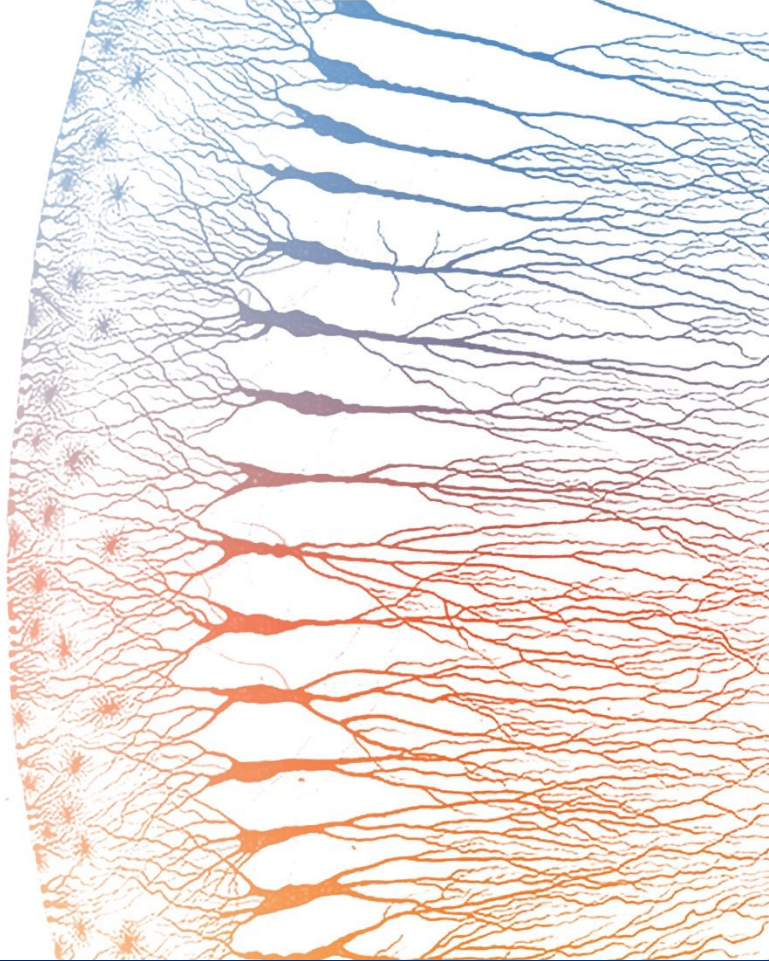




Leveraging Genetics to Treat Neurological Diseases

Corporate Deck / October 2025



This presentation contains forward-looking statements for the purposes of the safe harbor provisions under The Private Securities Litigation Reform Act of 1995 and other federal securities laws. The use of words such as “anticipate,” “expect,” “believe,” “plan,” “estimate,” “may,” or “potential,” and other similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. These forward-looking statements include, among other things, statements about expectations for Voyager’s achievement of preclinical and clinical development milestones for its potential development candidates such as the identification of lead development candidates, IND and CTA filings, the initiation of clinical trials, and the generation of clinical data and proof-of-concept; the potential for third-party clinical data to inform Voyager’s product development programs; Voyager’s ability to expand from gene therapy and antibodies into other modalities of neurogenetic medicine; Voyager’s ability to generate near-term and long-term funding through reimbursement, upfront, milestone and royalty-based fees (as applicable) under its existing licensing and collaboration agreements, and to obtain data regarding the performance of its TRACER-derived capsid families licensed to its collaborators and partners under such agreements; Voyager’s ability to maintain and advance product development programs under its current partnerships and collaborations, including the anticipated timing of regulatory submissions by collaborators; and the sufficiency of Voyager’s cash resources. These forward-looking statements are only predictions, and Voyager may not actually achieve the plans, intentions, or expectations disclosed in the forward-looking statements. All forward-looking statements are based on estimates and assumptions by Voyager’s management that, although Voyager believes such forward-looking statements to be reasonable, are inherently uncertain and subject to risks and uncertainties that may cause actual results to differ materially from those that Voyager expected. Such risks and uncertainties include, among others, the expectations and decisions of regulatory authorities; the timing, initiation, conduct, and outcomes of Voyager’s preclinical studies and clinical trials; the availability of data from internal or third-party clinical trials; the success of Voyager’s product candidates; the availability or commercial potential of product candidates under collaborations; the willingness and ability of Voyager’s collaboration partners to meet obligations under collaboration agreements with Voyager; the continued development of Voyager’s technology platforms, including Voyager’s TRACER capsid discovery platform and its non-viral discovery platform; Voyager’s scientific approach and program development progress, and the restricted supply and increased costs of critical research components; the development by third parties of capsid identification platforms and capsids that may be competitive to Voyager’s TRACER capsid discovery platform; Voyager’s ability to create and protect intellectual property rights associated with the TRACER capsid discovery and non-viral platforms, the capsids and ligands identified by the platforms, and development candidates for Voyager’s pipeline programs; the possibility and the timing of Voyager’s receipt of program reimbursement, development or commercialization milestones, option exercise, and other payments under Voyager’s existing licensing or collaboration agreements; the ability of Voyager to negotiate and complete licensing or collaboration agreements with other parties on terms acceptable to Voyager and the third parties; the success of programs controlled by third-party collaborators in which Voyager retains a financial interest; the ability to attract and retain talented directors, employees, and contractors; and the sufficiency of Voyager’s cash resources. These statements are also subject to a number of material risks and uncertainties that are described in Voyager’s most recent Annual Report on Form 10-K filed with the Securities and Exchange Commission, as updated by its subsequent filings with the Securities and Exchange Commission. Any forward-looking statement speaks only as of the date on which this presentation was presented. Voyager undertakes no obligation to publicly update or revise any forward-looking statement, whether as a result of new information, future events or otherwise, except as required by law. © Voyager Therapeutics, Inc.

