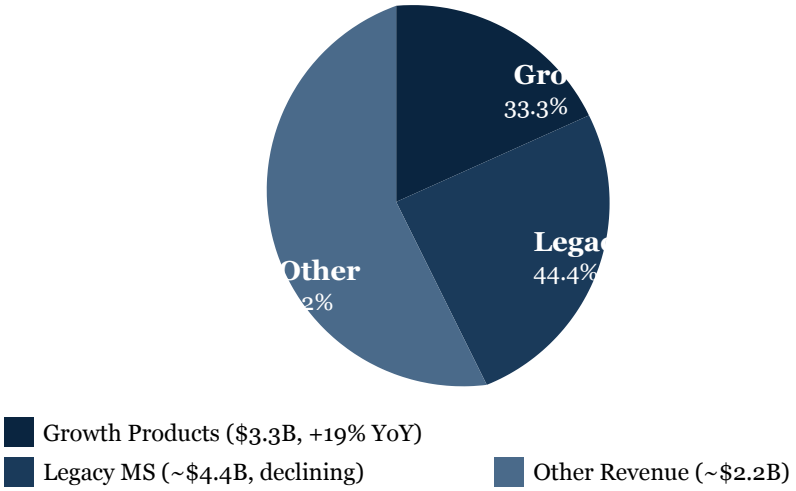
Biogen Inc. (NASDAQ: BIIB) is a pioneering American biotechnology company headquartered at 225 Binney Street, Cambridge, Massachusetts. Founded in **1978** by Nobel laureates Walter Gilbert and Phillip Sharp, Biogen has established itself as a global leader in neuroscience and rare disease therapies.

Company Overview

- **Headquarters:** Cambridge, MA (planning to move to 75 Broadway in 2028)
- **Founded:** April 14, 1978 in Geneva, Switzerland (relocated to Cambridge in 1982)
- **Employee Count:** 7,605 as of December 31, 2024 (+0.46% from 2023)
- **Public Company:** Listed on NASDAQ

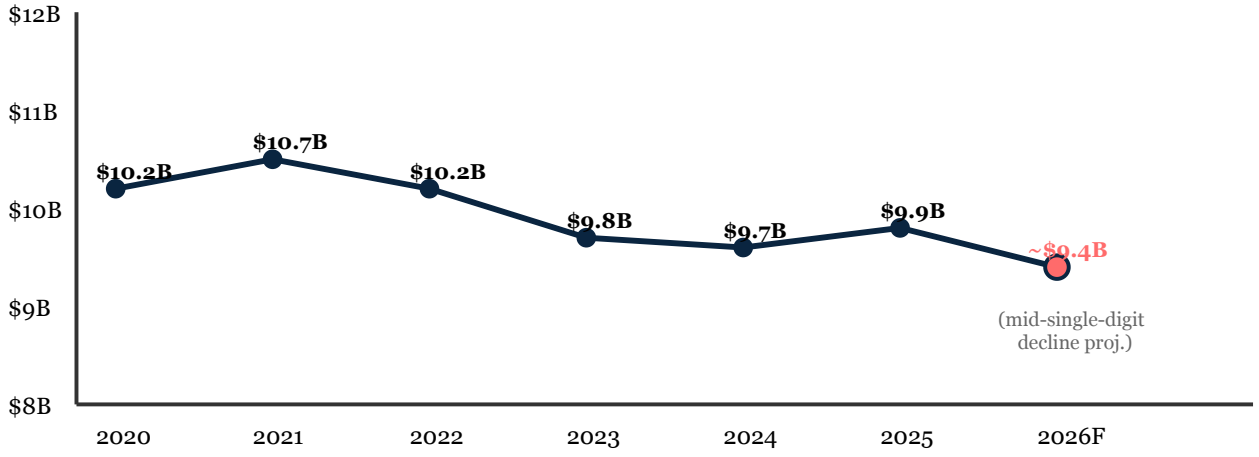
Revenue Mix by Segment (2025)

2025 Revenue Composition ($9.9B Total)



Revenue Growth Trajectory (2020-2026F)

Total Revenue Trend & Forecast



Strategic Position

Biogen is undergoing a strategic transformation from legacy multiple sclerosis (MS) treatments to a diversified portfolio emphasizing rare diseases and neurological conditions. Under CEO Christopher Viehbacher (appointed November 2022), the company is executing its **"Fit for Growth"** cost optimization program targeting ~$1 billion in gross savings by end-2025, while simultaneously investing in pipeline expansion through business development.

Growth Products (including LEQEMBI, SKYCLARYS, ZURZUVAE, QALSODY, and VUMERITY) generated **$3.3 billion in 2025 revenue (+19% YoY)**, offsetting legacy MS portfolio declines. The company's transformation is evident in its product mix: 45% of revenue now comes from non-MS medicines, with 55% of product revenue from outside the U.S.

