Pathways neuro pharma

Corporate Overview

INVESTOR PRESENTATION December 2025

CAUTIONARY NOTE ON FORWARD LOOKING STATEMENTS AND DISCLAIMERS

All statements contained herein other than statements of historical fact, including statements regarding our future results of operations and financial position, our business strategy and plans, and our objectives for future operations, are forward-looking statements. The words "believe," "may," "will," "estimate," "continue," "anticipate," "intend," "expect," and similar expressions are intended to identify forward looking statements. We have based these forward-looking statements largely on our current expectations and projections about future events and trends that we believe may affect our financial condition, results of operations, business strategy, short-term and long-term business operations and objectives, and financial needs. These forward-looking statements are subject to a number of risks, uncertainties and assumptions, including those described in the "Risk Factors" section of the offering documents. Moreover, we operate in a very competitive and rapidly changing environment. New risks emerge from time to time. It is not possible for our management to predict all risks, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements we may make. In light of these risks, uncertainties and assumptions, the future events and trends discussed in offering documents may not occur and actual results could differ materially and adversely from those anticipated or implied in the forward-looking statements.

All references to dollar amounts in the offering summary or to use of proceeds are subject to change pending offering documents.

This presentation highlights basic information about us and the offering. Because it is a summary, it does not contain all of the information that you should consider before investing. This offering may only be made by means of offering documents

PROPRIETARY INFORMATION

PATHWAYS NEURO PHARMA

Pathways Neuro Pharma is developing transformative therapies for Juvenile Parkinson’s and Neurodegeneration

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The Human and Economic Toll of Parkinson's Disease

Mortality Risk in Juvenile Parkinson's:

Devasting, progressive neurodegenerative disorder affecting patients under 21. JD patients exhibit a threefold higher mortality risk compared to the normal population.

Unmet need:

1. No disease modifying therapies
2. Only symptomatic dopamine agonist
3. Poor efficacy in pediatric patients
4. Daily dosing is the current SoC.
5. Market needs a safe, durable, non-agonist therapy

Economic Burden:

The total annual economic burden of Parkinson's disease in the U.S. is estimated at $51.9 billion, including direct medical costs and indirect costs, like income and caregiver expenses.[2]

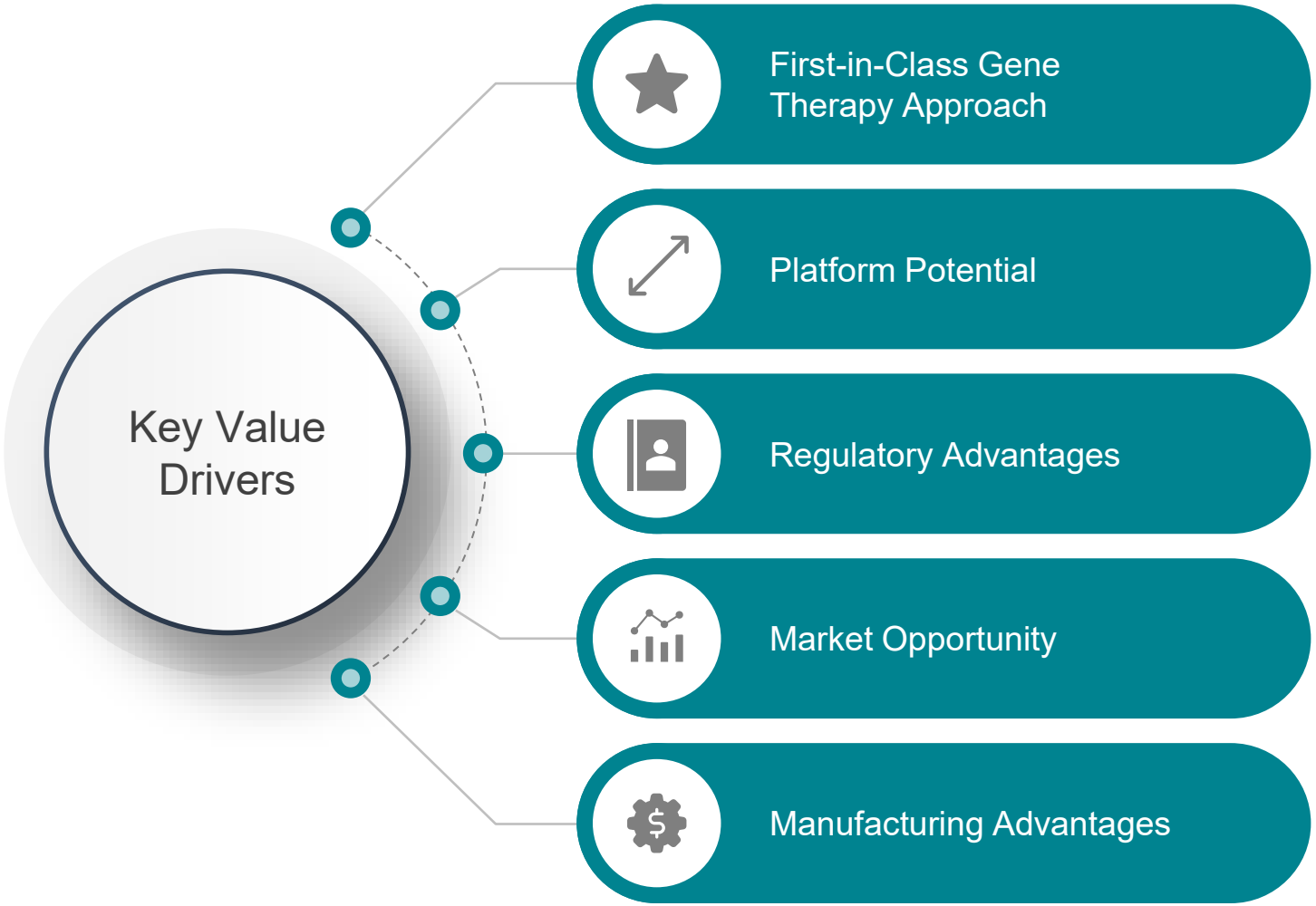
1. hopkinsmedicine.org; 2. pmc.ncbi.nlm.nih.gov