Cash runway into 2028, not including \$7.4B in potential milestone payments from existing partnerships¹



NEURO PIPELINE

Expect 4 programs in clinic in 2026; VY7523 data in AD patients expected H2 2026

4 wholly-owned Alzheimer's programs covering amyloid, tau, APOE



STRATEGY TO MITIGATE NEURO RISK

Focus on validated targets, biomarker-based path to POB/POC, transformative effects for high unmet needs

I.V. AAV and shuttles designed to optimize delivery of therapeutics to the CNS



TOP PEOPLE + PARTNERS

Validation and non-dilutive funding (\$500M+) from partners including Novartis, Neurocrine, Alexion

Neuro team with track record of successful CNS drugs

Pipeline

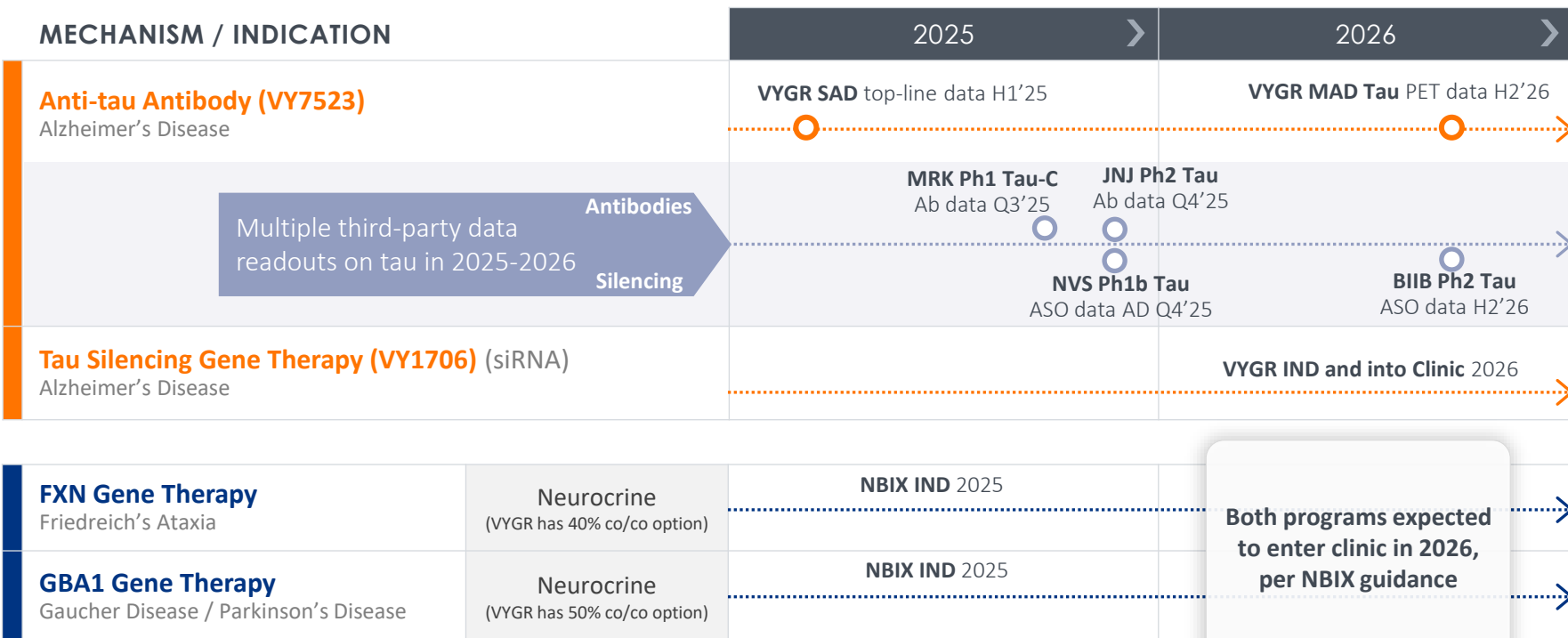


CNS Pipeline Focuses on Validated Targets with High Potential Value



	Mechanism / Indication		Research	IND-Enabling	Phase I	Phase II	Phase III
WHOLLY-OWNED	Anti-tau Antibody (VY7523) / Alzheimer's Disease						
	Tau Silencing Gene Therapy (VY1706) (siRNA) / Alzheimer's Disease						
	APOE Gene Therapy / Alzheimer's Disease						
	Anti-Aβ Gene Therapy (Vectorized Antibody) / Alzheimer's Disease						
	SOD1 Silencing Gene Therapy (siRNA) / ALS						
COLLABORATIONS (REIMBURSED)	FXN Gene Therapy / Friedreich's Ataxia	Neurocrine (VYGR has 40% co/co option)					
	GBA1 Gene Therapy / Gaucher's Disease / Parkinson's Disease	Neurocrine (VYGR has 50% co/co option)					
	Three Gene Therapy Programs / Undisclosed	Neurocrine	1 in IND-enabling; 2 undisclosed				
	Huntington's Gene Therapy / Huntington's	Novartis	Undisclosed				