> **Forward-Looking Disclaimer:** This report contains forward-looking statements based on current expectations and available data as of March 2026. Actual results may differ materially due to risks outlined in the Risks section.

Company History

Founding and Early Years (1978-1989)

Biogen was founded on **April 14, 1978**, in Geneva, Switzerland, initially as **Biotechnology Geneva (Biogen NV)** by a distinguished group of scientists pioneering recombinant DNA technology:

- **Walter Gilbert** (Nobel laureate, first CEO)
- **Charles Weissmann**
- **Heinz Schaller**
- **Kenneth Murray**
- **Phillip Allen Sharp** (Nobel laureate)

In **1982**, Biogen relocated its headquarters to Cambridge, Massachusetts. The company went public with its IPO in **1983**. The early years were financially precarious, with **James L. Vincent** becoming CEO in 1985, averting bankruptcy after the company accumulated $100 million in losses. By 1989, Biogen achieved its first profit of $3.2 million on $28.5 million in sales.

Biogen Idec Merger (2003)

On **November 12, 2003**, Biogen merged with **Idec Pharmaceuticals** to form **Biogen Idec**, a transformational deal that expanded the company's focus to include oncology and neurology. In **2015**, the company was renamed to **Biogen Inc.**

Strategic Acquisitions

- **2006:** Acquired Conforma Therapeutics for $250 million
- **2007:** Licensed Aducanumab for Alzheimer's from Neurimmune
- **2023:** Acquired Reata Pharmaceuticals (SKYCLARYS for Friedreich's ataxia)
- **2024:** Completed $1.15 billion acquisition of HI-Bio for felzartamab
- **2025:** Partnership with Stoke Therapeutics for zorevunersen (Dravet syndrome)

Ownership Structure

Biogen Inc. is a **publicly traded company** listed on the NASDAQ under ticker symbol **BIIB**. **Institutional ownership** represents **87.93%** of outstanding stock, with approximately 1,189 institutional owners holding around 142 million shares.

Top Institutional Shareholders

Shareholder	Value/Shares	Ownership %
Vanguard Group Inc.	~$2.17 billion	Top holder
BlackRock, Inc.	Not disclosed	Second largest
Primecap Management Co.	$1.98B / 14.95M shares	~10.20%
State Street Corp	$938M / 7.32M shares	~5.00%
FMR LLC (Fidelity)	9.41M shares	6.40%

Board of Directors

Board Chair transition scheduled for June 9, 2026: **Maria C. Freire, M.D., Ph.D.** succeeds **Caroline Dorsa** as Chair. Key independent directors include Eric Rowinsky, William Hawkins, Stephen Sherwin, Jesus Mantas (Compensation Committee Chair), and Lloyd Minor (Audit Committee).

Leadership / C-Suite

Executive	Title	Start Date
Christopher Viehbacher	President & CEO	November 2022
Robin Kramer	EVP & CFO	February 2025
Priya Singhal, M.D.	EVP, Head of Development	2020
Alisha Alaimo	President, Head of North America	2017
Nicole Murphy	EVP, Pharmaceutical Operations	2015
Susan Alexander	Chief Legal Officer	20.2 years tenure

Drug Portfolio

Neuroscience / Multiple Sclerosis Portfolio

Product	Indication	Revenue (2025)	Growth	Patent Status
TYSABRI	Relapsing MS	~$1,573M (projected)	Declining	US patents expire 2026-2027
TECFIDERA	Relapsing MS	Not disclosed	Declining	Generic competition
VUMERITY	Relapsing MS	Included in $3.3B growth	Growing (+19% YoY)	Protected
LEQEMBI	Alzheimer's disease	$87M Q4 '24; $96M Q1 '25	Growing (+395% YoY)	Protected (co-marketed Eisai)
ZURZUVAE	Postpartum depression	$22M Q3 '24 (total)	Growing gradually	Protected (co-marketed Sage/Supernus)

Rare Disease / Neuromuscular Portfolio

Product	Indication	Revenue (2025)	Growth	Peak Sales Potential
SPINRAZA	Spinal muscular atrophy	$356M Q4 '25; FY -2% YoY	Declining	Past peak (~$2B)
SKYCLARYS	Friedreich's ataxia	$124M Q1 '25	Strong growth	$500M-1B
QALSODY	SOD1-ALS	$533M Q2 '25 (segment)	Growing	$300-500M

Top 5 CEO Focus Drugs

Based on earnings calls and strategic communications, CEO Christopher Viehbacher emphasizes:

1. **LEQEMBI (lecanemab)** - Alzheimer's cornerstone; 395% YoY growth Q1 '25 despite lukewarm initial uptake
2. **SKYCLARYS (omaveloxolone)** - Friedreich's ataxia; $124M Q1 '25, first-and-only approved therapy
3. **QALSODY (tofersen)** - SOD1-ALS; precision medicine flagship despite small population
4. **SPINRAZA (nusinersen)** - SMA; HD-SPINRAZA positioned to recapture market share; FDA decision April 3, 2026
5. **VUMERITY (diroximel fumarate)** - MS oral; sustaining franchise amid genericization

R&D Pipeline

Biogen has **10 Phase 3 trials** underway with multiple readouts expected in 2026-2027, characterized by CEO as "the year where we start to turn over the cards."

