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# Aethlon Medical Reports Results of Cytomegalovirus, Epstein-Barr and Herpes Simplex Virus Studies

SAN DIEGO, Feb. 22, 2017 /PRNewswire/ -- Aethlon Medical, Inc. (Nasdaq: AEMD), today reported the results of a study that validated the ability of the Aethlon Hemopurifier® to capture latent viral pathogens that are associated with increased mortality in immune-suppressed sepsis patients and also contribute to organ rejection in transplant patients.

The objective of the study was to validate their *in vitro* capture of Cytomegalovirus (CMV), Epstein-Barr virus (EBV) and Herpes Simplex virus 1 (HSV1) by the Hemopurifier®. The Company also reported that it conducted a related study to identify the presence of each of these viruses in blood samples obtained from organ transplant patients who were also suffering from sepsis.

The overall goal of the study was to further reinforce the broad-spectrum capability of the Hemopurifier to capture infectious viral pathogens. CMV, EBV and HSV1 are among the most common latent viruses, which can become life threatening when reactivated in immune compromised individuals. The Hemopurifier® is a first-in-class medical technology currently being advanced in FDA approved studies. In previous studies, the device has been demonstrated to capture a wide range of bioterror related, pandemic and chronic infectious viruses. The Company believes that the Hemopurifier can fulfill the broad-spectrum medical countermeasure goal of the U.S. Department of Health and Human Services (HHS) 2016 Public Health Emergency Medical Countermeasure Enterprise (PHEMCE), which is directed toward bioterror, pandemic threats and other pathogens that are not well addressed with disease-specific drug therapies.

In the latent viral pathogen study, a 72% reduction of HSV1 from human blood serum was observed in six hours of Hemopurifier® application. Studies involving EBV and CMV were also conducted, showing a reduction of 77% and 88%, respectively, during the six-hour applications. In all three sets of experiments, controls consisting of blood serum samples not subjected to the Hemopurifier® did not exhibit a significant reduction in infectious virus. This study incorporated the use of small-scale Hemopurifier® devices that model virus capture from small volumes of human blood serum. The quantification of viral elimination was performed through plaque assays, which account for infectious virus capture. A study to demonstrate the simultaneous capture of all three viruses is now being conducted.

Aethlon researchers also reported on the incidence of HSV1 and CMV infection in blood samples of 15 subjects who had been admitted into intensive care. Twelve (12) of these subjects were organ transplant recipients. The researchers identified that 8 of the 15 subjects (53%) had reactivated CMV infection, while seven (7) of the subjects (47%) had reactivated HSV1 infection. Six (6) of the 15 subjects (40%) were co-infected with both CMV

and HSV1. Seven (7) of the 15 subjects had received antiviral drug medication. Of these, three (3) subjects still had a presence of CMV, of which two (2) subjects were also co-infected with HSV1. The presence of EBV was not identified in any of the subjects. The attending clinical staff had also determined that 14 of the 15 subjects were suffering from sepsis. The tested samples were provided through collaboration with the University of Pittsburgh Medical Center.

The reactivation of latent viral pathogens is a common occurrence in septic patients. In a published 2014 report by Walton et al. entitled *Reactivation of Multiple Viruses in Patients with Sepsis*, the incidence of CMV, EBV and HSV reactivation was examined in blood and/or plasma samples from critically ill septic patients. The results showed the incidence of CMV to be 24.2% (86/356). EBV was reported in 53.2% (287/539) of the patients and the incidence of HSV was 14.1% (76/538). This study was conducted by The Washington University School of Medicine in Saint Louis.

Beyond its previously validated ability to capture bioterror related, pandemic and chronic infectious viruses, the Aethlon Hemopurifier® also provides a candidate strategy to address CMV, EBV, HSV1 and other latent viral infections that can be life threatening to immune-suppressed sepsis patients and organ transplant recipients.

### **About Cytomegalovirus (CMV)**

The incidence of cytomegalovirus in the U.S. population is greater than 60%, with prevalence increasing up to 90% for elderly individuals. Much like HSV1 and EBV, CMV is a dangerous pathogen for individuals with compromised immune systems. Beyond sepsis, individuals with high-risk CMV infections include solid organ transplant recipients, hematopoietic cell transplant recipients, those with HIV infection, cancer patients, and recipients of immune-modulating drugs.

### **About Epstein - Barr Virus (EBV)**

Epstein-Barr virus is extremely prevalent in the U.S., affecting 80%-90% of the country's population. Beyond the potential role of EBV in sepsis, immune compromised individuals face an increased risk of stem cell and solid organ transplant rejections. EBV infected individuals are also at risk for Burkitt's lymphoma and nasopharyngeal carcinoma. HIV-infected individuals who are co-infected with EBV are at risk for a wide range of severe disease ailments.

### **About Herpes Simplex Virus 1 and 2 (HSV1/HSV2)**

Estimates for the incidence of HSV1 and HSV2 in the U.S. are approximately 65% and 17%, respectively. Common physical symptoms include minor cold sores and lesions. However, HSV1 can cause severe ailments in immunocompromised patients. Beyond the potential role of HSV1 in sepsis, herpetic infections can cause progressive and persistent esophagitis, colitis, perianal ulcers, and pneumonia. HSV1 can also cause central nervous system infections such as encephalitis and meningitis. Neonatal HSV1 infection can contribute to infant morbidity and mortality.

### **About Aethlon Medical**

Aethlon Medical (Nasdaq: AEMD) is a leading developer of immunotherapeutic technologies to combat infectious disease and cancer. To augment the body's natural immune defenses, the Aethlon Hemopurifier® eliminates life-threatening disease targets that are often shielded from the immune system and not well addressed by traditional drug therapies. The technology captures circulating viruses, bacterial toxins and cancer promoting exosomes through affinity attachment to a unique structure that cloaks these targets from immune detection. At present, the Hemopurifier® is being advanced under an FDA approved clinical study. Aethlon is also the majority owner of Exosome Sciences, Inc., a company focused on the discovery of exosomal biomarkers to diagnose and monitor life-threatening diseases. Additional information can be found online at [www.AethlonMedical.com](http://www.AethlonMedical.com) or you can connect with us on Twitter, LinkedIn, Facebook and Google+.

*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, 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 any products relating to the Zika or MERS-CoV viruses or relating to sepsis, 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, 2016, 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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