CAPSID LICENSES	Gene Therapy / Rare Neurological Disease		Alexion, AstraZeneca Rare Disease License				
	Four Gene Therapy Programs / SMA + 3 CNS Diseases		Novartis Licenses				

Multiple Potential Catalysts from Later-Stage Pipeline + Third Parties



Voyager's Industry-Leading Alzheimer's Franchise



Alzheimer's disease impacts approximately **7 million Americans** and is expected to impact nearly 13 million by 2050¹

Tau

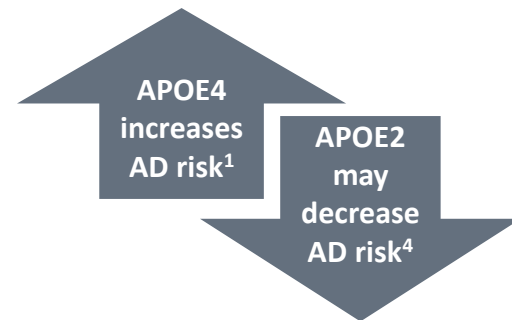
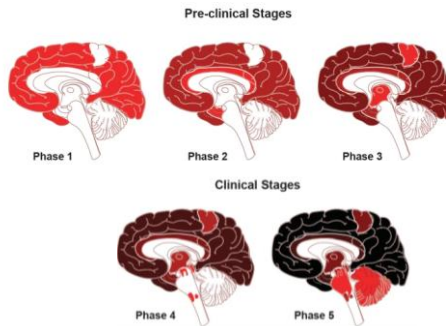
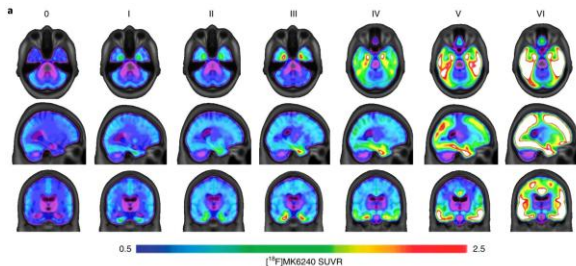
Likely to be necessary once tau spread begins²

Amyloid-beta

More effective earlier in disease, before tau spreads²

APOE

APOE4: 11% homozygotes; 50-60% heterozygotes¹



Tau spread correlates to worsening AD³

amyloid- β therapies approved for AD

VY7523
Anti-tau Antibody

VY1706
Tau Silencing

Vectorized Anti-A β
Antibody

Bifunctional: APOE Silencing
with APOE2 replacement

1. Alzheimer's Association; <https://www.alz.org/alzheimers-dementia/facts-figures> (accessed July 2025). 2. Sims JR, Zimmer JA, Evans CD, et al. Donanemab in Early Symptomatic Alzheimer Disease: The TRAILBLAZER-ALZ 2 Randomized Clinical Trial. JAMA. 2023;330(6):512–527. doi:10.1001/jama.2023.13239 3. Therriault, Nature Aging volume 2, p526–535 (2022).4. Fortea, J., Pegueroles, J., Alcolea, D. et al. APOE4 homozygosity represents a distinct genetic form of Alzheimer's disease. Nat Med 30, 1284–1291 (2024). <https://doi.org/10.1038/s41591-024-02931-w> 4

