TAXIS PHARMACEUTICALS DEMONSTRATES SYNERGISTIC EFFICACY AGAINST MRSA AND LOW RESISTANCE FREQUENCY WITH TXA709/CEFDINIR COMBINATION

Poster Presentation at ICAAC 2015 Highlights Potential of TXA709, Both Alone and in Combination with Cefdinir, as Oral Antibiotic for Drug-Resistant S. aureus Infections

NORTH BRUNSWICK, N.J., September 18, 2015 – TAXIS Pharmaceuticals, a drug-discovery company focused on developing a new class of antibiotic agents to treat life-threatening, multidrug-resistant bacterial infections, announced the presentation of results demonstrating the synergistic antibacterial activity of its lead clinical candidate, TXA709, when combined with cefdinir, a third-generation cephalosporin antibiotic. In a poster presentation today at the Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC) in San Diego, CA, researchers presented pre-clinical *in vitro* and *in vivo* data showing that TXA709 acts synergistically with cefdinir against isolates of methicillin-resistant *Staphylococcus aureus* (MRSA), a major contributor to the global antibiotic resistance problem, while also showing that the combination reduces the frequency of resistance (FOR), a measure of the degree of antibiotic resistance.

“Based on these pre-clinical data, TXA709 represents not only a promising and potent class of antibiotic, but also may expand and extend the utility of current and existing antibiotics when used in combination,” noted Gregory Mario, president and chief executive officer of TAXIS Pharmaceuticals. “In addition to highlighting the potential of TXA709, both alone and in combination with cefdinir, as an oral antibiotic agent for drug-resistant *S. aureus* infections, we are eager to begin research to validate these findings and apply them to clinical development of our pipeline of FtsZ inhibitors.”

TXA709 is a prodrug, a biologically inactive compound that can be metabolized in the body to produce a drug, of TXA707, a derivative of benzoic acid that disrupts the form and function of the bacterial protein FtsZ, which plays an essential role in bacterial cell division. A second-generation FtsZ inhibitor, TXA707 induces bacterial cell death more rapidly than that observed with standard-of-care antibiotics such as vancomycin. The inhibition of FtsZ is considered a novel mechanism of action, enhancing the appeal of TXA709 as an important tool for addressing the public health crisis stemming from the growing threat of antibiotic resistance.

At ICAAC, a team of researchers that included Daniel S. Pilch, Ph.D, Associate Professor in the Department of Pharmacology at Rutgers Robert Wood Johnson Medical School in Piscataway, N.J., and Edmond J. LaVoie, Ph.D, Professor and Chair of the Department of Medicinal Chemistry at the Ernest Mario School of Pharmacy at Rutgers, The State University of New Jersey, presented results of *in vivo* studies examining the synergy of TXA709 in oral combination with cefdinir against MRSA, using a mouse peritonitis model of systemic infection. The investigators also assessed the impact of combining TXA707, the active product of the prodrug TXA709, with cefdinir on FOR in MRSA, using a large inoculum approach.

The researchers reported that the TXA709-cefdinir combination exhibited synergistic activity *in vivo* against all MRSA strains tested, with the efficacious dose of TXA709 in combination with cefdinir being reduced as much as four-fold relative to that of TXA709 alone. Additionally, the combination of TXA707 with cefdinir significantly reduced detectable FOR in all MRSA strains examined, and eliminated detectable FOR in the majority of those strains.

“The synergistic activity of TXA709 and cefdinir adds to the growing body of evidence of the potential utility of TXA709 in the global struggle against antibiotic resistance,” Mr. Mario commented. “We are particularly excited about lowering FOR to below detectable levels in the majority of MRSA strains tested, as FOR is an important parameter for selection of antibiotic drugs for clinical development. These findings underscore the potential viability of TXA709, and we remain committed to bringing it, along with other novel antibiotic agents, to the clinic.”

About TAXIS

TAXIS Pharmaceuticals is a privately held biopharmaceutical company dedicated to developing novel antibiotics to combat the growing threat of multidrug-resistant bacteria. To date, TAXIS has identified and patented twelve (12) new classes of proprietary antibiotic agents that exploit a novel mechanism of bactericidal action distinct from any other antibiotic in clinical use today. The company is currently advancing its lead clinical candidate, TXA709, which is designed to disrupt the division of bacterial cells. The company's goal is to improve the treatment of infections caused by multidrug-resistant bacteria, such as methicillin-resistant *Stapylococcus aureus* (MRSA), vancomycin-resistant *Staphylococcus aureus* (VRSA), vancomycin-resistant enterococci (VRE), *Pseudomonas aeruginosa*, and *Acinetobacter baumannii*. For more information visit www.TAXISpharma.com

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