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ProMIS Neurosciences' PMN310 antibody demonstrates significant cognitive benefit in a mouse model of Alzheimer's disease

Transgenic mouse model reflects latest scientific understanding of disease – toxic oligomers of amyloid create cognitive deficit

TORONTO, Ontario and CAMBRIDGE, Mass., March 02, 2022 (GLOBE NEWSWIRE) -- ProMIS Neurosciences, Inc. (TSX: PMN) (OTCQB: ARFXF), a biotechnology company focused on the discovery and development of antibody therapeutics targeting **_misfolded proteins_** such as toxic oligomers, announced today that PMN310, its lead antibody therapeutic candidate for Alzheimer's disease (AD), showed a significant cognitive benefit in a widely recognized animal model of AD.

The APP/L mouse is a "transgenic" model of AD in which human amyloid-beta oligomers lead to cognitive deficits. In this model, treatment with PMN310 which selectively targets toxic oligomers of amyloid-beta preserved memory using the water maze readout, to the extent that the PMN310 treated mice were indistinguishable from "non-transgenic" control mice.

"This model closely aligns with the most current understanding of the biology of Alzheimer's disease, that small clumps of misfolded amyloid-beta (toxic oligomers) are the most pathogenic species[1]", stated Dr. Neil Cashman, ProMIS Chief Scientific Officer. "In our opinion, studies in transgenic mouse models that focus on plaque removal or monomer depletion are not representative of human disease. Indeed, drug candidates that showed plaque reduction in animal models were disappointing in the clinic, and targeting amyloid monomers which worked in these models, universally failed in clinical trials."

This positive result builds on earlier in vivo data for PMN310. We have previously published[2] on the protective activity of PMN310 in a novel object recognition model where toxic oligomers of amyloid-beta are injected in the brain of mice to create a memory deficit. In this model, co-injection of PMN310 prevented the loss of memory caused by toxic oligomers.

Commenting on today's announcement, ProMIS Chairman and CEO, Eugene Williams stated: "The observed positive outcome with systemic administration of PMN310 is very encouraging, as PMN310 is on track for an IND filing by year end in its initial formulation for intravenous/infusion delivery. In parallel, we are also progressing a potential subcutaneous injection form of PMN310."

[1]Cline E et al. 2018. The amyloid- oligomer hypothesis: beginning of the third decade.

Journal of Alzheimer's disease, 64, S567-S610.

[2]Gibbs E et al. 2019. A rationally designed humanized antibody selective for amyloid beta oligomers in Alzheimer's disease. Scientific Reports 9: 9870.
https://doi.org/10.1038/s41598-019-46306-5

About ProMIS Neurosciences
ProMIS Neurosciences, Inc. is a development stage biotechnology company focused on discovering and developing antibody 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
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