VY7523 (Anti-Tau Antibody): 1st AD Patient Data Expected H2 2026

Multiple ascending dose (MAD) trial ongoing (52 early AD patients); initial tau PET imaging data expected H2 2026

Single ascending dose (SAD) trial complete (48 healthy volunteers):

- No serious/severe adverse events or infusion reactions reported
- Serum concentrations increased in dose-proportionate manner; CSF-to-serum ratio 0.3%

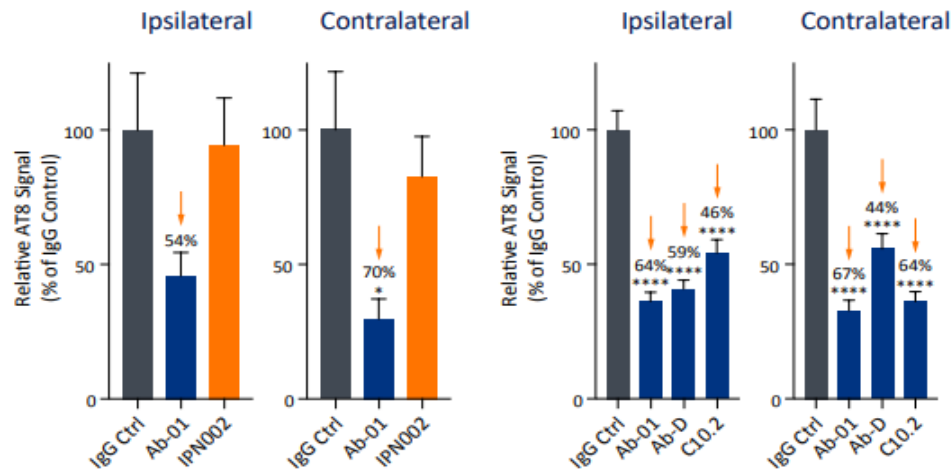
VY7523 represents a DIFFERENTIATED APPROACH to anti-tau antibodies

Selected from 700+ antibody candidates for pathologic tau specificity and efficacy in murine seeding model: 1, 2, 3

- N-term antibody that failed in model also failed in clinic ⁴
- VY7523, UCB's bepranemab, and Lundbeck's LuAF87908 work in model

Binds C terminal

- UCB, JNJ, Eisai + Prothena/BMS target mid/MTBR regions
- Merck's MK-2214 targets C-term

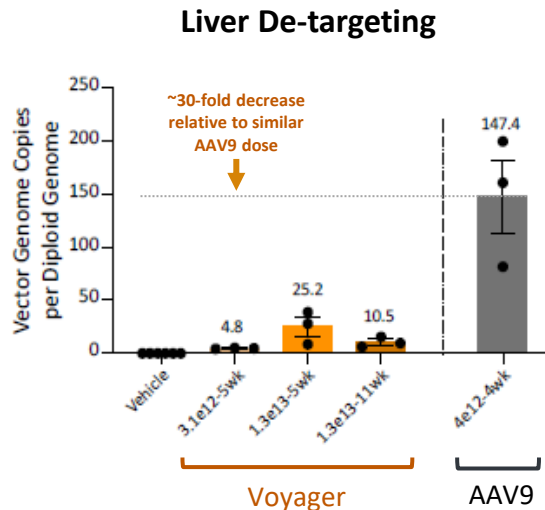
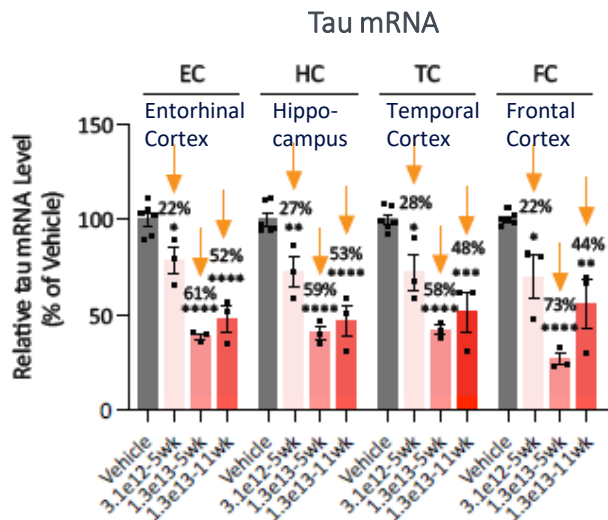


All antibodies represent murine versions:
- Ab01 / VY7523
- IPN002 / BIIB092
- Ab-D / bepranemab
- C10.2 / LuAF87908

1. AAIC 2022, Liu, et al. and data on file. 2. ADPD 2023, Liu, et al. and data on file. 3. ADPD 2024, Liu, et al. 4. ADPD 2025, Liu, et al. *, **, *** and **** indicate p < 0.05, 0.005, 0.0005 and 0.0001, respectively, compared to the vehicle control group.

