Hawaii Biotech, Inc.

HAWAII BIOTECH TO DEVELOP EBOLA VACCINE WITH THE UNIVERSITY OF HAWAI'I

FOR IMMEDIATE RELEASE
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(Honolulu, HI, Sept. 25, 2017) -- Hawaii Biotech, Inc., announced today that they are collaborating with University of Hawai'i Hawaii (UH) at Manoa on the development of a tri-valent Ebola vaccine. The National Institute of Allergy and Infectious Diseases has awarded a five-year grant, entitled "Pre-clinical Development of a Thermostable Trivalent Ebola Vaccine," to UH to support this work. As a part of this grant, Hawaii Biotech has been given a sub-award totaling $1.49 million over five years as part of the grant to UH.

Unlike other advanced Ebola vaccines under development which use live viral vectors that complicate manufacturing, stability, and storage, this vaccine is based on highly purified recombinant protein antigens which avoid these manufacturing difficulties. Axel Lehrer, PhD, now working in the Department of Tropical Medicine, Medical Microbiology and Pharmacology, John A. Burns School of Medicine (JABSOM), UH-Manoa, and Hawaii Biotech developed a robust manufacturing process for the required proteins when Lehrer was employed at Hawaii Biotech. Hawaii Biotech has licensed a patent covering the use of these Ebola proteins to the UH to further support this collaboration.

Dr. Lehrer is also working to demonstrate the feasibility of a heat stable subunit Ebola vaccine. Soligenix is collaborating in this development with its proprietary vaccine thermostabilization technology, ThermoVax.® Thermostabilization would allow formulation of a vaccine for worldwide distribution not requiring cold storage.

"We are excited to continue our work with Axel and with Soligenix to produce a multivalent Ebola vaccine that can be manufactured, distributed, and stored without the additional costs of cold storage required for Ebola vaccines being developed by others," said Elliot Parks, chief executive officer of Hawaii Biotech.

About Ebola

Ebola Virus Disease (EVD) can be caused by one of five species of Ebolavirus, four of which cause disease in humans, including its best-known member, Zaire ebolavirus. All species of Ebolavirus belong to the Filoviridae family, a family that further contains the equally human pathogenic Marburgvirus. The Ebola virus is believed to be harbored in various animal species in Africa, although the specific reservoir host is still unknown. There have been several known EVD outbreaks in Africa since 1976, with the largest outbreak starting in 2014 in Western Africa.

Transmission of Ebola requires direct contact of bodily fluids from an infected person or contact with infected animals. The mortality rate from Ebola infection is extremely high, and can sometimes be affected by the quality of supportive care available with a focus on early initiation of treatment. Symptoms of Ebola virus infection include high fever, severe headache, muscle pain, weakness, fatigue, diarrhea, vomiting, abdominal pain and unexplained hemorrhage. Resolution of the disease largely depends on the patient's own immune system. There is no approved treatment and no approved vaccine for Ebola, although research into both has accelerated since the onset of the 2014 outbreak.

The Ebola outbreak in 2014 primarily spanned three West African countries, and involved over 26,000 confirmed/probable/suspected cases with an estimated death toll of 10,892 people as of May 1, 2015 according to the Centers for Disease Control and Prevention (CDC), including some cases in Europe and the United States. The widespread nature of the infection and its devastating impact has further illustrated the need to develop an Ebola vaccine to prevent future and possibly more significant outbreaks.

About Hawaii Biotech, Inc.

Hawaii Biotech is a privately held biotechnology company focused on the development of prophylactic vaccines for established and emerging infectious diseases and anti-toxin drugs for biological threats. HBI has developed proprietary expertise in the production of recombinant proteins that have application to the manufacture of safe and effective vaccines, diagnostic kits, and as research tools. HBI completed successful first-in-human Phase 1 clinical studies with both West Nile virus and dengue vaccines in healthy human subjects. HBI has developed a product pipeline of recombinant subunit vaccines, including vaccine candidates for West Nile virus, tick-borne flavivirus, malaria, Crimean-Congo hemorrhagic fever, and Ebola. The company is also continuing the development of small molecule anti-toxin drugs for anthrax and botulism. HBI, founded in Hawaii in 1982, is headquartered in Honolulu. For more information, please visit: www.hibiotech.com

About John A. Burns School of Medicine, University of Hawai'i at Manoa

The University of Hawai'i at Manoa is one of the most ethnically diverse institutions of higher education. Hawai'i's cultural diversity and geographical setting affords the John A. Burns School of Medicine (JABSOM) a unique research environment to excel in health disparity research. JABSOM faculty bring external funding of about $42 million annually into Hawai'i.

About Soligenix, Inc.

Soligenix is a late-stage biopharmaceutical company focused on developing and commercializing products to treat rare diseases where there is an unmet medical need. Their BioTherapeutics business segment is developing SGX301 as a novel photodynamic therapy utilizing safe visible light for the treatment of cutaneous T-cell lymphoma, our first-in-class innate defense regulator (IDR) technology, dusquetide (SGX942) for the treatment of oral mucositis in head and neck cancer, and proprietary formulations of oral beclomethasone 17,21-dipropionate (BDP) for the prevention/treatment of gastrointestinal (GI) disorders characterized by severe

inflammation including pediatric Crohn's disease (SGX203) and acute radiation enteritis (SGX201). The Vaccines/BioDefense business segment includes active development programs for RiVax®, a ricin toxin vaccine candidate, OrbeShield®, a GI acute radiation syndrome therapeutic candidate and SGX943, a therapeutic candidate for antibiotic resistant and emerging infectious disease. The development of vaccine programs at Soligenix incorporates the use of our proprietary heat stabilization platform technology, known as ThermoVax®.