Current Parkinson's Treatment: Symptomatic Relief with Significant Side Effects

TREATMENT NAME	COMMON SIDE EFFECTS
Levodopa-Carbidopa (Brand Name: Sinemet)	Nausea, dizziness, orthostatic hypotension (drop in blood pressure upon standing), dyskinesias (involuntary movements), and hallucinations.
Dopamine Agonists (e.g., Pramipexole [Brand Name: Mirapex], Ropinirole [Brand Name: Requip]))	Nausea, dizziness, somnolence (drowsiness), hallucinations, and impulse control disorders (e.g., compulsive gambling, hypersexuality)
Monoamine Oxidase B (MAO-B) Inhibitors (e.g., Selegiline [Brand Name: Eldepryl], Rasagiline [Brand Name: Azilect])	Nausea, headache, insomnia, and, rarely, hypertensive reactions.
Amantadine (Brand Name: Symmetrel):	Ankle swelling, livedo reticularis (a mottled skin discoloration), hallucinations, and confusion.
Anticholinergics (e.g., Benztropine [Brand Name: Cogentin], Trihexyphenidyl [Brand Name: Artane]):	Dry mouth, blurred vision, constipation, urinary retention, and cognitive impairment.

Pathway's Solution:
First-in-Clase Gene Therapy Driving Rapid Value Creation

Our approach creates massive value with cost-effective development and near-term milestones



Vital Improvement to SoC

Unlike daily dopamine agonist therapies, our non-agonist solution increases dopamine receptor density at the genomic level, offering enhanced, long-term effect.

Expansive Potential in Neurology

While initially focused on Juvenile Parkinson's Disease, our gene therapy approach can be adapted for CNS disorders.

Clear Clinical Pathway

Orphan Drug & Rare Pediatric Disease designations Breakthrough, and potential Platform Designation

Strong M&A Tailwinds

Gene therapies for rare CNS disorders command high reimbursement rates and strong M&A interest.. Durable IP protection through 2041

Cost Reduction

Gene therapies are notoriously expensive to manufacture and Pathways Neuro Pharma has developed methodology to substantially reduce production costs.

Two Precision Gene Therapies–

- **PINK1 Gene Replacement: Early Onset PD**

Restores mitochondrial health by targeting Pink 1 dysfunction

- **DRD1 Upregulation: Juvenile Parkinson's**

Turn up the dopamine response in the brain by increasing receptor density

"Two programs powered by the AAV platforms – enabling shared data, faster IND timelines, and first-in-patient validation in 2026.