Program	Indication	Expected Readout	Partnership
Litifilimab	Cutaneous lupus	Phase 2: End Q1 2026	Proprietary (FDA Breakthrough)
Litifilimab	Systemic lupus	Phase 3: Q4 2026	Proprietary
Felzartamab	Kidney diseases	Phase 3: Mid-2027	HI-Bio ($1.15B acquisition)
Zorevunersen	Dravet syndrome	Phase 3: Mid-2027	Stoke Therapeutics
HD-SPINRAZA	Spinal muscular atrophy	FDA decision: April 3, 2026	Proprietary

Competitive Landscape

Multiple Sclerosis

Major Competitors: Novartis, Roche, Sanofi, Merck KGaA, Teva, BMS, AbbVie, Janssen. Over 75 companies and 80 pipeline therapies in development. Key threats: biosimilar TYSABRI (post-2026 patent expiry), high-efficacy anti-CD20 therapies (Ocrevus, Kesimpta), BTK inhibitors.

Alzheimer's Disease

Major Competitor: Eli Lilly (donanemab). Market constrained by infusion requirements, ARIA monitoring, reimbursement hurdles. LEQEMBI differentiation: full FDA approval, robust Phase 3 data, Eisai geographic reach.

Spinal Muscular Atrophy

Major Competitors: Novartis ZOLGENSMA (one-time gene therapy, $2.1M), Roche Evrysdi (oral). SPINRAZA retains advantage in late-onset SMA (Types 2/3) and markets with limited gene therapy infrastructure.

Risks and Challenges

- **Patent Cliff:** TYSABRI patents expire 2026-2027; biosimilar entry expected to accelerate MS franchise decline
- **Competitive Pressure:** 75+ companies in MS; ZOLGENSMA eroding SPINRAZA; donanemab competing with LEQEMBI
- **Pipeline Execution Risk:** 10 Phase 3 trials represent substantial investment; failures would undermine growth narrative
- **Regulatory/Pricing Pressure:** CMS reimbursement constraints on LEQEMBI; European biosimilar pricing pressure
- **FX Exposure:** 55% revenue from outside U.S.; currency fluctuations impact reported revenue
- **M&A Integration Risk:** HI-Bio ($1.15B) felzartamab Phase 3 carries execution risk

Outlook and Valuation Context

2026 Guidance

- **Total Revenue:** Mid-single-digit percentage decline vs. 2025 ($9.9B)
- **Non-GAAP Diluted EPS:** $15.25-$16.25
- **Drivers:** Continued MS decline offset by growth products (LEQEMBI, SKYCLARYS, QALSODY)

Peer Comparison

Company	Market Cap	2025 Revenue	Focus
Biogen	$27-28B	$9.9B	Neuroscience, rare disease
Vertex	~$120B	~$10B+	Cystic fibrosis, gene editing
Regeneron	~$100B	~$13B+	Ophthalmology, immunology
Gilead	~$100B	~$27B	HIV, HCV, oncology

Investment Thesis: Biogen's valuation reflects investor concerns about MS patent cliff, but successful execution of "bridge to growth" strategy (10 Phase 3 readouts 2026-27, LEQEMBI inflection, rare disease expansion) could drive re-rating. **Bull case:** Pipeline successes + LEQEMBI acceleration = revenue growth resumption by 2027-28. **Bear case:** Pipeline failures + LEQEMBI stagnation + accelerated MS erosion = sustained revenue decline.

Ada Patient Finder Analysis

Perfect Fit: SKYCLARYS (Friedreich's Ataxia)

Ada Fit Score: 10/10 ⭐⭐⭐

Diagnostic Delay: Median 3 years (IQR: 1-7 years); Brazilian study mean 7.8 ± 6.7 years, consulting 6.2 ± 4.1 physicians.

Underdiagnosis: 30-50% estimated (especially late-onset FRDA >25 years presenting without classic features).

Net Revenue Per Patient: $148,000-222,000/year (U.S. net after 40-60% gross-to-net adjustment).

