

AVI BioPharma and Leading Researchers at Karolinska Institutet Form Collaboration to Identify RNA-Based Therapeutic Candidates for Treatment of Extensively Drug-Resistant Tuberculosis (XDR-TB)

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BOTHELL, WA, Jan 05, 2011 (MARKETWIRE via COMTEX) --

AVI BioPharma, Inc. (NASDAQ: AVII), a developer of RNA-based therapeutics, announced today the formation of a collaboration with leading scientists at the Swedish medical university Karolinska Institutet to identify RNA-based therapeutic candidates for the treatment of Extensively Drug-Resistant Tuberculosis (XDR-TB). XDR-TB is a severe infection that occurs worldwide and represents a significant threat to global public health. One-third of the world's population carries the tuberculosis bacterium, and XDR-TB strains are highly and increasingly resistant to currently available treatments.

Research under the collaboration will evaluate novel RNA-based drug candidates employing AVI's proprietary, intrinsically charge-neutral, phosphorodiamidate morpholino oligomer (PMO) based chemistry platform. The drug candidates will target individual human host and bacterial genes, as well as combinations of PMO-based drug candidates that target both host and bacterial genes.

"This collaboration pairs AVI's experience targeting bacterial and host factor genes using proprietary PMO-based chemistries with world scientific leaders in the research and treatment of XDR-TB, a growing global public health concern," said Chris Garabedian, AVI's CEO and president. "We look forward to a productive relationship with the scientists and researchers at the Karolinska Institutet as we jointly seek to advance the fight against XDR-TB using the broad potential of our RNA-based technologies. We believe this initial collaboration on XDR-TB will provide AVI's scientific team with a valuable opportunity to further enhance our infectious disease expertise and pipeline in an area of strategic focus for the company's proprietary RNA-based drug discovery and development platform."

Professor Markus Maeurer, Scientific Project Leader at Karolinska Institutet in Stockholm, added, "Based on our research in pathogen-host interaction in XDR-TB, we believe there is distinct promise in RNA-based therapeutics using PMO-based oligomers to target and manipulate bacterial and host genes. For this reason, we chose to work with AVI to rapidly develop therapeutics for patients in need."

Using AVI's RNA-based platform technologies, the collaborators will identify therapeutic candidates targeting bacterial and host genes. AVI will retain rights to the therapeutic candidates employed in the collaboration. Intellectual property developed under the collaboration will be jointly owned, and AVI will hold an exclusive option to negotiate with the Karolinska Institutet to acquire its interest in that intellectual property. Funding and research support for the activities under the collaboration will be provided by both parties.

About Extensively Drug-Resistant Tuberculosis (XDR-TB) XDR-TB is a form of tuberculosis (TB) resistant to therapeutics developed to treat the disease. According to the World Health Organization, one in three people in the world is infected with a form of TB bacteria. It is estimated that there are up to 40,000 cases of XDR-TB annually, which often result from poor compliance with treatment regimens for TB and its initial multidrug-resistant form.

XDR-TB bacteria are resistant to first line therapies, including isoniazid and rifampicin, any fluoroquinolone and at least one of three injectable second-line drugs (capreomycin, kanamycin, and amikacin). Because XDR-TB is resistant to the first-line and second-line drugs, patients are left with limited treatment options that are less effective and often have worse treatment outcomes. It is estimated that a cure is possible only for an estimated 30 percent of affected people.

Like TB, XDR-TB is spread by breathing in bacteria that are propelled into the air by an infected person through coughing, sneezing, or simply talking. Symptoms of TB and XDR-TB are also similar and include weakness, weight loss, fever, night sweats, coughing, chest pain and coughing up blood. XDR-TB is a potentially fatal disease.

About Karolinska Institutet Karolinska Institutet is one of the world's leading medical universities. Its mission is to contribute to the improvement of human health through research and education. Karolinska Institutet accounts for over 40 percent of the medical academic research conducted in Sweden and offers the country's broadest range of education in medicine and health sciences. Since 1901 the Nobel Assembly at Karolinska Institutet has selected the Nobel laureates in Physiology or Medicine. For more

information, visit ki.se.

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 its highly differentiated RNA-based technology platform, AVI has built a pipeline of potentially transformative therapeutic agents, including a clinical stage Duchenne muscular dystrophy candidate and anti-infective candidates for influenza and hemorrhagic fever viruses. 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 evaluation of RNA-based therapeutic candidates for the treatment of XDR-TB; and AVI's PMO-based chemistry and its ability to target and manipulate bacterial and host genes in the treatment of XDR-TB. These forward-looking statements involve risks and uncertainties, many of which are beyond AVI's control. Known risk factors include, among others: research may not identify any RNA-based therapeutic candidates; and 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. 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.

SOURCE: AVI BioPharma, Inc.