Advancing Toward First-in-Patient Studies

	Proof-of Concept Achieved	Preclinical Toxicity, Biodistribution & Immunogenicity	First-in-Patient Studies Australia	Potential Pivotal Trial (Pending FDA Alignment)
Early Onset Parkinson's	Completed		Q1 2026 Anticipated Commencement	Q3 2026 Anticipated Commencement

FDA Approvals Driven by Phase 2 Data in Cell & Gene Therapy

COMPANY	PRODUCT/BRAND	INDICATION	APPROVAL BASIS
Bluebird Bio®	Lovo-cel (Lyfgenia)	Sickle Cell Disease	Phase 1 / 2 Pivotal HGB 206 trial
Autolus Limited®	Obe-cel (Aucatzyl)	Refractory B-cell ALL	Phase 1b / 2 FELIX trial
Adaptimmune Therapeutics	afami-cel (Tecelra)	Synovial Sarcoma (MAGE-A4⁺ solid tumor)	Phase 2 study (accelerated approval)
PTC Therapeutics Inc	Kebilidi (US) Upstaza (EU)	AADC Deficiency Rare neuro-genetic disorder	Open-Label Phase 1/ 2 Trial
Lovance Biotherapeutics	Lifileucel (Amtagvi	Metastatic Melanoma	Pivotal Phase 2 Trial

Gene Therapies Approved on Early Patient Data

Product	Company	Region	Pathway/Designation	Year	FIP Evidence Summary
Elevidys	Sarepta	U.S.	Accelerated Apprroval	2023	Patient biopsy (midro-dystorphin
Vyjuvek	Krystal Biotech	U.S.	RMAT, Orphan, Accelerated	2023	Early Patient Efficacy/Safety
Rethymic	Enzyvant	U.S.	RMAT,Prioity Approval	2021	Patient survival & immune reconstition
Zyntegio	Bluebird Bio	EU	Conditional Approval	2019	Patient transfusion independence
Glybera	uniQure	EU	Exceptional Circumstances	2012	Small total Patient dataset
Strimveils	GSK-- Orchard	EU	Maketing Authorization	2016	18-Patient ADA-SCID data
Elevidys(JP)	Sarepta	Japan	Conditional & Time-Limited	2025	Early Patient Efficacy/Safety Pending
Collategene	AnGes	Japan	Conditional & Time-Limited	2019	Limited Early Patient
Zolgensma	Novartis	Australia	Provisional/ Priority	2021	SMA Patient cohort outcomes
Hemgenix	CSL Behring	Australia	Provisional Approval	2022	Patient factor IX levels

M&A Landscape Overview: Value Realized Post-FIP

Company	Acquirer	Clinical Phase	M&A Exit Value
Capstan	**AbbVie**	**Post-Phase 1**	**$2,100,000,000**
AveXis	**Novartis**	**Post-Phase 1**	**$8,700,000,000**
Kite Pharma	**Gilead**	**Post-Phase 1**	**$11,900,000,000**

**** Over $25B in gene therapy acquisitions in the last five years.***

**** Capital raised today directly drives First-in-Patient completion and near-term exit readiness.***

Global Pharma: Established Gene Therapy Leaders

Company	Business Objectives	Strategic Fit
Novartis	Built AAV manufacturing with AveXis	PINK1 & DRD1
Eli Lilly	Expanding in CNS and gene therapy	DRD1 & GPR139
Roche/ Genentech	Invested in Spark; Parkinson's & Neuro	PINK1, DRD1 & A-Syn
Pfizer/ Janssen	Strong Neuro Franchise	DRD1 & GPR139
BMS/ Sanofi/ AstraZeneca	Expanding in rare-disease & gene therapy	PINK1 & DRD1
Biogen	Leader in Neurodegeneration	PINK 1, DRD1, A-Syn
Acadia Pharmaceuticals	Parkinson's focus	PINK 1, DRD1, A-Syn

Global Pharma continue to pay premium valuations for validated AAV and CNS assets

Accelerated Regulatory Pathways Driving Rapid Value Creation

PINK1	DRD1	Alpha-Syn
Early-onset PD with PINK 1 mutations	Juvenile PD	PD & Lewy body disease populations
Restore mitochondrial repair via gene replacement	Increase dopamine receptor density in the brain	Halt toxic protein aggregation & spread
ORPHAN DRUG	ORPHAN DRUG	FAST TRACK
RMAT	RARE PEDIATRIC DISEASE	PLATFORM TECH
BREAKTHROUGH THERAPY	BREAKTHROUGH THERAPY	BREAKTHROUGH THERAPY

