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***EpiVax Receives NIH Grant for \$390,000 to Optimize HIV Vaccine Delivery***

**December 1, 2008 (Providence, RI)**--EpiVax, Inc, a leader in the field of computational immunology, announced today that it has received a grant from the National Institute of Allergy and Infectious Diseases (NIAID), a division of the National Institutes of Health (NIH), to optimize delivery of an HIV vaccine. NIAID will provide EpiVax with \$390,000 over two years for the proposed research.

"The recent failure of the investigational HIV vaccine tested in the Phase II clinical trial known as STEP is a strong indicator that more traditional approaches to vaccine design and delivery are simply not going to work for HIV. That's why the EpiVax brand of "outside the box" thinking was funded; the world is looking for safer, more effective ways to prevent AIDS," said Dr. Annie De Groot, CEO and CSO of the company. "We are especially aware of the need for such a vaccine as we approach World AIDS Day, a time when our thoughts turn to the 50 million people who have been infected with HIV and the 20 million who have already died from AIDS."

Using the grant funding from the NIH, EpiVax will develop a pro-inflammatory and non-tolerogenic HIV vaccine delivery system based on the dendritic cell targeting anti-DEC-205 antibody. The success of anti-DEC-205 as a vaccine carrier is dependent on co-administration of non-specific dendritic cell maturation factors such as CD40-ligand. In their absence, anti-DEC-205 induces antigen-specific tolerance rather than immunity. EpiVax reasons that regulatory T-cell epitopes contained in anti-DEC-205 promote a tolerogenic reaction that is only overcome through the co-administration of clinically dangerous or untested non-specific immuno-stimulators. This idea is based on EpiVax' discovery of a set of natural regulatory T-cell epitopes derived from human immunoglobulins that induce tolerance by stimulating regulatory T cells. EpiVax has already verified experimentally that these epitopes cause antigen-specific expansion of regulatory T cells and suppress inflammatory immune responses.

The NIH award will enable EpiVax to develop a modified pro-inflammatory and non-tolerogenic anti-DEC-205 antibody. Modification of regulatory T-cell epitopes is expected to significantly diminish tolerogenicity, enabling use of anti-DEC-205 as a stand-alone HIV antigen delivery system that obviates the dangers associated with non-specific activation of the immune system.

Epitope modification is an immunomodulatory approach EpiVax previously developed to reduce immunogenicity of protein therapeutics. Here, EpiVax will substitute key amino acids in the regulatory T-cell epitopes with those that are experimentally shown to interfere with MHC binding to reduce tolerogenicity.

### **About HIV Vaccines**

According to the World Health Organization, “the development of a safe and effective vaccine is hampered by the high genetic variability of HIV, the lack of knowledge of immune correlates of protection, the absence of relevant and predictive animal models, and the complexity of the implementation of efficacy trials, especially in developing countries.”

### **About EpiVax**

This grant award is the 5<sup>th</sup> consecutive NIH or foundation award granted to EpiVax in the last year, for a total of more than \$ 2.5M. EpiVax, Inc. is dedicated to merging in vitro immunology research with bioinformatics to generate new therapeutics for cancer and autoimmune diseases as well as new vaccines for infectious diseases such as HIV, TB, and hepatitis. T cell epitope mapping, the selection of target peptides from any protein sequence, is a powerful resource for the development of novel protein therapeutics. EpiVax research shows that peptides chosen by EpiMatrix™ software are highly likely to provoke an immune response when presented to T cells. EpiVax tools can also accurately deimmunize proteins. For more information about EpiVax, please visit [www.epivax.com](http://www.epivax.com).

### **About Tregitope**

Tregitope is a set of peptides that induce the body's own natural regulatory T cells. When administered in conjunction with other antigens or protein immunogens, the response to these immunogens is diminished and altered if the antigen/immunogens are co-administered with Epi-13. Preliminary in vitro and in vivo studies indicate that the modification of the immune response is due to the induction of natural T reg cells. Read the original article online at [http://www.ncbi.nlm.nih.gov/](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3500000/).

### **About National Institute of Allergy and Infectious Diseases (NIAID)**

The National Institute of Allergy and Infectious Diseases (NIAID) conducts and supports basic and applied research to better understand, treat, and ultimately prevent infectious, immunologic, and allergic diseases. For more than 50 years, NIAID research has led to new therapies, vaccines, diagnostic tests, and other technologies that have improved the health of millions of people in the United States and around the world.