



# Hawaii Biotech, Inc.

## FOR IMMEDIATE RELEASE

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### **Avantogen and Hawaii Biotech to Combine Vaccine Businesses** New Vaccine Pure-Play, 50%-50% owned, to Expand Research in Hawaii

**Sydney, Australia; San Diego, CA, USA; Honolulu, HI USA — March 14, 2006 —** Avantogen Limited (Avantogen)(ASX:ACU), and Hawaii Biotech, Inc. (Hawaii Biotech), a privately held company, today announced that they have entered into a Definitive Agreement to combine their respective vaccine businesses. The combined business, as yet unnamed, will be 50% owned each by Hawaii Biotech's current shareholders and Avantogen Limited and will focus exclusively on prophylactic and therapeutic vaccine development.

The transaction, which is contingent on approval of both Avantogen and Hawaii Biotech shareholders, is expected to close in late April, 2006. The combined business will incorporate both Avantogen's and Hawaii Biotech's complementary technologies, and will maintain the existing vaccine development laboratories in Oahu, Hawaii, with corporate headquarters in Southern California. This new agreement builds upon a previously executed License Agreement between Avantogen and Hawaii Biotech in which Hawaii Biotech successfully evaluated Avantogen's proprietary immunostimulatory adjuvant, GPI-0100, for use in Hawaii Biotech's West Nile vaccine. Under terms of the agreement, Avantogen will contribute US \$3.5 million in cash, its vaccine adjuvant program (currently in Phase I human trials) and Pentrys vaccine program (currently in Phase II human trials), and its senior management team, while Hawaii Biotech will contribute its vaccine research and development team, its preclinical vaccine programs and facilities, its vaccine grant funding, and US \$1 million in cash. Under certain circumstances applicable to both Avantogen and Hawaii Biotech, equity ownership of the newly combined company can be adjusted to 60%-40% in either direction.

Leonard Firestone, M.D., current CEO of Avantogen, will become CEO of the newly combined company, while Carolyn Weeks-Levy, current VP of Research, Development, and Regulatory Affairs and leader of Hawaii Biotech's vaccine programs, will become its Chief Scientific Officer. Bruce Nye, Avantogen's CFO, will become CFO. David C. Watumull will remain CEO of Hawaii Biotech's current anti-inflammatory small molecule development business, which will be spun out into a new entity, Cardax Pharmaceuticals, Inc., to be wholly owned by current Hawaii Biotech shareholders.

Initial board members will be: Avantogen Chairman Richard Opara, who will serve as Chairman; current Hawaii Biotech Chairman Nick Mitsakos; Leonard Firestone, M.D., CEO; Joseph Boystak, formerly Managing Director with Jefferies & Co and now with Chopin Capital Partners; and a fifth member to be chosen by Hawaii Biotech.

New Board Chairman Dr. Richard Opara, who is also Chairman of Avantogen, commented: "This combination will create a truly exceptional biotechnology company, and is a pivotal step in restructuring Avantogen to optimize the value of its assets for the benefit of its shareholders. Our vision is to create a public company that is a world leader in the development of recombinant vaccines for prevention of common, deadly, incurable diseases using our proprietary, state-of-the-art manufacturing methods. These methods will allow us to lead the marketplace by rapidly delivering the quality and quantity of vaccine product needed to address worldwide pandemic diseases such as Influenza. We also see worldwide potential for the development of the West Nile and Dengue Fever vaccines."

"We have explored a number of options over the past year for the development of our vaccine business," added David G. Watumull, CEO of Hawaii Biotech. "We believe that this strategy is our best choice as it brings together the necessary financial, scientific, and management resources to focus and accelerate development of our vaccines, including those for avian flu, West Nile, and dengue fever."

### **Hawaii Biotech Vaccine Background**

Hawaii Biotech's vaccine development platform is based on production of proprietary antigens (proteins) that, when appropriately adjuvanted, provoke immune responses equivalent to, or better than, traditional live or inactivated viral vaccines - with a significantly improved safety profile. During the past 3 years, Hawaii Biotech received funding commitments of over US\$30 million from the U.S. National Institutes of Health and other governmental agencies, to develop vaccines to prevent human infection by the West Nile virus, Dengue Fever virus, pandemic and annual Influenza viruses, and other serious incurable diseases including hepatitis C, malaria, Tick-borne and Japanese encephalitis, Ebola, and Eastern equine encephalitis.

### **Avantogen Adjuvant Background**

Avantogen's GPI-0100 product is currently under license to Pfizer Animal Health, Inc., Endocyte, Inc., University of Alabama, and Memorial-Sloan Kettering Cancer Center, to boost immune responses to their respective vaccine-based products under development.

### **About Pandemic Influenza and "Bird Flu"**

The Centers for Disease Control (CDC) defines an influenza pandemic as a global outbreak that occurs when a new, virulent influenza A virus "emerges" in the human population, and spreads easily from person to person worldwide. Local outbreaks of "bird flu" may be a source of a new

flu virus. Pandemics are different from seasonal outbreaks or “epidemics” of influenza. Seasonal outbreaks are caused by subtypes of influenza viruses that already circulate among people, whereas pandemic outbreaks are caused by new subtypes that “emerge”, or by subtypes that haven’t circulated among people for a long time, or ever. Past influenza pandemics have led to high levels of illness, death, social disruption, and economic loss. The severity of the next pandemic cannot be predicted, but models suggest that in the absence of any control measures (e.g., vaccination), a “medium—level” pandemic in the U.S. could cause 89 - 207,000 deaths, 314 - 734,000 hospitalizations, 18 - 42 million outpatient visits, and another 20 - 47 million people being sick. Between 15% and 35% of the U.S. population could be affected by an influenza pandemic, and the economic impact could range between \$71.3 and \$166.5 billion.

### **About West Nile Virus**

Virtually unknown in the U.S. prior to 1999, the West Nile virus is now permanently established throughout the U.S. and Canada. According to the CDC, in 1 of 150 infected with West Nile, encephalitis and meningitis will occur, characterized by polio-like symptoms. Live, attenuated virus vaccines being developed by potential competitors have a small, but real risk of causing severe, encephalitic West Nile disease. Hawaii Biotech’s approach has been to utilize genetically engineered viral proteins that cannot cause disease, conferring a substantial safety advantage. Estimates of U.S. market size for a West Nile Virus Vaccine are between \$200 and 500 million, annually. Unlike most human viral diseases, West Nile causes both disease and death in animals. In a well-validated animal model of human West Nile disease, the company’s West Nile vaccine conferred *100% protection* from viral challenge vs. *77% mortality* in controls.

### **Forward-Looking Statements**

Statements contained in this press release that are not historical information are forward-looking statements as contemplated by the Private Securities Litigation Reform Act of 1995. Such forward-looking statements are subject to risks and uncertainties that could cause actual results to differ materially from those projected or implied. Such potential risks and uncertainties relate, but are not limited, to the results of clinical trials, product demand and market acceptance, the impact of competitive products and pricing, effectiveness and pace of current and future product development, and regulatory approval. More detailed information on these and additional factors that could affect Avantogen’s business, prospects and operating and financial results are described in Avantogen’s annual reports filed or to be filed with the Australian Stock Exchange. Avantogen urges all interested parties to read these reports to gain a better understanding of the many business and other risks that the company faces. For further information visit [www.avantogen.com](http://www.avantogen.com). The historical results achieved by the company are not necessarily indicative of its future prospects. The company undertakes no obligation to publicly update or revise any forward-looking statements, whether as a result of new information, future events or otherwise.

For more information, please visit <http://www.hibiotech.com>

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