Expedited Global Accelerated Pathways: From First-in- Patient to Approval Across Key Markets

- **United States (FDA):**
  - Orphan Drug – eligible now (rare juvenile PD)
  - Rare Pediatric Disease (PRV) – if primarily <19 yrs
  - RMAT / Breakthrough – post-FIP with preliminary benefit
- **European Union (EMA):**
  - Orphan Designation – eligible now
  - PRIME – post-FIP early benefit in unmet need
  - Conditional Marketing Authorization – with confirmatory plan
- **Japan (PMDA/MHLW):**
  - Orphan – eligible now
  - Conditional & Time-Limited Approval – post-FIP with confirmatory study
  - Sakigake – possible if innovation/domestic criteria met
- **Australia (TGA):**
  - Orphan – eligible now
  - Provisional Determination/Approval – post-FIP on early data
- **United Kingdom (MHRA):**
  - ILAP / Early Access – post-FIP with compelling early benefit

Proven Leadership with Multiple Biotech Exits

Anthony P Mack, MBA
Chief Executive Officer

Anthony Mack is a distinguished pharmaceutical and biotech entrepreneur with 35 years in the industry. As CEO, he formerly led Scilex Pharmaceuticals (Nasdaq: SCLX) and founded ProSolus Inc, later acquired by Mission Pharmacal. His notable achievement as CEO includes taking Virpax Pharmaceuticals Inc (Nasdaq: VRPX) public in February 2021, highlighting his expertise in advancing innovative healthcare companies in a competitive landscape.

Bradley G Thompson, PhD
Chief Technology Officer

Dr Thompson, PhD, co-founder of Kickshaw Ventures, Inc and of Wyvern Pharmaceuticals, Inc, is an experienced biotechnology professional of more than 43 years. Until recently, he served as Director and Chairman of BIOTECanada and as Executive Chairman, CEO, and President of Oncolytics Biotech, Inc. He has served on the boards of directors of numerous public and private companies and is also a member of the Advisory Board of Lifeboat Foundation Biosciences Inc.

Building Strategic Partnerships for Global Impact

Pathways is in advanced discussions with a publicly traded global healthcare company, supporting neurodegenerative programs in 55 countries– positioning Pathways for accelerated clinical and market execution once finalized.

