TMTI Accomplishments Have Advanced the Nation's Ability to Successfully Counter an Emerging Biothreat

Fort Belvoir, VA -- The Transformational Medical Technologies Initiative (TMTI), a Department of Defense (DoD) program that was created to revolutionize protection for the Warfighter against biological threats, has successfully partnered with AVI BioPharma, Inc. ("AVI") to conduct a rapid response exercise against a real-world emerging threat, the pandemic H1N1 virus, which is also known as Swine Origin Influenza Virus. The intent of the exercise was to demonstrate a capability to rapidly respond to emerging infectious diseases by producing multiple therapeutic candidates and preclinically testing their efficacy.

The exercise demonstrated, at a preclinical level, the ability to rapidly respond to a real world viral threat utilizing AVI's RNA-based therapeutics platform. Initially the exercise involved the evaluation of several RNA-based drug candidates in preclinical experiments using an *in vivo* model of seasonal flu. Subsequently, the lead candidate from those studies was tested in a more advanced preclinical *in vivo* model, utilizing a fully virulent human pandemic H1N1 virus. The studies included various treatment groups employing different doses of AVI's lead drug candidate, a scrambled RNA sequence control, a saline control and a positive control utilizing a current standard of care drug.

The preclinical *in vivo* results of AVI's lead RNA-based candidate drug demonstrated a statistically significant reduction in virus level that exceeded the reduction using a current standard of care drug. The candidate-drug treated-groups displayed none of the clinical signs of respiratory distress, weight loss, sneezing or nasal discharge normally seen with influenza infection.

AVI's response platform employs a comprehensive database of genetic sequences from over 90% of pathogenic virus families infecting humans for evaluation as potential drug targets. The H1N1 candidate drugs were developed using AVI's patented Phosphorodiamidate Morpholino Oligomer (PMO) *plus* chemistry. AVI's PMO*plus* chemistry platform has previously generated two Investigational New Drugs (INDs) against hemorrhagic fever viruses. These viral hemorrhagic fever INDs have been accepted by the US Food and Drug Administration (FDA). They are planned to enter Phase I safety and tolerability studies, which would lead to the first FDA-licensed therapeutics for Ebola and Marburg if successful.

As part of the continuing partnership with AVI, TMTI intends to support additional studies to confirm these results and to obtain additional data. These confirmatory studies are expected to be completed early in 2010.

About Defense Threat Reduction Agency & Transformational Medical Technologies Initiative

The Defense Threat Reduction Agency (DTRA) was founded in 1998 to integrate and focus the capabilities of the Department of Defense that address the weapons of mass destruction (WMD) threat. The mission of the DTRA is to safeguard America and its allies from WMD (e.g. chemical, biological, radiological, nuclear, and high yield explosives) by providing capabilities to reduce, eliminate, and counter the threat, and mitigate its effects. Under DTRA, Department of Defense resources, expertise and capabilities are combined to ensure the United States remains ready and able to address the present and future WMD threats.

The TMTI was created by the DoD to protect the Warfighter from emerging and genetically altered biological threats by discovering and developing a wide range of medical countermeasures through enhanced medical research, development, test and evaluation programs. The TMTI Program Office is matrixed from the Joint Science and Technology Office – DTRA and Joint Program Executive Office – Chemical and Biological Defense, with oversight from the Office of the Secretary of Defense. For more information on TMTI, visit http://www.tmti-cbdefense.org.

About AVI BioPharma

AVI BioPharma is focused on the discovery and development of RNA-based drugs utilizing proprietary derivatives of its antisense chemistry (morpholino-modified 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 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, including an ongoing systemic Phase 1b/2 clinical trial of exon skipping AVI-4658. 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 Junin, influenza, HCV or Dengue viruses. For more information, visit www.avibio.com