VY1706 (Tau Silencing): Shows Robust Tau Knockdown IV in NHPs

VY1706, A BBB-Penetrant, IV-delivered AAV Gene Therapy Provides Broad and Robust CNS tau Lowering in Tauopathy Mouse Models and Non-Human Primate



- Single IV dose in 11-week NHP study
- At 1.3E13 vg/kg:
 - *Tau mRNA reduced 44-73%*
 - *Tau protein reduced 27-55%*
- Broad distribution across the brain, including areas impacted by AD
- ~30-fold liver de-targeting vs wild type AAV9

Anticipate IND filing and into clinic in 2026

FXN Gene Therapy

- Gene replacement of FXN for Friedreich's Ataxia
- Partnered with Neurocrine
- Voyager has 40/60 opt-in rights in U.S.

GBA1 Gene Therapy

- Gene replacement of GBA1 for Gaucher disease and Parkinson's disease
- Partnered with Neurocrine
- Voyager has 50/50 opt-in rights in U.S.

Friedreich's Ataxia

~5,000 patients living with FA in US¹.

All cases caused by mutations of the FXN gene¹.

One treatment available but does not replace FXN;
unmet need remains¹.

Gaucher Disease

~6,000 patients with Gaucher disease in the U.S.²

All cases caused by mutations of the GBA gene.²

No treatment available for neurological involvement in Type 2 and Type 3
Gaucher disease; Type 1 treated with enzyme replacement therapy².
and/or

GBA-1 Parkinson's Disease

~1 million patients with Parkinson's disease in the U.S.³; up to 10% with
GBA1 mutations, which increase the risk of Parkinson's by ~20-fold⁴.

No disease-modifying treatments available⁵.

1. Friedreich's Ataxia Research Alliance (FARA). What is FA? Available at: <https://www.curefa.org/what-is-friedreichs-ataxia>. Accessed: May 2024. 2. Cleveland Clinic: Gaucher Disease. Available at: <https://my.clevelandclinic.org/health/diseases/16234-gaucher-disease>. Accessed April 2025. 3. Parkinson's Foundation. Statistics. Available at: <https://www.parkinson.org/understanding-parkinsons/statistics>. Accessed: May 2024. 4. Migdalska-Richards A, Schapira AH. The relationship between glucocerebrosidase mutations and Parkinson disease. Journal of Neurochemistry. 2016 Oct; 139: 77-90. doi: 10.1111/jnc.13385. Epub 2016 Feb 10. 5. Parkinson's Foundation. What is Parkinson's? Available at: <https://www.parkinson.org/understanding-parkinsons/statistics>. Accessed: May 2024.

Zolgensma® proves success in gene therapy IS possible – for both patients and investors

>3,700 patients treated

Approved in >51 countries

\$1.2B in 2024 sales

Over \$6B total sales

Maximizing Probability of Technical Success

- Genetically-validated target, central to disease pathology
- Neurology drug development expertise

Maximizing Probability of Commercial Success

- Transformative benefit in disease of significant unmet need
- Intravenous delivery

Voyager's Strategy is to Replicate These Success Factors



TRACER™ AAV Capsid Platform



Voyager's TRACER Has the Potential to Revolutionize Delivery Across the BBB



Molecular Therapy Methods & Clinical Development

Rapid evolution of blood-brain-barrier-penetrating AAV capsids by RNA-driven biopanning
(Nonnenmacher, 2020)



Identification and characterization of a highly conserved cell surface receptor utilized by engineered BBB-penetrant AAV capsids with enhanced brain tropism in non-human primates and mice (Hoffman, 2024)

“Frankly, when I saw the first non-human primate data, I literally fell out of my chair.”

BOB SMITH, Senior VP, Global Gene Therapy Business, Pfizer, speaking about Voyager's TRACER capsids at The Meeting on the Mesa, 2023, as reported in *Cell&Gene*



Continued directed evolution of VCAP-101 and VCAP-102 identifies second generation capsids with increased brain tropism in non-human primates and mice (Moyer, 2024)

“...these [VYGR] capsids have incredible CNS tropism and transduction efficiency and allows us a noninvasive IV delivery...”