For Information, Please Contact:
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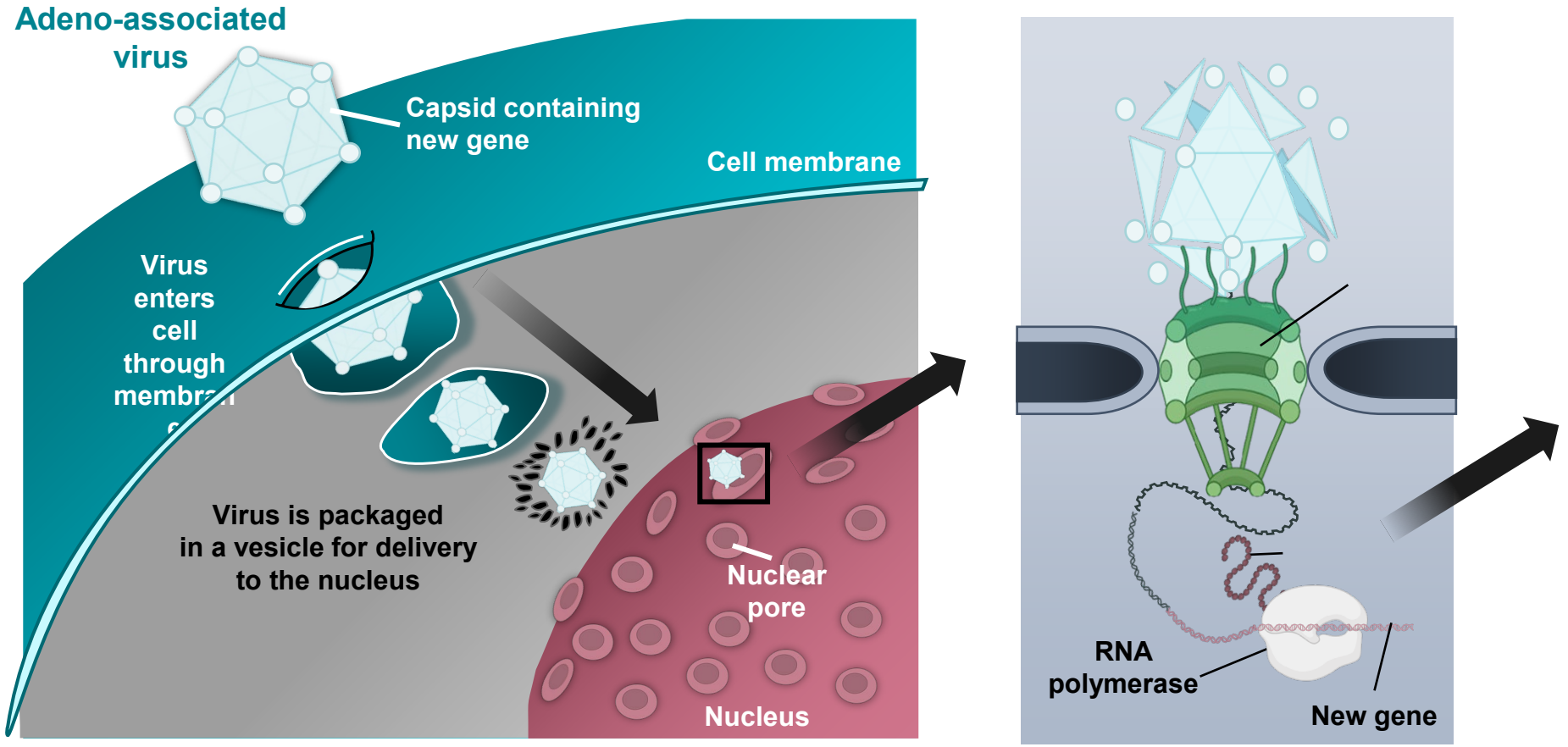
Adeno-Associated Virus (AAV) Vector Gene Therapy

How AAV Vectors Deliver New Genes to Restore Function

Modified DNA containing a **new gene** is packaged into an adeno-associated viral vector

Virus disassembles and delivers DNA encoding the **new gene** into the nucleus



Genetic information from the **new gene** is transcribed to create messenger RNA **(mRNA)**, which serves as a blueprint for protein production

How does gene therapy work? NIH. Accessed March 21, 2024. https://medlineplus.gov/genetics/understanding/therapy/procedures/

De-Risked Platform: "AAV Vectors with Multiple FDA Approvals"

NAME	COMPANY	DISEASE TREATED	APPROVAL DATE	SEROTYPE*
Luxturna®[1]	Spark Therapeutics, Inc.	**Retinal dystrophy**	**2017**	**AAV2**
Zolgensma®[2]	Novartis Gene Therapies, Inc.	**Spinal muscular atrophy**	**2019**	**AAV9**
Hemgenix®[3]	CSL Behring LLC	**Hemophilia B**	**2022**	**AAV5**
Elevidys[4]	Sarepta Therapeutics, Inc.	**Duchenne muscular dystrophy**	**2023**	**AAVrh74**
Roctavian™[5]	BioMarin Pharmaceutical Inc.	**Hemophilia A**	**2023**	**AAV5**

AAV vectors are considered biosafety level 1[6]

AAVs are not known to cause any diseases in humans[6]

*Serotypes are selected based on their targeted gene therapy applications.

1. Luxturna [package insert]. Philadelphia, PA: Spark Therapeutics, Inc.; 2022. 2. Zolgensma [package insert]. Bannockburn, IL: Novartis Gene Therapies, Inc.; 2023. 3. Hemgenix [package insert]. King of Prussia, PA: CSL Behring LLC; 2022. 4. Elevidys [package insert]. Cambridge, MA: Sarepta Therapeutics, Inc.; 2023. 5.Roctavian [package insert]. Novato, CA: BioMarin Pharmaceutical Inc.; 2023. 6. Collins DE, Reuter JD, Rush HG, Villano JS. Viral Vector Biosafety in Laboratory Animal Research. Comp Med. 2017;67(3):215-221.