Ada Symptom Surfacing: Excellent. Gait ataxia, coordination issues, slurred speech, balance problems, scoliosis, and cardiomyopathy are all capturable via symptom assessment.

> **Pitch Hook:** "Friedreich's ataxia patients endure a median 3-year diagnostic odyssey (mean 7.8 years in some cohorts), consulting 6+ physicians as gait ataxia, slurred speech, and coordination deficits are misattributed to cerebral palsy, MS, or nonspecific neurological disorders. 30-50% remain undiagnosed, especially late-onset cases. Ada's symptom assessment excels at surfacing ataxia patterns – progressive balance loss, dysarthria, absent reflexes, cardiac red flags (hypertrophic cardiomyopathy) – prompting FXN genetic testing. With ~2,000-4,000 undiagnosed U.S. patients and net revenue of $148K-222K per patient annually, Ada Patient Finder could identify 1,000-2,000 SKYCLARYS candidates, generating **$148M-444M in first-year revenue expansion** while transforming lives before irreversible disability and cardiac complications progress. SKYCLARYS is first-and-only approved FRDA therapy – capturing undiagnosed patients is pure market expansion."

Strong Fit: SPINRAZA (SMA Type 3/Adult-Onset)

Ada Fit Score: 8/10

Diagnostic Delay: SMA Type 3 median 11.37 months; patients visit 3.94 doctors before diagnosis.

Underdiagnosis: 20-30%, especially Type 3 and adult-onset.

Net Revenue Per Patient: $300,000-450,000 first year; $150,000-225,000 ongoing (U.S. net).

Ada Symptom Surfacing: Moderate. Progressive weakness, gait disturbance, scoliosis surface in Ada, but SMA requires genetic testing.

> **Pitch Hook:** "SMA Type 3 patients face a median diagnostic delay of 11.37 months and consult nearly 4 physicians before genetic confirmation. Progressive muscle weakness, gait abnormalities, and scoliosis are often misattributed to orthopedic or neurological conditions. Ada's symptom assessment can flag rare neuromuscular patterns and prompt SMN1 genetic

> testing referrals, capturing the 20-30% of undiagnosed SMA patients (estimated 2,000-5,000 in the U.S.). At $300K-450K net revenue per patient in the first year, identifying just 500 patients would generate **$150M-225M in incremental revenue** for SPINRAZA."

Summary Table: Ada Patient Finder Fit Scores

Drug	Indication	Diagnostic Delay	Net Revenue/Pt/Yr	Fit Score	Recommendation
SKYCLARYS	Friedreich's ataxia	3-7.8 years	$148K-222K	**10/10**	HIGHEST PRIORITY
SPINRAZA	SMA Type 3	11.37 months	$300K-450K first yr	**8/10**	STRONG FIT
TYSABRI	Multiple sclerosis	2-14 months	$32K-60K	**7/10**	MODERATE (patent cliff 2026-27)
ZURZUVAE	Postpartum depression	57.4% late-onset missed	$6.4K-9.5K one-time	**6/10**	NO (revenue too low; alternative: awareness campaign)
QALSODY	SOD1-ALS	11 months	$240K-360K	**5/10**	MARGINAL (tiny population; alternative: ATLAS trial)
LEQEMBI	Alzheimer's	3.5 years	$10.6K-15.9K	**4/10**	NO (revenue too low; alternative: awareness/biomarker trials)

Strategic Recommendations for Biogen

Tier 1 Priority: Immediate Engagement

1. **SKYCLARYS (Friedreich's Ataxia)** – 10/10 fit; ~2,000-4,000 undiagnosed patients; **$148M-444M first-year revenue potential**

2. **SPINRAZA (SMA Type 3/Adult-Onset)** – 8/10 fit; ~2,000-5,000 undiagnosed patients; **$150M-225M+ first-year revenue potential**

Tier 2 Priority: Moderate Fit / Patent Considerations

3. **TYSABRI (Multiple Sclerosis)** – 7/10 fit; evaluate urgency given 2026-27 patent expiry

Tier 3: Awareness Campaigns / Alternative Models

4. **ZURZUVAE (Postpartum Depression)** – 6/10 fit; revenue too low for patient-finder economics, but massive underdiagnosis (57.4% late-onset PPD missed) justifies awareness campaign or volume-based partnership targeting **$1.3B-3.0B addressable market**
5. **LEQEMBI (Alzheimer's)** – 4/10 fit; revenue too low, but strategic value in MCI awareness, biomarker trial recruitment, CMS coverage expansion

Pipeline Watch

6. **Zorevunersen (Dravet Syndrome)** – 7/10 projected fit; engage post-Phase 3 readout (mid-2027)
7. **Litifilimab (Lupus)** – 6/10 projected fit; monitor pricing and Phase 3 results (Q4 2026)

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