March 24, 2025

ProMIS Neurosciences Showcases Preclinical Data on Platform-Derived Antibody and Vaccines for Neurodegenerative Diseases at Alzheimer's Disease/Parkinson's Disease 2025 International Conference

Multiple datasets support continued development of ProMIS' antibody therapeutics and vaccines that selectively target toxic misfolded proteins to treat neurodegenerative diseases

CAMBRIDGE, Massachusetts, March 24, 2025 (GLOBE NEWSWIRE) -- ProMIS Neurosciences Inc. (Nasdaq: PMN), a clinical-stage biotechnology company focused on the generation and development of antibody therapeutics and vaccines targeting toxic misfolded proteins in neurodegenerative diseases such as Alzheimer's disease (AD), amyotrophic lateral sclerosis (ALS) and multiple system atrophy (MSA), today announced plans to deliver virtual oral presentations at the 2025 Alzheimer's and Parkison's Disease (AD/PD) International Conference taking place in Vienna, Austria from April 1 - 4, 2025. The oral presentations are available on demand starting on Tuesday, April 1, 2025 at 7:00am C.E.T (2:00am E.T).

"We are pleased to demonstrate the potential of our computational modeling platform in the development of next-generation antibodies and targeted vaccines for neurodegenerative diseases such as AD, PD and ALS," said Neil Warma, Chief Executive Officer of ProMIS Neurosciences. "These promising preclinical data may support vaccination with our platform-derived epitopes and selective antibody targeting of misfolded toxic aggregates of TDP-43 as a potentially safe and effective method to treat neurodegenerative diseases. We look forward to sharing these data at the upcoming AD/PD 2025 International Conference."

Presentation details

Title: Rational Design of Alzheimer's Vaccine to Maximize Selective Targeting of Toxic Amyloid-Beta Oligomers

Presenter: Johanne Kaplan, Chief Development Officer, ProMIS Neurosciences

Abstract Number: 1321

A large body of evidence indicates that soluble toxic oligomers of amyloid-beta (AβO) are a

primary driver of AD. Through computational modeling, four different conformational B cell epitopes of AβOs were identified. A novel approach was utilized to select an optimal vaccine composition amongst 15 possible combinations of one to four epitopes to provide maximal binding to a toxic oligomer-enriched low molecular weight fraction of soluble AD brain extract.

Results from the preclinical study showed that immunization with a single conformational epitope, peptide 301, the target of the PMN310 antibody, was sufficient to produce maximal reactivity against AD brain oligomers.

Title: Novel Approach to Optimization of Alpha-Synuclein Vaccine Composition for Maximal Targeting of Toxic Alpha-Synuclein Species

Presenter: Johanne Kaplan, Chief Development Officer, ProMIS Neurosciences

Abstract Number: 1310

Vaccination against pathogenic species of alpha-synuclein (ASyn; toxic oligomers, small soluble seeding fibrils), has the potential to protect against synucleinopathies, which include Parkinson's disease, dementia with Lewy bodies and multiple system atrophy. Vaccine constructs containing computationally-derived conformational B cell epitopes of misfolded pathogenic ASyn were tested in mice. The potential advantage of this approach, as opposed to inducing pan-ASyn reactivity, lies in preserving normal ASyn function and minimizing the diversion of active antibody by the more abundant non-toxic forms of the protein in the blood and central nervous system.

Results from the preclinical study showed that vaccination with conformational B cell epitopes produced high affinity antibodies with the desired selectivity for pathogenic ASyn and identified optimal vaccine configurations for further development.

Title: Selective Targeting of Pathogenic TDP-43 with Misfolding-Specific Monoclonal Antibodies and Intrabodies Against a Pathogenic Loss-of-Structure Epitope in the Nterminal Domain

Presenter: Neil Cashman, MD, Chief Scientific Officer and Co-founder of ProMIS Neurosciences

Abstract Number: 1426

TAR DNA-binding protein 43 (TDP-43) is associated with the pathogenesis of ALS, frontotemporal dementia, and AD. Normally, TDP-43 is predominantly localized in the nucleus, and regulates RNA splicing, transport, and stability. In disease, it is mislocalized to the cytoplasm and forms aggregates, which contribute to neurotoxicity and cell-to-cell propagation of pathogenic TDP-43. Development of effective immunotherapeutic agents requires stringent selectivity for misfolded TDP-43 in order to maintain the essential physiological functions of the normal isoform. The study's objective was to generate and evaluate the activity of monoclonal antibodies and intrabodies against an N-terminal domain epitope only exposed when the protein is misfolded in disease.

Results of the preclinical study provided proof-of-concept evidence that supports selective targeting of misfolded toxic aggregates of TDP-43 as a potentially safe and effective avenue

to treat neurodegenerative diseases associated with TDP-43 proteinopathy.