Parkinson's Program Overview: IP Protected and FDA Acceleration

TECHNOLOGY & IP[1]	MARKET OPPORTUNITY[2]	FDA Regulatory Expedited Development Pathways	NON-DILUTIVE FUNDING OPPORTUNITIES	COMMERCIAL OPPORTUNITIES
• Route of administration: IV Infusion • Duration and Frequency: Once every 12 to 18 months • "Neuroreceptor Compositions and Methods Of Use" – US Patent Number 11,760,788 – Anticipated Expiration March 2, 2041	• The Global Parkinson's Disease Market Size is Expected to Reach $16.14 Billion by 2033	• Rare Pediatric Disease Designation (RPDD): – Priority Review Voucher • Orphan Drug Designation (ODD): – Tax credits 25% for clinical trials – Waves FDA application fees • Breakthrough Designation (BTD): – Expedited review – Increased access to FDA guidance and enhanced support – Accelerating the approval timeline to address critical unmet needs • Expanded Access /Conditional Approval: For patients with no alternative treatment Pending strong phase 2 data required	• NIH • Michael J Fox Foundation for Parkinson's Research • American Parkinson's Disease Association • Child Neurology Society • Parkinson's Foundation	• Neurologist • Hospitals • Pediatric Movement Disorder Specialist • Pediatric Neurologist • Nurse Practitioners • Physician Assistants (in some regions) • Gene Therapy Research

1. Lau WC, Thompson B, inventors; Pathways Neuro Pharma, assignee. Neuroreceptor compositions and methods of use. US patent 11,760,788. September 19, 2023. 2.
2. https://www.towardshealthcare.com/insights/parkinsons-disease-diagnosis-and-treatment-market-sizing?utm_source=perplexity

Investment Highlights: Transformative Platform, Near-Term Value Creation

- First-in-Class Gene Therapy that delivers unprecedented CNS tropism and durable expression — enabling multiple CNS programs from a single vector backbone.
- Lead Indication: Juvenile Parkinson's Disease (PINK1 & DRD1) addressing a devastating pediatric population with no disease-modifying options; Orphan and Rare Pediatric Disease designations eligible now.
- Capital-Efficient Path to First-in-Patient (FIP): Bridge financing supports IND-enabling and FIP studies, positioning for early validation and potential FDA platform designation.
- Compelling M&A / IPO Upside: Over $25B in gene therapy acquisitions in the past five years demonstrate strong appetite for validated CNS platforms.
- Proven Leadership Track Record: Team behind 12 successful biotech exits, with deep regulatory, IP, and manufacturing expertise.

Key Milestones Driving Near-Term Value Creation

- IND-Enabling Package Completion – Preclinical and GLP tox studies nearing completion at University of Guelph; de-risks safety profile and enables IND readiness.
- IND Filing – Targeting submission within ~12 months of bridge financing; key regulatory inflection and Orphan/RPD eligibility.
- First-in-Patient Study – Initiation anticipated post-IND clearance; key validation milestone.
- Initial FIP Readout – Early efficacy and safety data expected within ~12 months post-FIP initiation; potential for RMAT/Breakthrough designation.
- Strategic Transaction Window – Liquidity event (M&A or IPO) targeted following early clinical validation and platform validation.

Executive Summary — Pathways Neuro Pharma

- Pathways Neuro Pharma is developing next-generation gene therapies for Juvenile Parkinson's Disease and related neurodegenerative disorders. Our non-agonist mechanism increases dopamine receptor density at the genomic level, offering sustained benefit beyond symptomatic treatments.

  Investment Highlights:
  • Lead Programs: PINK1, DRD1, and α-synuclein gene therapies for Juvenile PD and related disorders.
  • Regulatory Tailwinds: Eligible for Orphan Drug and Rare Pediatric Disease designations; early human data will support FDA IND and potential platform designation.
  • M&A / IPO Visibility: >$25 B in recent CNS-gene-therapy transactions validate strong acquirer appetite.
  • Leadership: Management team with 12 prior biotech exits including SCLX and VRPX IPOs.

  Clinical & Regulatory Milestones:
  • IND-enabling studies — Ongoing
  • FIP study (Australia) — Post-GLP completion
  • First human data readout — Anticipated 2026
  • IND submission (U.S.) — Following FIP results
  • Strategic event (M&A / IPO) — Post-FIP & IND acceptance

  Timing estimates are forward-looking and subject to regulatory and operational factors.

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