Moleculera Biosciences advances first-of-its-kind biomarker panel for Alzheimer's through alliance with Lunai Bioworks

Leveraging biomarkers, personal history measures and advanced AI platform to develop test that detects Alzheimer's disease prior to symptom onset and diagnosis

OKLAHOMA CITY, OK, UNITED STATES, October 1, 2025 /EINPresswire.com/ -- Moleculera Biosciences, Inc., a precision medicine company focused on uncovering the immune-mediated roots of chronic neuropsychiatric and cardiovascular disorders, as well as Alzheimer's disease, today announced that it has commenced development of a first-of-its-kind blood test to identify individuals with immune-mediated Alzheimer's disease at the earliest stages, prior to symptom onset and diagnosis. Moleculera, in collaboration with Lunai Bioworks (Nasdaq: LNAI), a leader in AI-based patient analytics and drug discovery, has expanded their strategic alliance to develop this next-generation Alzheimer's disease blood panel.

> Our vision is to shift the paradigm of Alzheimer's detection upstream — giving patients and clinicians the ability to intervene more effectively years earlier than current technologies allow."
>
> *Craig Shimasaki, PhD, MBA, Moleculera's co-founder and CEO*

The collaboration between Moleculera Biosciences and Lunai Bioworks, through Lunai's wholly- owned subsidiary BioSymetrics, will result in the development of an Alzheimer's Early Intervention Inflammatory Biomarker (AEIIB) panel. The overarching goal is to enable earlier predictive diagnosis, monitor disease trajectories, and provide opportunities for medical interventions that improve health outcomes. By addressing the upstream drivers of Alzheimer's disease (AD) pathology, this panel has the potential to transform the clinical management of AD by providing a tool to identify and intervene in the early stages of preclinical Alzheimer's disease, when interventional outcomes are more likely to be successful.

BioSymetrics will leverage its advanced, AI-driven Augusta platform in combination with

Moleculera's proprietary neuroinflammatory biomarkers and patient-specific data — including personal and family history measures — to develop a predictive algorithm capable of identifying early indicators of Alzheimer's disease progression in asymptomatic individuals. This groundbreaking approach aims to enable earlier detection, prior to diagnosis, paving the way for preventative strategies and more effective interventions to halt or slow the progression of the disease.

Alzheimer's disease is a progressive neurodegenerative disorder characterized by amyloid-beta (Aβ) plaques, tau tangles, and chronic neuroinflammation. While Aβ and tau have been central to AD research, the repeated failure of clinical trials targeting amyloid and tau directly — despite their clear association with AD pathology — suggests that these proteins may represent downstream components of a more complex chronic inflammatory and immune-mediated disease process.

"This integrated strategy utilizing panel biomarkers, personal history measures, and AI—has the potential to reshape how we approach diagnosis and intervention upstream of Alzheimer's disease diagnosis," said Craig Shimasaki, PhD, MBA, CEO of Moleculera Biosciences. "We are excited as we expand our alliance with BioSymetrics to leverage their advanced algorithms and stratify the developmental stages of Alzheimer's disease well before clinical diagnosis."

"We're thrilled to deepen our partnership with Moleculera Biosciences in pursuit of a shared mission: transforming the early detection of neurological disorders," said Dr. Gabe Musso, CSO of BioSymetrics. "By combining our AI-powered insights with Moleculera's pioneering biomarker science, we are taking a major step forward in identifying novel diagnostics that can shift the trajectory of Alzheimer's disease treatment."

About Moleculera Biosciences, Inc.

Moleculera Biosciences, Inc. is a pioneer of early stage molecular diagnostics for immune-mediated neuropsychiatric and cardiovascular disorders, as well as Alzheimer's disease. By integrating immune profiling innovations and AI-enabled analytics, we can uncover unrecognized patterns that conventional methods overlook, bringing us closer to earlier diagnosis and better patient outcomes. The company partners with leading healthcare institutions to accelerate the development of precision tools that can transform detection, treatment, and outcomes in chronic, immune-mediated and inflammatory disorders such as Alzheimer's disease.

The company's signature test, the Autoimmune Brain Panel™, includes a series of five high-complexity blood tests that identify circulating levels of autoantibodies in serum directed against specific targets in the brain and central nervous system that may result in neurologic, psychiatric, and behavioral symptoms, including PANS/PANDAS. In addition, the company is also advancing the development of an Autoimmune Cardiovascular Panel™. For more information, visit www.moleculera.com.

About Lunai Bioworks, Inc.

Lunai Bioworks Inc. is an AI-powered drug discovery and biodefense company pioneering safe and responsible generative biology. With proprietary neurotoxicity datasets, advanced machine learning, and a focus on dual-use risk management, Lunai is redefining how artificial intelligence can accelerate therapeutic innovation while safeguarding society from emerging threats. For more information visit www.lunaibioworks.com.

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