Evogen Study at 2017 AES Annual Meeting Identifies New Proteomic Biomarkers for Diagnosis of Epileptic Seizures

—Large Clinical Biomarker Study Presented at American Epilepsy Society Meeting Identifies Novel Blood-based Biomarkers for the Diagnosis of Epileptic Seizures—
—Visit Booth #631 to Learn More About How these Biomarkers Are Being Incorporated into Evogen's EvoScoreDX™ for the Accurate and Early Diagnosis of Epilepsy—

Philadelphia, PA, and Washington DC, December 2, 2017 – Evogen, Inc., a leader in proteomics and genomics-based testing for improved diagnosis and treatment of neurological disorders, today reported that a clinical study to be presented at the 2017 Annual Meeting of the American Epilepsy Society (AES) identifies new blood-based protein biomarkers that demonstrate promising potential for the accurate diagnosis of epileptic seizures. The study, which was conducted by researchers at the University of Maryland and University of Pennsylvania in collaboration with Evogen, identified multiple inflammatory protein biomarkers that demonstrate the ability to distinguish epileptic seizures from other conditions. Evogen is applying its proprietary algorithms to select combinations of these protein biomarkers that provide the most accurate diagnostic result. The new biomarkers are being incorporated into an updated version of Evogen's EvoScoreDX™ biomarker-based blood test designed to accurately distinguish epileptic seizures from other neurological events.

Evogen's blood-based diagnostic approach reflects recent studies showing that inflammation is associated with certain epilepsies and may contribute to seizures. In the current study, researchers screened 51 novel inflammatory proteins in blood samples from epilepsy patients and healthy volunteers. Seven protein biomarkers were ultimately selected to create a seizure score algorithm providing an accurate readout within 24 hours of a suspected seizure. The seizure score algorithm based on these seven biomarkers demonstrated strong diagnostic performance, with 100% sensitivity, 90% specificity, 91% positive predictive value, 100% negative predictive value and 95% overall accuracy.

Only an estimated 20% of suspected seizure-like events are epilepsy-related and the accurate diagnosis of epilepsy remains a challenge. Comprehensive patient assessments by epileptologists are the gold standard for diagnosing the condition, yet current methods are subjective, cumbersome, expensive and imprecise. An accurate blood-based diagnostic would enable epilepsy to be diagnosed and treated more rapidly and effectively, and would also reduce the erroneous diagnoses that can seriously limit individuals' life choices, such as the ability to drive.

Peter Crino, MD, PhD, is chair of the Department of Neurology at the University of Maryland School of Medicine and a co-author of the study. His former laboratory at the University of Pennsylvania conducted key studies of the biomarker approach used to develop EvoScoreDX. Dr. Crino noted, "This new study expands our understanding of the inflammatory proteins associated with seizures, while enabling us to improve our blood-based biomarker approach that has the potential to revolutionize the diagnosis of epilepsy. Accurate, objective and accessible new tools such as EvoScoreDX could help speed epilepsy diagnosis and treatment and facilitate the development of new clinical trials. The assay may also show that many of the people who are suspected of having suffered an epileptic seizure do not in fact have the disorder."

Todd Wallach, president and chief executive officer of Evogen, commented, "This new biomarker study expands our patented biomarker portfolio and advances our goal of optimizing our predictive seizure score algorithms to aid in the accurate and rapid diagnosis of epilepsy. We are working to incorporate these findings into our EvoScoreDx seizure test and expect the added biomarkers will further strengthen its demonstrated ability to accurately distinguish epileptic seizures from other neurological events."

Evogen representatives will be available to discuss the new study and EvoScoreDX at Booth #631 during the 2017 AES meeting.

1 – AES Poster 1.069, Dec. 2, 2017: 12:00-2:00 pm. *Expanded proteomic screen and identification of new novel biomarkers in seizure*, JM Gledhill, EA Waxman, EJ Brand, RD St. Clair, JR Pollard, TM Wallach and PB Crino.

About Epilepsy
Epilepsy is a chronic neurological disorder affecting approximately 65 million people worldwide and more than 2 million people in the US, where it is the fourth most common neurological disorder. Although epilepsy may be linked to factors such as health conditions, race and age, it can develop in anyone at any age. Approximately one in 26 people will develop epilepsy in their lifetime. There are many different types of epilepsy, but the main characteristic of the condition is recurrent seizures. The accurate diagnosis of epilepsy remains a challenge, as current methods are subjective, cumbersome, expensive and imprecise.

About Evogen
Evogen, Inc. is a leading developer of diagnostic, detection and sample collection solutions with successful products deployed worldwide. The company is focused on achieving leadership in proteomics and genomics-based testing for improved diagnosis and treatment of neurological disorders, offering rapid, accurate and cost effective precision medicine solutions for optimal patient outcomes. Evogen's patented EvoScoreDX™ biomarker-based blood test has the potential to help revolutionize the diagnosis of epilepsy. In peer-reviewed clinical studies, EvoScoreDX demonstrated sensitivity and specificity of 90% or more. It is currently available in limited distribution with expansion to additional target markets planned for 2018. Evogen is also preparing to launch its EvoScoreGX™ comprehensive genomic testing to neurologists for improved management of epilepsy and other neurological disorders. For more information, visit evogen.com.

###

Contacts
Evogen Corporate:
Richard St. Clair
rstclair@evogen.com

Media:
Barbara Lindheim
blindheim@bllbiopartners.com
212 584-2276