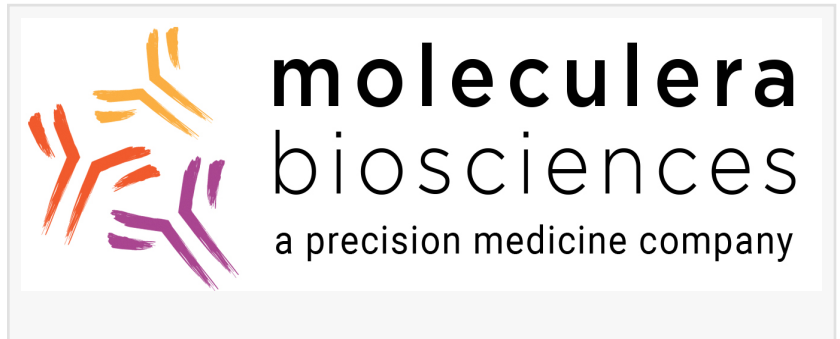


Moleculera Biosciences Awarded \$500K Grant to Clinically Validate Immune-mediated Cardiovascular Disorder Biomarkers

Precision medicine blood panel to aid in diagnosing and treating patients with myocarditis, cardiomyopathy, and chronic heart failure due to immune dysfunction



OKLAHOMA CITY, OK, UNITED STATES,
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[Moleculera Biosciences](#), Inc. has won a \$500,000 matching grant from the Oklahoma Center for the Advancement of Science and Technology (OCAST) to support the development and clinical validation of a blood test panel for the company's Autoimmune Cardiovascular Panel™.



We are excited to expand our expertise in immune-mediated conditions to include cardiovascular disorders that are all too common conditions that devastate the lives of millions of individuals."

*Craig Shimasaki, PhD, MBA,
Moleculera's Co-founder and
CEO*

Cardiovascular diseases (CVDs) are the leading cause of death globally. A portion of many CVDs have been shown to be unresponsive to standard-of-care therapies as the etiology for many of these disorders can be diverse and may include a chronic inflammatory and autoimmune response.

The Autoimmune Cardiovascular Panel™ will include a series of five high-complexity blood tests that measure the levels of autoimmune antibodies directed against key biological targets in the heart, and the ability of autoantibodies to stimulate a heart cell Protein Kinase A assay (PKA).

Elevated levels of one or more of these tests will help a physician determine whether a patient's non-response to treatment of certain cardiovascular disorders (i.e., myocarditis, dilated cardiomyopathy, and heart failure) may be due to an underlying immune-mediated and inflammatory response, potentially triggered by an infection(s). In these cases, patients may be treated with anti-infective, immune-modulatory and anti-inflammatory treatments.

Over the past 15 years, Molculera has researched and commercially tested the connection between infections, the immune system, and neuropsychiatric disorders and is now advancing its experience to include autoimmune targets in cardiovascular diseases that aid in diagnosing certain immune-mediate CVDs. The cardiovascular biomarker targets in this panel were identified in the laboratory of Dr. Madeleine Cunningham, Professor at the University of Oklahoma Health Sciences Center, and co-founder and CSO of Molculera Biosciences.

“We are excited to expand our expertise in immune-mediated conditions to include cardiovascular disorders that are all too common; conditions that devastate the lives of millions of individuals,” said Craig Shimasaki, PhD, MBA, President and CEO of Molculera Biosciences. “We believe that this test panel will lead to early intervention and help effectively manage these CVDs, reduce hospitalizations, and improve the quality of life for patients with these chronic disorders.”

The Autoimmune Cardiovascular Panel™ will include the identification and measurement of elevated autoantibodies in the serum directed against human cardiac myosin, beta-adrenergic receptor 1, beta-adrenergic receptor 2, muscarinic M2 receptor, in addition to the immune-mediated stimulation of Protein Kinase A.

“The recognition of Molculera Biosciences with the Industry Innovation Award exemplifies Oklahoma’s commitment to advancing breakthrough biomedical solutions,” said Jennifer McGrail, Executive Director, Oklahoma Center for the Advancement of Science & Technology. “By fostering such pioneering efforts, we strengthen Oklahoma’s growing bioscience ecosystem, enabling cutting-edge healthcare innovations that can improve the quality of life both locally and globally.”

The Panel is expected to begin commercialization in late 2025/early 2026. This is Molculera’s second precision medicine blood panel. The company’s signature test, the Autoimmune Brain Panel™, measures autoimmune antibodies directed against four CNS receptors/antigens in the brain, and an immune-mediated cell stimulatory assay (Calmodulin-Calcium Kinase II), which assist clinicians in identifying an underlying immune-mediated root cause for chronic neuropsychiatric symptoms.

Additionally, Molculera operates two corresponding platform products: a specimen biorepository and bioinformatics database, and a biomarker identification and therapeutic target identification program for the Autoimmune Brain Panel and is currently building a large biorepository of clinically annotated specimens for autoimmune cardiovascular disease in which we will then build a predictive treatment algorithm.

Molculera Biosciences also has two additional precision medicine molecular blood panels in development. The company’s Long-COVID Autoimmune Panel™ is anticipated to be launched in late 2026/early 2027, and the company’s Neurodegenerative Disorder Panel™ (Early Onset

Alzheimer's) is anticipated to be launched in late 2027/early 2028.

[About Moleculera Biosciences, Inc.](#)

Moleculera Biosciences, Inc. is a precision medicine company focused on identifying and directing treatment for chronic disorders triggered by inflammation and immune dysfunction. The company's signature program includes the Autoimmune Brain Panel™ (formerly known as the Cunningham Panel™), a series of five blood tests that identify circulating levels of autoantibodies in serum directed against the brain and central nervous system that may result in neurologic, psychiatric, and behavioral symptoms. The company has additional testing panels in development targeting cardiovascular, Long-COVID and neurodegenerative disorders.

Moleculera possesses the world's largest biorepository and bioinformatics database of over 15,000 clinically annotated specimens from patients suffering from immune-mediated neuropsychiatric disorders. Our robust biorepository is fueling the discovery and development of novel biomarkers and potential therapeutic targets for these debilitating disorders.

The company conducts research and clinical development and operates a CLIA and COLA-accredited, high-complexity laboratory in Oklahoma City, where it has tested over 15,000 patients using its patented anti-neuronal antibody panel, the Autoimmune Brain Panel™. Learn more at www.moleculera.com.

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