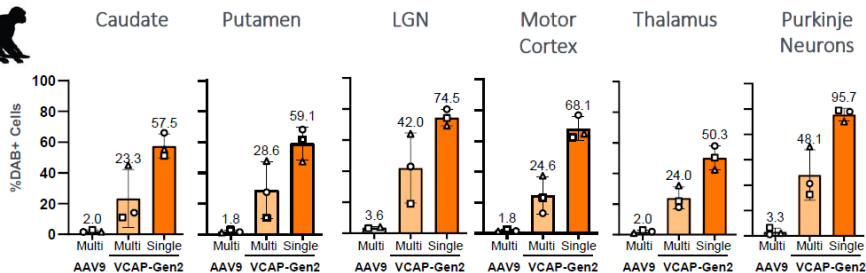
JUDE ONYIA, Ph.D., CSO Neurocrine Biosciences and Director of Voyager Therapeutics, speaking at 2023 Neurocrine Analyst Day event



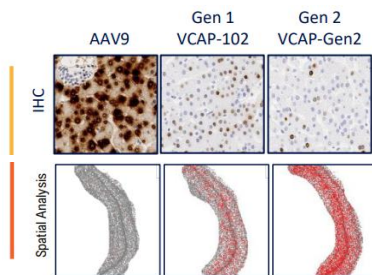
Voyager's TRACER-Derived Capsids Have Potential to Power Next-Gen Gene Therapy

TRACER capsid discovery platform derived from evaluation of 200M+ variants of AAV5 and AAV9

VCAP-Gen2: 50-75% of Cells Transduced Across Diverse Brain Regions at 3E13 vg/kg (ASGCT 2024)



Gen2 Capsids: Increased Brain Tropism and Liver Detargeting (ASGCT 2024)



Minimally invasive I.V.
Delivery



Customizable cell tropisms
(neurons, glial cells) and levels of
liver de-targeting



Receptor identification
enables rational design



**Multi-Species
Validation**



Improved, broad
CNS transduction



Fully integrated:
capsid engineering, NHP in vivo validation,
scalable production (HEK, Sf9)



Voyager-NeuroShuttle™ Non-Viral Platform





Voyager NeuroShuttle™ (VYGR-NeuroShuttle) is a non-viral delivery platform leveraging novel receptor-binding molecules to transport multiple modalities of neurotherapeutics across the blood-brain barrier (BBB).

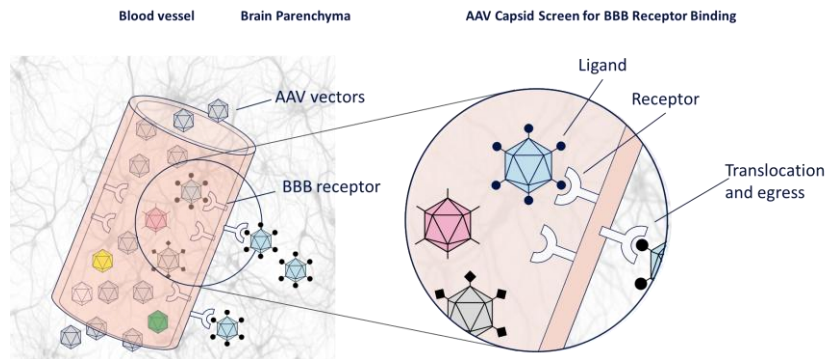


ALPL-VYGR-NeuroShuttle

Potential to deliver a diversity of therapeutic modalities:

- Antibodies
- Enzymes
- Genome editors
- ASOs
- siRNAs
- Peptides

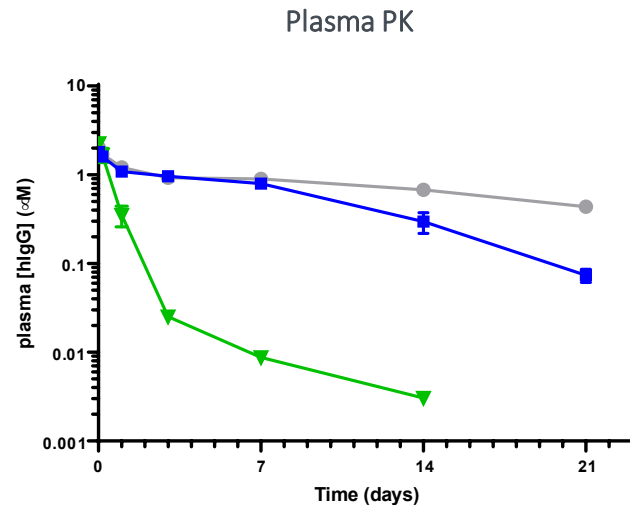
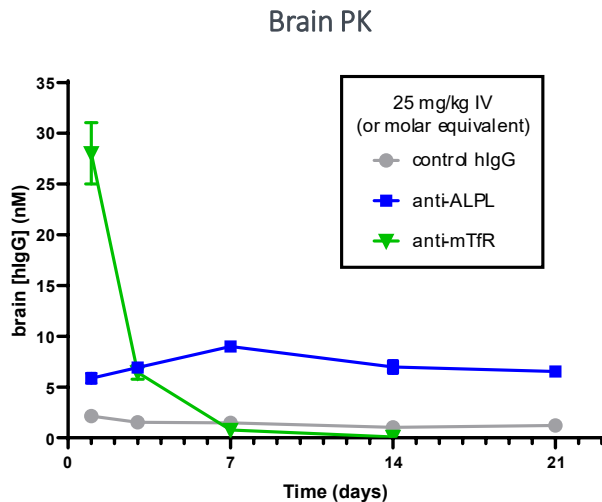
TRACER engine for receptor discovery



Receptor Y, Receptor 7, etc.

