

March 22, 2018



# **Study of Blood Test to Detect and Monitor Chronic Traumatic Encephalopathy (CTE) in Former NFL Players Set for Kick-Off in Phoenix**

- Protocol Approved for Biomarker Study in up to 200 Subjects -**
- Development of "Players' Council" in Key Study Locations -**

PHOENIX and SAN DIEGO, March 22, 2018 /PRNewswire/ -- Exosome Sciences, Inc., a diagnostic subsidiary of Aethlon Medical, Inc. (Nasdaq: AEMD), today announced the initiation of an Institutional Review Board (IRB) approved protocol for a research study involving retired NFL players and a data-supported biomarker candidate to potentially detect and monitor Chronic Traumatic Encephalopathy (CTE) in living individuals. The sample collection will be conducted in collaboration with Kendall Van Keuren-Jensen, Ph.D., co-director of the Translational Genomics Research Institute's (TGen) Center for Noninvasive Diagnostics, for biomarker discovery projects.

With the approval of the protocol, investigators plan to initiate screening of candidate participants in the coming weeks. The study will enroll former NFL players, who are at high-risk of suffering from CTE, and control subjects who didn't participate in activities that involved repetitive head trauma.

"The objective of our Exosome Sciences subsidiary is to further reinforce the clinical observations that resulted from our first study in former NFL players and then translate these outcomes into functional products that help those at risk of suffering from CTE and potentially other neurological disorders that involve the abnormal aggregation of Tau protein in the brain," stated Aethlon Medical CEO, Jim Joyce.

To support the study enrollment, Exosome Sciences also announced the development of a "Players' Council", which will be led by former Cincinnati Bengal and NFL broadcaster, Solomon Wilcotts.

"Members of the Players' Council will provide input on how best to engage with former NFL players, as well as serve as local advocates for the study. In addition, these members have volunteered to share and distribute educational information through their social platforms. We believe this is the first step in tackling brain health issues for all athletes," said Wilcotts.

To date, the Council has established local ambassadors in the following locations:

### **Phoenix**

- Steve Jordan, former Minnesota Viking
- Jamir Miller, former Arizona Cardinal and Cleveland Brown

### **South Florida**

- John Bock, former Miami Dolphin
- Shawn Wooden, former Miami Dolphin

### **Southern California**

- Ron Pitts, former Buffalo Bill and Green Bay Packer
- Nick Hartwick, former San Diego Charger

### **New York**

- Lee Rouson, former New York Giant

If fully enrolled, the study would be the largest to date involving former NFL players, who are at a high risk of suffering from CTE. The goal of the study for Exosome Sciences will be to further validate a CTE biomarker candidate known as plasma exosomal tau, or a TauSome™. The biomarker was previously studied as part of the first NIH-funded CTE research program (The DETECT Study), which was managed by the Boston University (BU) CTE Center. In addition to evaluating TauSome™ levels in blood plasma, the study will evaluate the potential presence of the TauSome™ biomarker in the urine and plasma. Additionally, the TGen research team will analyze collected samples for potential extracellular RNA markers.

"Since our announcement of plans for the study earlier this year, we have received an overwhelming response from former NFL players and their family members. Researchers at TGen will use these samples to study extracellular RNAs, which may be useful for monitoring the central nervous system," said Dr. Van Keuren-Jensen.

In a previous study known as DETECT, researchers examined 78 former NFL players and a control group of 16 former non-contact sport athletes. The study showed that plasma TauSome levels were significantly elevated in the NFL group as compared to the control group and that, within the former NFL player group, TauSome plasma levels correlated with performance on standardized tests of memory and psychomotor speed; the higher the TauSome level, the worse the performance. These results were subsequently published in the *Journal of Alzheimer's Disease*. Access to the online version of the publication is available at <http://tinyurl.com/zvyd23h>. Based on these preliminary findings, the authors concluded that TauSome levels in blood plasma may be an accurate, noninvasive CTE biomarker. Since the publication, an ongoing analysis of the study data revealed that TauSome levels were approximately 9x higher on average in the NFL group as compared to control subjects.

In addition to studying the biomarker in CTE, Exosome Sciences plans to investigate the potential for TauSome plasma levels to serve as a candidate biomarker to monitor Alzheimer's disease and other neurological tauopathies, which are disease conditions that involve the abnormal aggregation of tau protein in the brain.

To learn more about study dates and locations, please contact: [CTE@tgen.org](mailto:CTE@tgen.org) or visit [tgen.org/CTE](http://tgen.org/CTE). The first collection date is scheduled for Wednesday, March 28, from 8:00 a.m. to 4:00 p.m. in Phoenix.

### **About Exosomes**

Exosomes are very small vesicles released from all types of cells throughout the body, including brain cells. They can be isolated in all body fluids, including plasma, a component of blood. Exosomes carry within them the proteins from their cells of origin. Because exosomes can cross the blood-brain-barrier (a selective barrier that separates the circulating blood from the brain's extracellular fluid), they can provide a unique method of measuring certain aspects of the contents of brain cells through a blood test. That is, if the brain-derived exosomes can be isolated in plasma and then be stained for specific proteins found in the brain cells, researchers can potentially measure brain proteins through a blood test.

