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ProMIS Neurosciences Presents Preclinical Results of its Experimental Alzheimer's Vaccine at the 2022 International AD/PD™ Conference on Alzheimer's and Parkinson's Diseases and Related Neurological Disorders

Customized vaccine selectively targets toxic amyloid-beta oligomers

TORONTO, Ontario and CAMBRIDGE, Mass., March 22, 2022 (GLOBE NEWSWIRE) -- ProMIS Neurosciences, Inc. (TSX: PMN) (OTCQB: ARFXF), a biotechnology company focused on the discovery and development of therapeutics targeting ***misfolded proteins*** such as toxic oligomers implicated in the development of neurodegenerative diseases, announced today in vivo results of its experimental Alzheimer's vaccine presented at the AD/PD™ International Conference held in Barcelona Spain, March 15-20, 2022.

ProMIS Chief Development Officer, Dr. Johanne Kaplan, delivered an on-site oral presentation entitled: "Optimizing vaccine design for Alzheimer's disease: selective targeting of computationally-derived conformational B cell epitopes of soluble amyloid-beta toxic oligomers". The presentation discussed the design of an amyloid-beta (A β) vaccine to elicit antibodies that are **selective for toxic amyloid-beta oligomers** (A β O) without inducing a potentially detrimental immune response to normal forms of A β .

Using its proprietary computational modeling, ProMIS previously identified conformational epitopes that are exposed on misfolded, toxic A β O, but not on amyloid monomers or plaque. Importantly, antibodies raised against these conformational epitopes have demonstrated selectivity and protective activity against toxic A β O¹⁻³.

ProMIS' experimental vaccine, containing one of these conformational epitopes, was tested in mice in collaboration with the Vaccine and Infectious Disease Organization (VIDO) at the University of Saskatchewan, Canada.

Initial results showed robust induction of antibodies to the vaccine in the presence of various adjuvants, including alum approved for human use. The serum antibodies elicited were selective for A β O with little or no binding to monomers or plaque. Importantly, no potentially deleterious cellular responses to the vaccine were detected.

"Immunization of mice with our experimental Alzheimer's vaccine appears to exhibit the desired characteristics. It elicits high levels of antibodies with no measurable pro-inflammatory response and warrants further development", stated Dr. Johanne Kaplan.

“Furthermore, oligomer selectivity of the antibodies elicited by the vaccine most efficiently focuses the response on the neutralization and clearance of the pathogenic species of A β and potentially reduces the risk of side-effects associated with antibody binding to plaque and vascular deposits of A β .”

¹ Silverman et al. 2016. AAIC poster P4-400;

² Silverman et al. 2018. ACS Chem Neurosci 9: 1591-1606;

³ Gibbs et al. 2019. Scientific Reports 9:9870

Dr. Kaplan’s slide presentation and a related short, narrated video are available on the ProMIS website (<https://www.promisneurosciences.com/news-media/videos>)

AD/PD™ is the groundbreaking series of Alzheimer’s and Parkinson’s Diseases Conferences attracting international medical and scientific professionals worldwide. The Conference is at the forefront of unraveling the mechanisms and improving the treatment of Alzheimer’s, Parkinson’s, and other related neurodegenerative diseases. AD/PD™ Conferences uniquely combine distinct neurodegenerative diseases in one setting and examine their similarities and differences; there is a strong focus on mechanisms of disease, prevention, and therapy.

About ProMIS Neurosciences

ProMIS Neurosciences, Inc. is a development stage biotechnology company focused on discovering and developing therapeutics selectively targeting toxic misfolded oligomers implicated in the development and progression of neurodegenerative diseases, in particular Alzheimer’s disease (AD), amyotrophic lateral sclerosis (ALS) and Parkinson’s disease (PD). The Company’s proprietary target discovery engine is based on the use of two complementary computational modeling techniques. The Company applies its molecular dynamics, computational discovery platform -ProMIS™ and Collective Coordinates - to predict novel targets known as Disease Specific Epitopes on the molecular surface of misfolded proteins. ProMIS is headquartered in Toronto, Ontario, with offices in Cambridge, Massachusetts. ProMIS is listed on the Toronto Stock Exchange under the symbol PMN, and on the OTCQB Venture Market under the symbol ARFXF

To learn more, visit us at www.promisneurosciences.com, follow us on [Twitter](#) and [LinkedIn](#)

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Source: ProMIS Neurosciences Inc.