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BriefGlance.com: ProMIS Unveils Precision Vaccines for ALS and Parkinson's Disease

Key Data (from BriefGlance.com)

- Two novel vaccine candidates unveiled for ALS and Parkinson's disease, targeting misfolded TDP-43 and alpha-synuclein proteins.
- EpiSelect™ platform used to design vaccines with "sniper-like precision," avoiding healthy proteins.
- PMN310, an Alzheimer's antibody developed using the same platform, received Fast Track designation by the FDA in 2025 and is in Phase 1b trials.

Expert Consensus (from BriefGlance.com)

Experts view ProMIS's precision immunotherapy approach as a promising and innovative strategy for targeting neurodegenerative diseases, with potential advantages in safety and efficacy over less-selective therapies.

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ProMIS Unveils Precision Vaccines for ALS and Parkinson's Disease

CAMBRIDGE, MA – March 18, 2026 – ProMIS Neurosciences, a clinical-stage biotechnology company, is expanding its fight against neurodegeneration, moving beyond its established Alzheimer's program to take aim at Amyotrophic Lateral Sclerosis (ALS) and Parkinson's disease. The company announced it is presenting promising preclinical data on two novel vaccine candidates at the prestigious Alzheimer's & Parkinson's Diseases Conference (AD/PD™ 2026) in Copenhagen this week, signaling a significant strategic broadening of its therapeutic pipeline.

The presentations highlight a highly precise approach to treating these devastating diseases by targeting the toxic, misfolded proteins believed to be their root cause. This move leverages the company's proprietary computational discovery engine, which has already produced a Fast Track-designated antibody for Alzheimer's disease currently in human trials.

A "Sniper Rifle" Approach to Brain Disease

At the heart of many neurodegenerative disorders, including ALS and Parkinson's, is a common culprit: proteins that misfold into toxic shapes. These misshapen proteins, or oligomers, clump together, spread through the brain like a slow-motion infection, and kill nerve cells. For decades, scientists have tried to clear these proteins, but a major challenge has been distinguishing the toxic culprits from their healthy, functional counterparts, which are essential for normal cellular activity.

ProMIS Neurosciences believes it has a solution with its proprietary discovery platform, EpiSelect™. The platform functions like a molecular detective, using advanced computational algorithms to identify unique structural features, or "Disease Specific Epitopes," that are only exposed on the surface of toxic, misfolded proteins. This allows the company to design vaccines and antibodies with what it calls "sniper-like precision."

This targeted strategy is designed to induce an immune response that attacks only the pathogenic protein clumps, leaving the vast quantities of healthy, properly folded proteins untouched. This selectivity is critical for developing safer and potentially more effective therapies, as it aims to avoid off-target effects that could interfere with normal biological functions and cause unintended side effects.

New Vaccine Candidates Take Center Stage

The two scientific posters being presented at the AD/PD™ conference provide the first public glimpse into how this precision technology is being applied to ALS and Parkinson's disease.

One presentation details the rational design of a vaccine targeting misfolded TDP-43, a protein whose pathology is a hallmark of nearly all cases of ALS and some forms of frontotemporal dementia (FTD). By generating an immune response specifically against the pathogenic form of TDP-43, the vaccine aims to halt the spread of the toxic protein and clear the aggregates that lead to motor neuron death, without affecting the protein's vital role in healthy cells.

The second presentation focuses on a vaccine designed to elicit an antibody response against toxic species of alpha-synuclein, the protein that aggregates to form Lewy bodies in the brains of Parkinson's disease patients. The field of alpha-synuclein immunotherapy is competitive, with several large pharmaceutical companies pursuing antibody treatments. However, ProMIS asserts its approach is different. Its vaccine is engineered to be highly selective for the most toxic oligomeric forms of alpha-synuclein, potentially offering a better safety and efficacy profile than less-targeted therapies.

"We are pleased to be invited to present at AD/PD™ 2026, a leading forum for the presentation and discussion of advances in neurodegenerative disease research," said Neil Warma, Chief Executive Officer of ProMIS Neurosciences, in a statement. "These data highlight two of our pipeline candidates and underscore our focus on advancing novel therapeutic approaches for ALS and Parkinson's disease, particularly through targeting misfolded protein species believed to drive disease pathology."

Leveraging a Platform Proven in Alzheimer's

The confidence to pursue these new targets stems from the progress of the company's lead candidate, PMN310, for Alzheimer's disease. Developed using the same EpiSelect™ platform, PMN310 is a monoclonal antibody designed to selectively bind to toxic amyloid-beta oligomers—the species now widely considered the primary driver of neurodegeneration in Alzheimer's—while avoiding both single amyloid-beta molecules and the dense plaque deposits that have been the target of many previous therapies.

This non-plaque-binding approach is believed to be the reason for a potentially improved safety profile, specifically a lower risk of amyloid-related imaging abnormalities (ARIA), a form of brain swelling or microhemorrhages seen with plaque-clearing antibodies. PMN310 was granted Fast Track designation by the U.S. Food and Drug Administration in 2025 and is currently being evaluated in a Phase 1b clinical trial, known as PRECISE-AD, in patients with early-stage Alzheimer's disease.

The advancement of PMN310 into human trials provides crucial validation for the underlying EpiSelect™ platform, demonstrating its ability to translate a computational concept into a clinical-stage therapeutic. This track record provides a strong foundation for the company's expansion into other complex neurodegenerative diseases.

The Quest for Disease-Modifying Therapies

For patients with ALS and Parkinson's, the need for new treatments is urgent. Current therapies for both conditions primarily manage symptoms but do not stop or slow the relentless underlying progression of the disease. A therapy that could modify the disease course by targeting its root cause remains one of the most significant unmet needs in medicine.

ProMIS's immunotherapy strategy represents a promising avenue in this global quest. By activating the body's own immune system to precisely identify and eliminate the toxic proteins driving cell death, these vaccine candidates offer a fundamentally different approach from daily pills or infusions that may have broader, less-specific effects.

While the data presented in Copenhagen is from preclinical studies, it marks a critical step in validating the science and moving these programs toward human trials. The presentations will be closely watched by researchers, clinicians, and investors, all searching for the next breakthrough. For patients and families facing these devastating conditions, the promise of such a targeted approach represents a significant new direction in the long fight against neurodegenerative disease.