

AVI BioPharma, Inc. Demonstrates Effectiveness of Immune Control via RNA-based Therapeutics in Hemorrhagic Virus Infections

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-- Findings Presented at 49th ICAAC Conference --

For Immediate Release

BOTHELL, WA — Sept. 14, 2009 — AVI BioPharma, Inc. (NASDAQ: AVII), a developer of RNA-based drugs, today announced the presentation of data regarding the Company's antisense technology for control of the immune response in hemorrhagic virus infections, including Ebola and Marburg virus, at the 49th Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC) in San Francisco, CA.

Patrick L. Iversen, Ph.D., Senior Vice President of Strategic Alliances, presented data from preclinical studies demonstrating that specific peptide conjugated phosphorodiamidate morpholino oligomers (PPMO) targeting innate and adaptive immune responses can diminish hemorrhagic viral pathogenesis and dramatically increase host survival rates in mouse lethal challenge studies. The experimental design involved injection of PPMO into mice 4 hours prior to infection with a mouse-adapted Ebola Zaire virus. Results demonstrated that treatment with a PPMO targeting the IL-10 exon 4 splice acceptor resulted in an average 60 percent survival (41 survivors in 70 challenged and treated mice) and, in one experiment, 100 percent survival (10 survivors of 10 infected and treated mice), whereas untreated controls showed only 18 ± 16 percent survival (N=220). In separate experiments, treatment with this PPMO also provided for 90 percent survival in a Marburg lethal challenge mouse model.

"The observed high effectiveness of the PPMOs targeting immune responses to Ebola and Marburg viruses suggests that such an application could potentially be applied to other viruses or vaccines to provide a broader and more sustained therapeutic benefit," said Dr. Iversen. "The reduction in viral pathogenesis through gene-specific immune modulation could potentially be applied to numerous areas of unmet medical need."

These data are a result of continued studies conducted in collaboration with the U.S. Army Medical Research Institute of Infectious Diseases (USAMRIID).

About AVI BioPharma

AVI BioPharma is focused on the discovery and development of RNA-based drugs utilizing proprietary derivatives of its antisense chemistry, (morpholino phosphorodiamidate oligomers or PMOs) that can be applied to a wide range of diseases and genetic disorders through several distinct mechanisms of action. Unlike other RNA-based therapeutic approaches, AVI's antisense technology has been used to directly target both messenger RNA (mRNA) and its precursor (pre-mRNA), allowing for both up- and down-regulation of targeted genes and proteins. AVI's RNA-based drug programs are being evaluated for the treatment of Duchenne muscular dystrophy as well as for the treatment of cardiovascular restenosis through our partner Global Therapeutics, a Cook Group Company. AVI's antiviral programs have demonstrated promising outcomes in Ebola Zaire and Marburg Musoke virus infections and may prove applicable to other viral targets such as HCV or Dengue viruses. For more information, visit www.avibio.com.