Proof of concept murine data¹ show sustained CNS exposure for ALPL versus TfR shuttles

- Increased antibody concentration in brain; modest impact on peripheral clearance
- Brain uptake sustained for >3 weeks post-dose (vs <1 week for TfR shuttles)

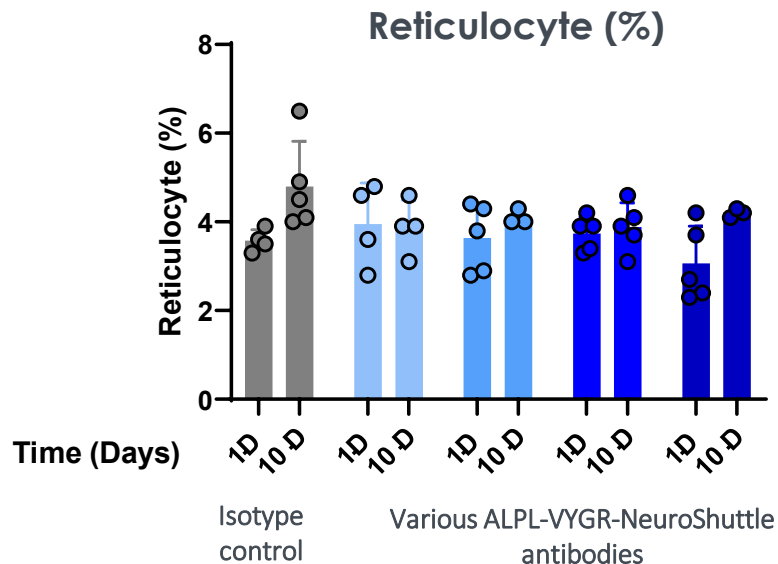


Proof of concept murine data show negligible anemia risk for ALPL

ALPL-VYGR-NeuroShuttle technology does not impact reticulocytes in mice; potential reduced anemia risk¹

ALPL plays a key role in skeletal and dental mineralization, liver function, and neurotransmitter synthesis.²

- Decreased levels of ALPL (~30% residual activity) can result in bone hypomineralization or cardiovascular complications.³
- Genetic data indicate partial loss of function is tolerable.³
- Preclinical studies ongoing to identify potential safety profile of ALPL-VYGR-NeuroShuttle.



Multiple potential opportunities for Voyager's NeuroShuttle platform to create value:

- Increase efficacy by increasing on-target delivery
- Improve safety by reducing peripheral exposure
- Lower COGS by reducing dose needed
- Expand opportunity for shuttles:
ALPL first of multiple receptors identified

Select M&A / Licensing Deals in the Shuttling Technology Space

Partner	Target	Value (\$mm)	# of Asset(s)	Indication	Phase
		\$2,720	Platform	Neurodegenerative Disease	Preclinical
		\$1,400	1 + Platform	Alzheimer's Disease	Phase I
		\$1,350	2	Alzheimer's Disease	Preclinical
		\$1,060	1	Parkinson's Disease	Preclinical
		\$800	1	Neurodegenerative Disease	Preclinical

Multiple \$1bn+ M&A or licensing deals in recent years by large pharma to gain access to shuttle technology programs

☐ M&A Deal with All Upfront



VYGR-NeuroShuttle is a priority for Voyager.

Platform optimization and program development across therapeutic modalities ongoing, in rodents and non-human primates.

Business





Alzheimer's Franchise

» Tau antibody (Ph 1) » Tau gene therapy (IND/Clinic 2026) » APOE + Anti-amyloid gene therapies



Rare Neurogenetic Diseases

» Out-licensing capsids for rare CNS targets » In-licensing early-stage assets for non-GTX targets



CNS Delivery

» Multiple IV TRACER gene therapies moving toward clinic¹ » ALPL receptor platform emerging

