



Hawaii Biotech, Inc.

HAWAII BIOTECH AWARDED ANTHRAX ANTI-TOXIN GRANT BY NATIONAL INSTITUTE OF ALLERGY AND INFECTIOUS DISEASES

FOR IMMEDIATE RELEASE

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(HONOLULU, HI, Feb. 4, 2014) – The National Institute of Allergy and Infectious Diseases (NIAID), part of the National Institutes of Health (NIH), has awarded Hawaii Biotech, Inc., a grant to continue the development of anthrax anti-toxin drugs. The small molecule inhibitors under development block anthrax lethal toxin. The award has a first-year period of performance, through Q1 2014, valued at \$1.1 million. The grant for the full five-year period equals \$7.4 million.

Under this award, the Hawaii Biotech team will continue screening potent anti-toxin small molecules to block the action of lethal factor, the protease component of lethal toxin produced by *Bacillus anthracis*. This grant will support the improvement of current lethal factor inhibitors which have demonstrated efficacy in animal models of post exposure inhalation of anthrax, as drug candidates. The safety, stability, and bioavailability of these candidates will be improved, with the goal of use in humans as an antidote to anthrax lethal factor intoxication.

"Research and development of vaccines and treatments to protect against infectious diseases will help keep our families and communities healthy and safe," Senator Brian Schatz said. "Hawaii Biotech is doing important work to find vaccines and therapeutics for some of the biggest global health threats, like anthrax, and this grant will help give them the resources they need. Achieving this competitive grant highlights Hawaii's continued growth in the high-level research and development community."

"Our team is pleased to be able to continue our anti-toxin development work at Hawaii Biotech, where we started this program several years ago," said Dr. Alan Johnson, the principal investigator. Dr. Elliot Parks, CEO of Hawaii Biotech, added, "This NIAID grant allows Hawaii Biotech to build our drug development capabilities to match our strong vaccine development franchise. In doing so, we hope to help protect the public against biological agents that might be used in an act of bioterrorism."

About Hawaii Biotech, Inc. (HBI):

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 is currently engaged in the development of a product pipeline of recombinant subunit vaccines, including vaccine candidates for West Nile virus, tick-borne flavivirus, malaria, Crimean-Congo hemorrhagic fever, and discovery of small molecule anti-toxin drugs for anthrax and botulism. HBI, founded in

Hawaii in 1982, is headquartered in suburban Honolulu. For more information, please visit: www.hibiotech.com

About Anthrax Toxin:

Anthrax disease results from infection by the Gram-positive bacteria *Bacillus anthracis*. While infection via a wound or by ingestion of contaminated foodstuffs is often not life threatening, the mortality rate for inhalation anthrax can approach 100%, if left untreated. Once inhaled, the spores germinate and the vegetative bacteria disseminates throughout the body. In addition to causing septicemia, the bacteria secretes two major toxins, edema toxin and lethal toxin, which cripple the body's ability to fight the infection and can cause tissue damage. Although *B. anthracis* spores are found naturally in soils worldwide, the greatest danger to the public in developed countries results from the potential use of this pathogen as a weapon of bioterrorism. Anthrax has been designated a Category A biodefense agent by the Centers for Disease Control and Prevention. The threat from anthrax was clearly demonstrated by the 2001 bioterrorism attack which delivered spores using the US mail. Of the individuals diagnosed with inhalation anthrax after that attack, 45% died from the disease despite receiving intensive antibiotic and supportive medical treatment. For more information, please visit: <http://www.cdc.gov/anthrax/index.html>

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