Abstracts are available on the Poster and Publications page of the Company's website at www.promisneurosciences.com.

About PMN310

PMN310 is a humanized monoclonal antibody (mAb) designed and developed based on its selectivity for soluble amyloid-beta oligomers, which are believed to be the most toxic and pathogenic form of Aβ, relative to Aβ monomers and amyloid plaques. Soluble AβOs have been observed to be potent neurotoxins that bind to neurons, impair synaptic function and induce neurodegeneration. By selectively targeting toxic soluble AβOs, PMN310 aims to directly address the growing body of evidence indicating they may be the primary underlying cause of the neurodegenerative process in Alzheimer's disease. PMN310 has successfully completed a Phase 1a clinical study (NCT06105528), a double-blind, placebo-controlled, single ascending dose study of the safety, tolerability and pharmacokinetics of PMN310 infusions in healthy volunteers.

About ProMIS Neurosciences Inc.

ProMIS Neurosciences Inc. is a clinical stage biotechnology company focused on generating and developing antibody therapeutics and vaccines selectively targeting toxic misfolded proteins in neurodegenerative diseases such as Alzheimer's disease (AD), amyotrophic lateral sclerosis (ALS) and multiple system atrophy (MSA). The Company's proprietary target discovery engine applies a thermodynamic, computational discovery platform - ProMIS™ and Collective Coordinates - to predict novel targets known as Disease Specific Epitopes on the molecular surface of misfolded proteins. PMN310, the Company's lead product candidate for the treatment of AD, is a differentiated, humanized monoclonal antibody that has been designed to specifically bind toxic Aβ oligomers and to not bind plaque or monomers. Oligomers are known to drive disease progression in AD and PMN310 appears to selectively bind oligomers. PMN310 has successfully completed a Phase 1a clinical study and is dosing Alzheimer's disease patients in a Phase 1b clinical trial in AD patients. ProMIS has offices in Cambridge, Massachusetts and Toronto, Ontario.

Forward-Looking Statements

This press release contains forward-looking statements that are made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. Certain information in this news release constitutes forward-looking statements and forward-looking information (collectively, "forward-looking information") within the meaning of applicable securities laws. In some cases, but not necessarily in all cases, forward-looking information can be identified by the use of forward-looking terminology such as "plans", "pleased to", "look forward to", "potential to", "targets", "expects" or "does not expect", "is expected", "excited about", "an opportunity exists", "is positioned", "estimates", "intends", "assumes", "anticipates" or "does not anticipate" or "believes", or variations of such words and phrases or state that certain actions, events or results "may", "could", "would", "might", "will" or "will be taken", "occur" or "be achieved". In addition, any statements that refer to expectations, projections or other characterizations of future events or circumstances contain forward-looking information. Specifically, this news release contains forward-looking information relating to the Company's preclinical data, novel vaccine approach to target toxic oligomers and the

potential implications thereof, statements of reference to its preclinical studies and to its lead product, PMN310, designed for the treatment of AD, statements related to the targeting of toxic misfolded proteins in neurodegenerative diseases and the belief that they have greater therapeutic potential due to reduction of off-target activity, management's belief that its patented platform technology has created an antibody candidate specific to toxic misfolded oligomers, and therapeutic activity and preferential targeting of toxic soluble aggregates by Aß-directed antibodies and the potential implications thereof. Statements containing forward-looking information are not historical facts but instead represent management's current expectations, estimates and projections regarding the future of our business, future plans, strategies, projections, anticipated events and trends, the economy and other future conditions. Forward-looking information is necessarily based on a number of opinions, assumptions and estimates that, while considered reasonable by the Company as of the date of this news release, are subject to known and unknown risks, uncertainties and assumptions and other factors that may cause the actual results, level of activity, performance or achievements to be materially different from those expressed or implied by such forward-looking information, including, but not limited to, the risk that preclinical results or early results may not be indicative of future results, the Company's ability to fund its operations and continue as a going concern, its accumulated deficit and the expectation for continued losses and future financial results. Important factors that could cause actual results to differ materially from those indicated in the forward-looking information include, among others, the factors discussed throughout the "Risk Factors" section of the Company's most recently filed Annual Report on Form 10-K for the year ended December 31, 2023 and in its subsequent filings filed with the United States Securities and Exchange Commission. Except as required by applicable securities laws, the Company undertakes no obligation to publicly update any forward-looking information, whether written or oral, that may be made from time to time, whether as a result of new information, future developments or otherwise.

For further information:

Visit us at www.promisneurosciences.com

Please submit media inquiries to info@promisneurosciences.com

For Investor Relations, please contact:

Precision AQ (formerly Stern IR)

Anne Marie Fields, Managing Director

annemarie.fields@precisionaq.com

Tel. 212-362-1200

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