Partnerships Have Brought \$500M+; Potential for Another \$7.4B

	Disease/Target	Patients Impacted (U.S.)	Upfront / Option / License Payments	Potential Development Milestone Payments ¹	Potential Sales Milestone Payments ¹	Tiered Royalties
	NBIX1: FA	FA: ~5,000 pts ⁵	\$165M	\$190M ²	\$550M ²	NBIX1: U.S. high-single-digit to high-teens; ex-U.S. mid-single-digit to mid-teens ²
	NBIX2: GBA1 + 3 targets	Gaucher: ~6,000 pts ⁹ GBA1 PD: ~100,000 pts ⁶	\$175M	\$1.5B ³	\$2.7B ³	NBIX2: GBA, U.S. low double-digit to twenty; ex-U.S. high single-digit to mid-teen. 3 targets, U.S. high single-digit to mid-teen; ex-U.S. mid single-digit to low double-digit ³
	NVS1: 3 CNS targets	Not disclosed	\$94M	\$380M	\$525M	NVS1: Mid- to high-single-digit
	NVS2: HD + SMA	HD: ~30,000 pts ⁷ SMA: ~10,000-25,000 pts ⁸	\$100M ⁴	\$425M	\$775M	NVS2: High-single-digit to low-double-digit tiered royalties on global net sales.
	1 rare neurologic disease target	Not disclosed	\$40M	\$115M	\$175M	Mid- to high-single-digit
\$2.6B + \$4.8B = \$7.4B + royalties						

1. Potential milestone payments represent maximum potential payments under applicable agreement(s). 2. After the Phase 1 readout, Voyager has the option to either: (1) co-develop and co-commercialize with Neurocrine Biosciences in the U.S. under a 60/40 cost- and profit-sharing arrangement (Neurocrine/Voyager), or (2) permit Neurocrine Biosciences to retain full U.S. commercial rights in exchange for milestone payments and royalties based on U.S. sales. Assumes 2 FA collaboration products; totals may not add due to rounding. 3. After the Phase 1 readout, Voyager has the option to either: (1) co-develop and co-commercialize GBA1 with Neurocrine Biosciences in the U.S. under a 50/50 cost- and profit-sharing arrangement, or (2) permit Neurocrine Biosciences to retain full U.S. commercial rights in exchange for milestone payments and royalties based on U.S. sales. 4. NVS2 \$100 million payment consists of \$80 million in cash and \$20 million equity investment. 5. Friedreich's Ataxia Research Alliance (FARA). What is FA? Available at: <https://www.curefa.org/what-is-friedreichs-ataxia>. 6. Migdalska-Richards A, Schapira AH. The relationship between glucocerebrosidase mutations and Parkinson disease. Journal of Neurochemistry. 2016 Oct; 139: 77-90. doi: 10.1111/jnc.13385. Epub 2016 Feb 10. 7. <https://rarediseases.org/rare-diseases/huntingtons-disease/>. 8. <https://smafoundation.org/about-sma/> 9. Cleveland Clinic: Gaucher Disease. Available at: <https://my.clevelandclinic.org/health/diseases/16234-gaucher-disease>. Accessed April 2025.

Management Team: Extensive Neurology Expertise



Al Sandrock, M.D., Ph.D.

Chief Executive Officer



Todd Carter, Ph.D.

Chief Scientific Officer



Toby Ferguson, M.D.

Chief Medical Officer



Nathan Jorgensen, Ph.D.

Chief Financial Officer



Trista Morrison

*Chief Corporate Affairs Officer,
Chief of Staff to CEO*



Robin Swartz

*Chief Business Officer,
Chief Operating Officer*



Recent Achievements and Upcoming Milestones

Q1 2025	✓	VY7523 (anti-tau antibody) well tolerated in single ascending dose clinical trial
Q1 2025	✓	VY7523 multiple ascending dose (MAD) clinical trial initiated in AD patients
Q2 2025	✓	Multiple data presentations at ADPD 2025 and ASGCT 2025
Q2 2025	✓	APOE Gene Therapy program advanced into wholly-owned AD pipeline
Q4 25-26	○	Potentially informative tau data read-outs expected from multiple third parties
2025	○	IND filings anticipated with NBIX-partnered Friedreich's ataxia and GBA1 gene therapies
2026	○	Clinical trial initiations expected for NBIX-partnered Friedreich's ataxia and GBA1 programs; potential to generate proof-of-concept for capsids
2026	○	IND filing and clinical trial initiation anticipated with VY1706 (tau silencing gene therapy) for AD
H2 2026	○	Initial tau PET imaging data expected in MAD trial of VY7523 in AD
Ongoing	○	Potential for additional value-creating partnerships; discussions ongoing

Runway into 2028; this does not include any potential milestone payments from existing partnerships¹

¹ Based on our current operating plans, cash and cash equivalents and marketable securities as of June 30, 2025, along with amounts expected to be received as reimbursement for development costs under the Neurocrine and Novartis collaborations and interest income.



Thank You

www.voyagertherapeutics.com