### **About Extracellular RNA**

TGen has focused a significant amount of research on examining circulating extracellular RNA that may inform researchers about health and disease status. RNAs travel in extracellular vesicles, such as exosomes described above. They are protected within these vesicles and RNA binding proteins. By studying RNA, in addition to proteins, we may be able to identify cell-signaling processes that are altered during disease.

### **About Exosome Sciences**

Exosome Sciences, Inc., in collaboration with majority shareholder Aethlon Medical (Nasdaq: AEMD), is focused on discovering exosomal biomarkers to diagnose and monitor Alzheimer's disease (AD), Chronic Traumatic Encephalopathy (CTE) and other neurological disorders. Our TauSome™ biomarker (also referred to as exosomal tau) is being clinically evaluated as the basis for a blood-based test to identify CTE in living individuals. Visit [www.exosomesciences.com](http://www.exosomesciences.com) for additional details.

### **About Aethlon Medical, Inc.**

Aethlon Medical is focused on addressing unmet needs in global health and biodefense. The Aethlon Hemopurifier® is a first-in-class therapeutic device designed to address life-threatening viral infections. The United States Food and Drug Administration (FDA) has designated the Hemopurifier® as a Breakthrough Device related to the treatment of life-threatening viruses that are not addressed with approved therapies.

In collaboration with leading government and non-government research institutes, Aethlon has validated the ability of the Hemopurifier® to capture a broad-spectrum of pandemic influenza viruses, mosquito-borne viruses and deadly hemorrhagic viruses. Based on its use to treat Ebola virus, the Hemopurifier® was named a "Top 25 Invention" and one of the "Eleven Most Remarkable Advances in Healthcare," by TIME Magazine.

Aethlon is also investigating the potential therapeutic use of the Hemopurifier® to reduce

the presence of tumor-derived exosomes, which contribute to immune-suppression and the spread of metastasis in cancer patients. Additionally, Aethlon is the majority owner of Exosome Sciences, Inc. (ESI), which is focused on the discovery of exosomal biomarkers to diagnose and monitor cancer and neurological disorders, including Alzheimer's disease (AD) and Chronic Traumatic Encephalopathy (CTE). Additional information can be found online at [www.AethlonMedical.com](http://www.AethlonMedical.com) and [www.ExosomeSciences.com](http://www.ExosomeSciences.com). You can also connect with us on Twitter, LinkedIn, Facebook and Google+.

### **About TGen**

Translational Genomics Research Institute (TGen) is a Phoenix, Arizona-based non-profit organization dedicated to conducting groundbreaking research with life changing results. TGen is focused on helping patients with neurological disorders, cancer, diabetes, and infectious diseases, through cutting edge translational research (the process of rapidly moving research towards patient benefit). TGen physicians and scientists work to unravel the genetic components of both common and rare complex diseases in adults and children. Working with collaborators in the scientific and medical communities literally worldwide, TGen makes a substantial contribution to help our patients through efficiency and effectiveness of the translational process. TGen is affiliated with City of Hope, a world-renowned independent research and cancer and diabetes treatment center: [www.cityofhope.org](http://www.cityofhope.org). This precision medicine affiliation enables both institutes to complement each other in research and patient care, with City of Hope providing a significant clinical setting to advance scientific discoveries made by TGen. For more information, visit: [www.tgen.org](http://www.tgen.org). Follow TGen on [Facebook](#), [LinkedIn](#) and [Twitter @TGen](#).

### **Forward Looking Statements**

This press release contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934 that involve risks and uncertainties. Statements containing words such as "may," "believe," "anticipate," "expect," "intend," "plan," "project," "will," "projections," "estimate," or similar expressions constitute forward-looking statements. Such forward-looking statements are subject to significant risks and uncertainties and actual results may differ materially from the results anticipated in the forward-looking statements. Factors that may contribute to such differences include, without limitation, the Company's ability to maintain its listing on the Nasdaq Capital Market, or any other national securities exchange, that the Company or its subsidiary will not be able to commercialize its products, including any CTE-related products, that the FDA will not approve the initiation or continuation of the Company's clinical programs or provide market clearance of the Company's products, including clearance through the 21st Century Cures Act, the Company's ability to raise capital when needed, the Company's ability to complete the development of its planned products, the Company's ability to manufacture its products either internally or through outside companies, the impact of government regulations, patent protection on the Company's proprietary technology, the ability of the Company to meet the milestones contemplated in its contract with DARPA, product liability exposure, uncertainty of market acceptance, competition, technological change, and other risk factors. The foregoing list of risks and uncertainties is illustrative, but is not exhaustive. Additional factors that could cause results to differ materially from those anticipated in forward-looking statements can be found under the caption "Risk Factors" in the Company's Annual Report on Form 10-K for the year ended March 31, 2017, and in the Company's other filings with the Securities and

Exchange Commission. Except as may be required by law, the Company does not intend, nor does it undertake any duty, to update this information to reflect future events or circumstances.

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