



AVI BioPharma Reports Positive Pre-Clinical Influenza Data

5/1/07

NEUGENE Antisense Compounds Show Efficacy Against Influenza A in

Mice

PORTLAND, Ore.--(BUSINESS WIRE)--May 1, 2007--AVI BioPharma, Inc. (Nasdaq:AVII) and collaborators presented pre-clinical data demonstrating effectiveness of NEUGENE(R) antisense compounds against seasonal influenza A virus in mice. Thomas G. Voss, Ph.D., assistant professor, Department of Microbiology and Immunology, Tulane University School of Medicine, presented the data in poster form at the 20th International Conference on Antiviral Research on April 30, 2007.

In experiments sponsored by AVI and conducted at Tulane University School of Medicine and the United States Army Medical Research Institute for Infectious Diseases (USAMRIID), mice were pre-treated with antisense phosphorodiamidate morpholino oligomers (PMOs), and then infected with two different strains of influenza A (H3N2 and H1N1). Treated mice showed significantly reduced clinical signs (weight loss) and increased survival compared to control treated and untreated mice. In addition, PMO-treated mice showed significantly reduced viral titer (to below limit of detection) in comparison to untreated mice. Histological examination of the lungs showed that treated mice had reduced pathology when examined for infiltrating cells or alveolar damage.

"These data, in combination with other pre-clinical research, reinforce our belief that NEUGENE antisense compounds are potentially well-suited to treating seasonal influenza A infections," said Patrick L. Iversen, Ph.D., senior vice president of research and development at AVI. "Now that we have demonstrated efficacy against multiple strains of seasonal flu in this model, we intend to evaluate our compounds in additional animal models to test their potential efficacy against the H5N1 subtype of avian flu."

AVI's NEUGENE antisense drug development program against the influenza A virus targets genetic regions of the virus that are highly conserved across six viral subtypes that cause human disease. These include three subtypes that caused pandemics in the 20th century -- the 1918 Spanish flu (H1N1), the 1957 Asian flu (H2N2) and the 1968 Hong Kong flu (H3N2) -- and three subtypes of avian flu that have been reported to cause disease in humans (H5N1, H7N7 and H9N2). AVI's potential treatment for seasonal influenza A will be made available to potential licensees.

About Influenza A Viruses

Influenza, or flu, is a contagious respiratory illness caused by influenza viruses. On average 5 percent to 20 percent of the U.S. population is infected with the flu each year. Influenza A virus is an enveloped negative-strand RNA virus, with eight genome segments that code for 10 proteins. Influenza strains are subtyped according to the antigenic and genetic nature of their surface glycoproteins: hemagglutinin (HA or H) and neuraminidase (NA or N). Fifteen H and nine N subtypes have been identified, with three associated with widespread human disease (H1N1, H2N2 and H3N2). In addition, several subtypes of avian influenza virus -- H5N1, H7N7 and H9N2 -- can infect and cause disease in humans.

The current influenza pandemic in birds throughout Asia, Eastern Europe and Turkey is caused by the H5N1 subtype. It is thought that co-infection of humans or certain animals (such as pigs) with both H1N1 and H5N1 can lead to a reassortment or recombination of viral particles, resulting in the emergence of a virus with dangerous public health properties, namely one to which the human population has no natural immunity and which has the ability to spread easily from person to person. It is believed that emergence of avian flu by this general mechanism may have led to the worldwide pandemics of 1918, 1957 and 1968.

About AVI BioPharma

AVI BioPharma develops therapeutic products for the treatment of life-threatening diseases using third-generation NEUGENE antisense drugs and ESPRIT exon skipping technology. AVI's lead NEUGENE antisense compound is designed to target cell proliferation disorders, including cardiovascular restenosis. In addition to targeting specific genes in the body, AVI's antiviral program uses NEUGENE antisense compounds to combat disease by targeting single-stranded RNA viruses, including West Nile virus, hepatitis C virus, dengue virus, Ebola virus and influenza A virus. AVI's NEUGENE-based ESPRIT technology will initially be applied to potential treatments for Duchenne muscular dystrophy. More information about AVI is available on the company's Web site at <http://www.avibio.com>.

"Safe Harbor" Statement under the Private Securities Litigation Reform Act of 1995: The statements that are not historical facts contained in this release are forward-looking statements that involve risks and uncertainties, including, but not limited to, the results of research and development efforts, the results of preclinical and clinical testing, the effect of regulation by the FDA and other agencies, the impact of competitive products, product development, commercialization and technological difficulties, and other risks detailed in the company's Securities and Exchange Commission filings.

CONTACT: AVI Contact:

AVI BioPharma, Inc.
Michael Hubbard, 503-227-0554
hubbard@avibio.com

or

Investor Contacts:
Lippert/Heilshorn & Associates Inc.
Jody Cain or Brandi Floberg, 310-691-7100

jcain@lhai.com
bfloberg@lhai.com

or

Press Contact:

Waggener Edstrom Worldwide
Bioscience and Healthcare Practice
Jenny Moede, 503-443-7000
jmoede@waggeneredstrom.com

SOURCE: AVI BioPharma, Inc.