



## **For Immediate Release**

### **PROFECTUS BIOSCIENCES, INC. RECEIVES \$5.6M GRANT TO DEVELOP A VACCINE TO PROTECT HUMANS AGAINST INFECTION WITH NIPAH/HENDRA VIRUSES**

**Baltimore, MD – May 9, 2012** Profectus BioSciences, Inc. (Profectus), a leader in the development of therapeutic and preventive vaccines against infectious diseases and cancers, announced today it has received a grant under the Partnerships for Biodefense RFA from the Division of Microbiology and Infectious Diseases, National Institute of Allergy and Infectious Diseases, NIH. This \$5.6M award supports the preclinical development of Hendra virus soluble G (HeV-sG) as a vaccine for use in humans against either Nipah or Hendra virus infection.

Nipah virus (NiV) and Hendra virus (HeV) are closely related *Paramyxoviruses* that cause a respiratory and encephalitis disease in humans and a variety of animal hosts. The natural reservoir for these viruses is the flying fox (bats of the genus *Pteropus*) found in Australia, Southeast Asia and Oceania. Human infections have occurred after exposure to tissues and secretions from infected horses, pigs, and bats or contaminated food products. There is currently no approved vaccine against either NiV or HeV and death is certain for more than 75% of the cases.

These viruses are classified as biothreat agents by the NIH and CDC and agriculture threat agents by the USDA. In fact, the Meningoencephalitis Virus (MEV-1), the subject of the recent cinematic release "Contagion", was modeled after the Nipah virus.

HeV-sG represents the ectodomain of the G glycoprotein of Hendra virus that mediates viral infection of its target cell. HeV-sG was created in the laboratory of Dr. Christopher C. Broder at the Uniformed Services University of the Health Sciences, Bethesda, Maryland. The potential of HeV-sG as a subunit vaccine against these deadly pathogens was first shown in animal models by Dr. Broder and his collaborators at CSIRO AAHL, Geelong, Australia. Recently, non-human primate efficacy studies were performed in collaboration between Dr. Broder and Dr. Thomas Geisbert at the Galveston National Laboratory, University of Texas Medical Branch. All of these animal studies have confirmed that vaccination with HeV-sG protects against disease after infection with otherwise lethal doses of either NiV or HeV. Profectus is collaborating with these investigators to develop the HeV-sG subunit vaccine for use in humans. Profectus is also collaborating with Catalent Pharma Solutions (Middleton, WI) to access their proprietary GPEX<sup>®</sup> technology to produce high yield mammalian cell lines for cGMP production of HeV-sG.

***Profectus BioSciences, Inc.** is a technology-based vaccine company devoted to the treatment and prevention of infectious disease and related cancer, with the goal of reducing morbidity and*

mortality. Since its inception in 2003, the Company's strategic intent has been to acquire and develop the technologies needed to achieve this goal. The Company has licensed a group of vaccine-based technologies from Wyeth Vaccines (now Pfizer, Inc.) that greatly enhance the immunogenicity of prophylactic and therapeutic vaccines based on a "prime-boost" strategy. This strategy uses the delivery of a best-in-class pDNA vaccine to "prime" the immune system, followed by a first-in-class "boost" with an rVSV vector. Current targets, in addition to Henipavirus, include Ebola and Marburg viruses, hepatitis C virus (HCV), human papilloma virus (HPV), herpes simplex virus type 2 (HSV-2), human immunodeficiency virus (HIV), and malaria. Partners and collaborators include Ichor Medical Systems, the Galveston National Laboratory, Yale University, the Institute of Human Virology, the Center for HIV/AIDS Vaccine Immunology, the National Cancer Institute, the NIH Division of AIDS, the Bill and Melinda Gates Foundation, the International AIDS Vaccine Initiative, the PATH Malaria Vaccine Initiative, the HIV Vaccines Trials Network, and the AIDS Clinical Trials Group. More information is available at [www.ProfectusBioSciences.com](http://www.ProfectusBioSciences.com).

**The Galveston National Laboratory** is an academic research center at the University of Texas Medical Branch in Galveston, Texas. One of the largest and most sophisticated infectious disease research facilities in the U.S., the GNL utilizes the unique resources of its biosafety level (BSL) 2, 3 and 4 laboratories, to study the diseases making the world's people and animals sick. This research yields better tests, treatments and vaccines for these diseases. The GNL's renowned scientists work collaboratively, both locally and internationally, to advance local discoveries for the infectious diseases impacting global health like SARS virus, West Nile virus, Ebola, Marburg, Nipah, Plague, encephalitis, influenza and a host of others. For more information, visit [www.utmb.edu/gnl/](http://www.utmb.edu/gnl/).

**Catalent Pharma Solutions.** From drug and biologic development services to delivery technologies to supply solutions, Catalent Pharma Solutions has the deepest expertise, the broadest offerings and the most unique technologies in the industry. With over 75 years of experience, Catalent helps customers get more molecules to market faster, enhance product performance, and provide superior, reliable manufacturing and packaging solutions. Catalent employs more than 8,000 people at 20+ facilities worldwide and in fiscal year 2011 generated more than \$1.6 billion in annual revenue. Catalent is headquartered in Somerset, NJ. For more information, visit [www.catalent.com](http://www.catalent.com).

**Uniformed Services University of the Health Sciences.** The Uniformed Services University of the Health Sciences is the nation's federal health sciences university. USU students are primarily active-duty uniformed officers in the Army, Navy, Air Force and Public Health Service who have received specialized training in tropical and infectious diseases, preventive medicine, the neurosciences (to include TBI and PTSD), disaster response and humanitarian assistance, and acute trauma care. A large percentage of the university's more than 4,700 physician and 500 advanced practice nursing alumni are supporting operations in Iraq, Afghanistan and elsewhere, offering their leadership and expertise. The University also has graduate programs in biomedical sciences and public health, open to civilian and military applicants committed to

*excellence in research, which have awarded more than 375 doctoral and 800 masters degrees to date. For more information, visit [www.usuhs.mil](http://www.usuhs.mil).*

**About CSIRO.** *CSIRO, the Commonwealth Scientific and Industrial Research Organization, is Australia's national science agency and one of the largest and most diverse research agencies in the world. For more information, visit [www.csiro.au](http://www.csiro.au).*

**Contact:**

Jeffrey N. Meshulam

Vice President, COO

Profectus BioSciences, Inc.

443-743-1107

[Meshulam@profectusbiosciences.com](mailto:Meshulam@profectusbiosciences.com)