Voyager Therapeutics Announces Selection of Development Candidate for SOD1 Amyotrophic Lateral Sclerosis Gene Therapy Program

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- IND filing expected in mid-2025 -

LEXINGTON, Mass., Dec. 06, 2023 (GLOBE NEWSWIRE) -- Voyager Therapeutics, Inc. (Nasdaq: VYGR), a biotechnology company dedicated to breaking through barriers in gene therapy and neurology, today announced that it has selected a lead development candidate for its superoxide dismutase 1 (SOD1)-mutated amyotrophic lateral sclerosis (ALS) gene therapy program. The Company anticipates filing an investigational new drug (IND) application with the Food and Drug Administration for the candidate in mid-2025.

Voyager's SOD1-ALS lead candidate combines a highly potent siRNA construct to decrease the expression of SOD1 with an IV-delivered, blood-brain barrier-penetrant TRACER™ capsid. In a non-human primate study, the candidate demonstrated 73% reduction of SOD1 in cervical spinal cord motor neurons following a single intravenous dose in cynomolgus macaques. The candidate demonstrated robust knockdown of SOD1 across all levels of the spinal cord and motor cortex. Further, the candidate demonstrated an ability to transduce both neurons and astrocytes, two cell types thought to play an important role in ALS. Voyager expects to present additional data on the candidate at an upcoming scientific conference. In data previously shared at the 2022 American Society of Gene and Cell Therapy (ASGCT) annual meeting, another Voyager SOD1-ALS preclinical candidate increased survival by a median of 152 days in a G93A mouse model, with survival in some animals exceeding 430 days.

"Our SOD1-ALS program is one of several TRACER™-powered gene therapy programs we expect to see advance to IND in 2025," said Alfred W. Sandrock, Jr., M.D., Ph.D., Chief Executive Officer of Voyager. "We believe our development candidate could represent a significant advancement in the treatment of SOD1-mutated ALS by offering the potential for durable SOD1 knockdown with a single IV administration. SOD1 is a validated target, and we plan to utilize established cerebrospinal fluid and plasma biomarkers in early clinical studies to efficiently achieve potential proof of concept."

About Amyotrophic Lateral Sclerosis (ALS)
Amyotrophic Lateral Sclerosis (ALS) is a progressive neurodegenerative disease in which the motor neurons atrophy and die, resulting in loss of the ability to speak, move, eat and, eventually, breathe. ALS is typically fatal within approximately two to five years of symptom onset[1,2]. The disease is estimated to impact approximately 20,000 people in the U.S.[2] Multiple genes have been implicated in ALS; mutations in the superoxide dismutase 1 (SOD1) gene are estimated occur in approximately 2-3% of ALS cases, or up to 600 people in the U.S.[2,3,4] There are multiple treatments available for ALS and its symptoms, but there is no cure[5].

About the TRACER™ Capsid Discovery Platform
Voyager's TRACER™ (Tropism Redirection of AAV by Cell-type-specific Expression of RNA) capsid discovery platform is a broadly applicable, RNA-based screening platform that enables rapid discovery of AAV capsids with robust penetration of the blood-brain barrier and enhanced central nervous system (CNS) tropism in multiple species, including non-human primates (NHPs). TRACER generated capsids have demonstrated superior and widespread gene expression in the CNS compared to conventional AAV capsids as well as cell- and tissue-specific transduction, including to areas of the brain that have been traditionally difficult to reach, while de-targeting the liver and dorsal root ganglia. As part of its external partnership strategy, Voyager has established multiple collaboration agreements providing access to its next-generation TRACER capsids to potentially enable its partners' gene therapy programs to treat a variety of diseases.

About Voyager Therapeutics
Voyager Therapeutics (Nasdaq: VYGR) is a biotechnology company dedicated to breaking through barriers in gene therapy and neurology. The potential of both disciplines has been constrained by delivery challenges; Voyager is leveraging cutting-edge expertise in capsid discovery and deep neuropharmacology capabilities to address these constraints. Voyager's TRACER™ AAV capsid discovery platform has generated novel capsids with high target delivery and blood-brain barrier penetration at low doses, potentially addressing the narrow therapeutic window associated with conventional gene therapy delivery vectors. This platform is fueling alliances with Alexion, AstraZeneca Rare Disease; Novartis Pharma AG; Neurocrine Biosciences, Inc. and Sangamo Therapeutics, Inc., as well as multiple programs in Voyager's own pipeline. Voyager's pipeline includes wholly-owned and collaborative preclinical programs in Alzheimer's disease, amyotrophic lateral sclerosis (ALS), Parkinson's disease, and other diseases of the central nervous system, with a focus on validated targets and biomarkers to enable a path to rapid potential proof-of-biology. For more information, visit www.voyagertherapeutics.com.

Forward-Looking Statements
This press release 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," "plan," "believe," or "potential," and other similar expressions are intended to identify forward-looking statements.

For example, all statements Voyager makes regarding Voyager's ability to advance its AAV-based gene therapy programs, including the preclinical development of its potential development candidates and timing of IND filings; Voyager's expected presentation of additional data from its SOD1 ALS gene therapy program at an upcoming scientific conference; the potential for the development candidate to achieve durable SOD1 inhibition following IV delivery or address ALS manifestations beyond the CNS by enabling broad CNS knockdown of SOD1; and Voyager's ability to utilize established cerebrospinal fluid and plasma biomarkers to efficiently achieve potential proof-of-biology for the development candidate are forward looking.

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. All forward-looking statements are 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 continued development of Voyager's technology platforms, including Voyager's TRACER platform; the ability to initiate and conduct preclinical studies in animal models; the

development by third parties of capsid identification platforms 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 platform, the capsids identified by the platform, and development candidates for Voyager's pipeline programs; the initiation, timing, conduct and outcomes of Voyager's preclinical studies; the possibility or the timing of the exercise of development, commercialization, license and other options under the Alexion, AstraZeneca Rare Disease and Novartis license option agreements and Neurocrine collaborations; 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 ability to attract and retain talented directors, employees, and contractors; and the sufficiency of cash resources to fund its operations and pursue its corporate objectives.

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. All information in the press release is as of the date of this press release, and any forward-looking statement speaks only as of the date on which it was made. Voyager undertakes no obligation to publicly update or revise this information or any forward-looking statement, whether as a result of new information, future events or otherwise, except as required by law.

References:

[1] ALS Association. ALS Symptoms and Diagnosis. Available at: https://www.als.org/understanding-als/symptoms-diagnosis. Accessed: December 2023.

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[3] Brown C., et al. Estimated Prevalence and Incidence of Amyotrophic Lateral Sclerosis and SOD1 and C9orf72 Genetic Variants. *Neuroepidemiology*. 2021;55(5):342-353. doi: 10.1159/000516752. Epub 2021 Jul 9.

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[5] National Institute of Neurological Disorders and Stroke. Amyotrophic Lateral Sclerosis (ALS). Available at: https://www.ninds.nih.gov/health-information/disorders/amyotrophic-lateral-sclerosis-als. Accessed: December 2023.

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