AVI BioPharma Expands Clinical Pipeline With Initiation of Phase 1 Study of Influenza Therapeutic Candidate

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AVI-7100 Offers Novel Mechanism of Action and Potential Broad-Spectrum Activity Against Influenza Viruses, Including Tamiflu-Resistant Strains

BOTHELL, WA, Jun 21, 2011 (MARKETWIRE via COMTEX) -- AVI BioPharma, Inc. (NASDAQ: AVII), a developer of RNA-based therapeutics, today announced that it initiated dosing of volunteers in a Phase 1 clinical study of AVI-7100, the Company's lead drug candidate for the treatment of influenza. AVI-7100 is a therapeutic candidate with a novel mechanism of action and potentially broad-spectrum activity against influenza viruses, including Tamiflu-resistant virus strains. This clinical trial is the third Phase 1 program initiated this year for an AVI infectious disease drug candidate.

In the randomized, double-blind, placebo-controlled study, AVI will assess the safety, tolerability and pharmacokinetics of AVI-7100 administered via intravenous infusion in single-ascending doses in up to 48 healthy adult volunteers. The study will have six cohorts consisting of six volunteers who receive the therapeutic and two who will receive a placebo.

"AVI-7100 offers a promising, novel approach with potential broad-spectrum activity for the treatment of influenza," said Chris Garabedian, AVI's President and CEO. "This is especially important because of the decrease in utility of current flu therapies in light of the increase of drug-resistant strains of the virus. To support the continued development of the AVI-7100 influenza program and our mission of advancing innovative treatment options, we will respond to an RFP announced in May by the U.S. Department of Defense seeking the full clinical development of influenza therapeutics for both prophylaxis and treatment."

About AVI-7100

AVI-7100 is AVI's lead therapeutic candidate for the treatment of influenza. AVI-7100 targets a well-conserved region of the influenza A virus, affording it the potential to act as a broad-spectrum treatment for multiple influenza strains, including Tamiflu-resistant flu strains. Seasonal influenza (H3N2) and the more recently emergent swine origin influenza virus (SOIV), H1N1, are both caused by the influenza A virus. AVI-7100 employs the Company's patented PMOplus(TM) technology that selectively introduces positive charges to a phosphorodiamidate morpholino oligomer (PMO) backbone to improve selective interaction between the drug and its target. AVI-7100 was preclinically developed and identified as the lead candidate with support from the U.S. Department of Defense's Joint Project Manager Transformational Medical Technologies (JPM-TMT) under contract HDTRA1-09-C-0046.

Preclinical studies funded under JPM-TMT contract HDTRA1-10-C-0079 demonstrated that AVI-7100 improved clinical symptoms and reduced viral titers in animal models infected with pandemic H1N1 or H3N2 viruses, and had statistically significant activity as compared to saline and Tamiflu controls.

About AVI BioPharma

AVI BioPharma is focused on the discovery and development of novel RNA-based therapeutics for rare and infectious diseases, as well as other select disease targets. Applying pioneering technologies developed and optimized by AVI, the Company is able to target a broad range of diseases and disorders through distinct RNA-based mechanisms of action. Unlike other RNA-based approaches, AVI's technologies can be used to directly target both messenger RNA (mRNA) and precursor messenger RNA (pre-mRNA) to either down-regulate (inhibit) or up-regulate (promote) the expression of targeted genes or proteins. By leveraging a highly differentiated RNA-based technology platform, AVI has built a pipeline of potentially transformative therapeutic agents, including eteplirsen, which is in clinical development for the treatment of Duchenne muscular dystrophy, and multiple drug candidates that are in clinical development for the treatment of infectious diseases. For more information, visit www.avibio.com.

Forward-Looking Statements and Information

This press release contains statements that are forward-looking, including statements about the development of AVI's product candidates, opportunities for and AVI's intent to seek U.S. government support of AVI programs, and the efficacy, potency and utility of AVI's product candidates in the treatment of rare and infectious diseases. These forward-looking statements involve risks

and uncertainties, many of which are beyond AVI's control. Known risk factors include, among others: clinical trials may not demonstrate safety and efficacy of any of AVI's drug candidates; any of AVI's drug candidates may fail in development, may not receive required regulatory approvals, or be delayed to a point where they do not become commercially viable; and AVI may not qualify for additional or continued government funding in support of its product development programs. Any of the foregoing risks could materially and adversely affect AVI's business, results of operations and the trading price of its common stock. For a detailed description of risks and uncertainties AVI faces, you are encouraged to review the official corporate documents filed with the Securities and Exchange Commission. AVI does not undertake any obligation to publicly update its forward-looking statements based on events or circumstances after the date hereof.

"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.

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