



TAXIS Pharmaceuticals announces CARB-X award of \$3.2 million, with potential for an additional \$11.4 million, to develop Efflux Pump Inhibitors (EPIs), a new drug class to defeat multi-drug resistant infections

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(Monmouth Junction, NJ USA)--(BUSINESS WIRE)--CARB-X, a global partnership led by Boston University, is awarding TAXIS Pharmaceuticals, Inc. up to \$3.2 million in non-dilutive funding to develop Efflux Pump Inhibitors (EPIs), representing a new drug class designed to address a major mechanism of multi-drug-resistant (MDR) *Pseudomonas aeruginosa* bacteria. EPIs have the potential to resurrect the therapeutic activity of antibiotics that no longer work against MDR *P. aeruginosa* bacterial infections. TAXIS Pharmaceuticals is also eligible for additional funding of up to \$11.4 million if certain milestones are met.

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“After a long and rigorous review process with CARB-X, we’re extremely gratified that their team has the confidence to fund our Efflux Pump Inhibitor (EPI) drug development program.” said Gregory Mario, CEO of TAXIS Pharmaceuticals, “Our new drug class is designed to resurrect the efficacy of many generic antibiotics by attacking an elemental form of drug resistance. We believe that advancement of our new anti-resistance drug candidates to combat MDR infections could result in a significant reduction in patient mortality with a substantial cost-effective societal benefit.”

Specifically, TAXIS Pharmaceuticals’ EPI drug development program targets MDR *P. aeruginosa* with an emphasis on extended-spectrum beta-lactamase (ESBL) pathogens, including hospital acquired and ventilator associated infections. It should be noted that some types of MDR *P. aeruginosa* are resistant to nearly all antibiotics. The U.S. Centers for Disease Control (CDC) report titled Antibiotic Resistance Threats in the United States 2019 recorded 32,600 hospital reported cases of *P. aeruginosa* infection and 2,700 patient deaths in 2017.

The EPI drug development program will benefit patients with ESBL-producing *P. aeruginosa*, a life-threatening bacterial infection resistant to currently available antibiotics. If successful in commercializing this technology, TAXIS Pharmaceuticals will provide the global community with cost-effective access to life-saving, anti-resistance drugs resulting in significantly reduced antibiotic utilization.

ABOUT EFFLUX PUMP INHIBITORS (EPIs)

Efflux Pump Inhibitors (EPIs) represent a new anti-resistance drug class against Gram-negative MDR pathogens. Bacterial efflux pumps act like bilge pumps by flushing antibiotics out of the bacterial cell and are responsible for antibiotic resistance in many gram-negative strains. TAXIS Pharmaceuticals’ EPIs have shown that they can resurrect the activity, potency and effectiveness of multiple classes of antibiotics including Macrolides, Cephalosporins, Monobactams, Antimycobacterials, Tetracyclines, Fluoroquinolones and Sulfanomides. Current data reveals synergy with 28 currently approved and marketed antibiotics that no longer work or now require high doses to have any effect.

ABOUT ANTIBIOTIC RESISTANT BACTERIA

According to the U.S. Centers for Disease Control and Prevention (CDC), more than 2.8 million antibiotic-resistant infections occur in the United States each year and more than 35,000 people die as a result. Infections caused by antibiotic-resistant germs are difficult, and sometimes impossible, to treat. In most cases, antibiotic-resistant infections require extended hospital stays, additional follow-up doctor visits, and costly and toxic alternatives. Globally, the Review on Antimicrobial Resistance commissioned by the UK Government and the Wellcome Trust consisted of eight studies, each focusing on a specific aspect of antimicrobial resistance. The final report warns that by 2050 antibiotic-resistant superbugs could kill 10 million people a year worldwide, an average of one death every three seconds. Currently up to 50,000 lives are lost each year to antibiotic-resistant infections in the U.S. and Europe alone, and across the globe, at least 700,000 people a year die due to drug-resistant bacterial infections including tuberculosis and MRSA.

ABOUT CARB-X

CARB-X (Combating Antibiotic-Resistant Bacteria Biopharmaceutical Accelerator) is a global non-profit partnership dedicated to supporting early development antibacterial R&D to address the rising threat of drug-resistant bacteria. CARB-X is led by Boston University and funding is provided by the Biomedical Advanced Research and Development Authority (BARDA), part of the Office of the Assistant Secretary for Preparedness and Response (ASPR) in the US Department of Health and Human Services; the Wellcome Trust, a global charity based in the UK working to improve health globally; Germany's Federal Ministry of Education and Research (BMBF); the UK Department of Health and Social Care's Global Antimicrobial Resistance Innovation Fund (GAMRIF); the Bill & Melinda Gates Foundation, and with in-kind support from National Institute of Allergy and Infectious Diseases (NIAID), part of the US National Institutes of Health (NIH) within the US Department of Health and Human Services. CARB-X is investing up to US\$500 million from 2016-2021 to support innovative antibiotics and other therapeutics, vaccines and rapid diagnostics. CARB-X supports the world's largest and most innovative pipeline of preclinical products against drug-resistant infections. CARB-X focuses exclusively on high priority drug-resistant bacteria, especially Gram-negatives. CARB-X is headquartered at Boston University School of Law. <https://carb-x.org/>. Follow us on Twitter @CARB_X

ABOUT TAXIS PHARMACEUTICALS

TAXIS Pharmaceuticals, Inc. is a clinical stage company developing anti-resistance drug candidates that enable the re-use of the most widely prescribed generic antibiotics against antibiotic-resistant ESKAPE pathogens (*E. faecium*, *S. aureus*, *K. pneumoniae*, *A. baumannii*, *P. aeruginosa*, and *Enterobacter* species). Our TAXISTANCE® anti-resistance drug platform is focused on the disruption of the foundation of bacterial cell wall architecture to address elemental forms of drug resistance. Our most advanced drug candidate, oral TXA709, is currently enrolling in a Phase I human safety clinical trial in healthy volunteers for development as an anti-resistance drug to be used in combination with obsolete antibiotics as a fully oral anti-MRSA treatment. TXA709 targets the Filamenting temperature-sensitive mutant Z (FtsZ) bacterial cell division protein and was granted Qualified Infectious Disease Product (QIDP) designation by the FDA. It may also be possible to develop a FtsZ drug candidate targeting Gram-negative bacteria in the future. Our Efflux Pump Inhibitors (EPIs) represent a new drug class against Gram-negative multidrug-resistant (MDR) pathogens. Bacterial efflux pumps act like bilge pumps by flushing antibiotics out of the bacterial cell and are responsible for antibiotic resistance in many gram-negative strains. TAXIS Pharmaceuticals EPIs have shown that they can resurrect the activity, potency and effectiveness of multiple classes of antibiotics including Macrolides, Cephalosporins, Monobactams, Antimycobacterials, Tetracyclines, Fluoroquinolones and Sulfanomides. Current data reveals synergy with 28 currently approved and marketed antibiotics that no longer work or now require high doses to have any effect.

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