



MEDIA RELEASE

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CARB-X funds Trellis Bioscience to support the development of a monoclonal antibody designed to disrupt superbugs' protective coating so that antibiotics can kill them

(BOSTON, MA) – CARB-X is awarding Trellis Bioscience, of Redwood City, California, USA, up to \$3.2 million in non-dilutive funding, with the possibility of \$3.8 million more if certain project milestones are met, to develop an innovative monoclonal antibody designed to disrupt the protective biofilm that makes bacteria resistant to antibiotics. With the biofilm coating compromised, the bacteria are more vulnerable to being eliminated by existing antibiotics and by the body's own immune system. The CARB-X award will support antibody manufacturing for Phase 1.

“Drug-resistant bacterial infections kill hundreds of thousands of people each year around the world, and CARB-X is supporting the development of urgently needed new products to address this crisis,” said Erin Duffy, Chief of Research and Development of CARB-X, which is based at the Boston University School of Law. “The Trellis project is in early development but if successful and approved for use in patients, its promise for tackling challenging, biofilm-mediated infections including joint implants could be transformational for the success of many modern-medical procedures.”

“We are thankful that CARB-X is supporting the development of this innovative antibody. We believe it has the potential to be a game-changer in the treatment of a broad range of drug-resistant bacterial infections,” said Stefan Ryser, CEO of Trellis. “CARB-X funding will support the manufacture of the drug for clinical development and, in a potential second tranche of funding, support an initial trial in patients with an infected implant, a type of infection that is particularly hard to treat due to biofilm formation on the surface of the implant.”

TRL1068, a native human monoclonal antibody, disrupts the bacterial biofilm by extracting a key scaffolding protein, thereby rendering the bacteria more susceptible to attack by the immune system as well as more sensitive to conventional antibiotics. TRL1068 has been shown to enhance antibiotic activity in highly-drug-resistant strains of Gram-positive and Gram-negative bacteria. The antibody was developed using Trellis' platform technology, which integrates computerized microscopy with advanced nanomaterials for discovery of native human monoclonal antibodies directly from white blood cells of healthy blood donors.

New products are urgently needed to fight drug-resistant bacteria

According to the WHO, an estimated 700,000 people die each year worldwide from bacterial infections. CARB-X is investing up to \$500 million in antibacterial R&D around the world

between 2016-2021. The goal is to support projects through the early phases of development through Phase 1 clinical trials, so that they will attract additional private or public support for further clinical development and approval for use in patients.

The CARB-X portfolio is the world's largest and most diverse antibacterial development portfolio with 36 projects in five countries. Since its inception in 2016, CARB-X has announced 55 awards exceeding \$182.5 million, with the potential of additional funds if project milestones are met, to accelerate the development of antibacterial products. These funds are in addition to investments made by the companies themselves. The CARB-X pipeline will continuously evolve, as projects progress and others fail for a variety of reasons.

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About CARB-X

Combating Antibiotic-Resistant Bacteria Biopharmaceutical Accelerator (CARB-X) is a global non-profit partnership dedicated to accelerating early development antibacterial R&D to address the rising global 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). A non-profit partnership, CARB-X is investing up to \$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 is headquartered at Boston University School of Law. carb-x.org/. Follow us on Twitter @CARB_X.

About Trellis Bioscience

Trellis Bioscience LLC has created a platform technology integrating computerized microscopy with advanced nanomaterials for discovery of native human monoclonal antibodies directly from the antibody producing white blood cells (B cells) of healthy blood donors. The patented technology overcomes technical obstacles that have long impeded exploitation of this ideal source of therapeutics. In addition to the biofilm disrupting antibody, three other products are also nearing initiation of clinical testing, targeting viral diseases that cost the healthcare system billions of dollars annually: cytomegalovirus, respiratory syncytial virus, and influenza. In addition to the CARB-X award, the company has received \$19 million in SBIR grant funding from the National Institute of Allergy and Infectious Diseases (NIAID), complementing comparable equity investment. www.trellisbio.com

About BARDA and NIAID

The US Department of Health and Human Services works to enhance and protect the health and well-being of all Americans, providing for effective health and human services and fostering advances in medicine, public health, and social services. Within HHS, ASPR's mission is to save lives and protect Americans from 21st century health security threats. ASPR leads the nation's medical and public health preparedness for, response to, and recovery from disasters and public health emergencies. BARDA provides a comprehensive, integrated, portfolio approach to the advanced research and development, innovation, acquisition, and manufacturing of medical countermeasures – vaccines, drugs, therapeutics, diagnostic tools, and non-pharmaceutical products for public health emergency threats. These threats include chemical, biological, radiological, and nuclear agents, pandemic influenza, and emerging infectious diseases. NIH is the primary US federal agency conducting and supporting basic, clinical, and translational medical research, and is investigating the causes, treatments, and cures for both common and rare diseases. NIAID conducts and supports research — at NIH, throughout the United States, and worldwide — to study the causes of infectious and immune-mediated diseases, and to develop better means of preventing, diagnosing and treating these illnesses.

About Wellcome Trust

Wellcome exists to improve health for everyone by helping great ideas to thrive. We're a global charitable foundation, both politically and financially independent. We support scientists and researchers, take on big problems, fuel imaginations and spark debate. The Wellcome Trust is a charity registered in England and Wales, no. 210183. Its sole trustee is The Wellcome Trust Limited, a company registered in England and Wales, no. 2711000 (whose registered office is at 215 Euston Road, London NW1 2BE, UK)

About BMBF

Education and research are the foundations for our future. The promotion of education, science and research by the Federal Ministry of Education and Research (BMBF) represents an important contribution to securing Germany's prosperity. Education and research are a Federal Government policy priority, which is reflected in the development of the funding it is making available to these fields.

About the Global AMR Innovation Fund (GAMRIF)

The Department for Health and Social Care (DHSC) is the UK Government department which is responsible for helping people to live more independent, healthier lives for longer.

The partnership with CARB-X is part of DHSC's Global Antimicrobial Resistance Innovation Fund (GAMRIF). GAMRIF was established to provide seed funding for innovative research and development, specifically in neglected and underinvested areas, in the field of AMR. GAMRIF is a £50m UK Aid investment, which means all projects funded must support research primarily and directly for the benefit of people in low- and middle-income countries (LMICs). The Fund takes a 'One Health' approach, seeking to invest in potential solutions to reduce the threat of AMR in humans, animals, fish and the environment. The Fund seeks to leverage additional global funding through interaction with international government bodies, public-private partnerships, product development partnerships, global funding mechanisms and global fora.

About Boston University

Founded in 1839, Boston University is an internationally recognized institution of higher education and research. With more than 33,000 students, it is the fourth-largest independent university in the United States. BU consists of 17 schools and colleges, along with a number of multi-disciplinary centers and institutes integral to the University's research and teaching mission. In 2012, BU joined the Association of American Universities (AAU), a consortium of 62 leading research universities in the United States and Canada. For further information, please contact Jeremy Thompson at jeremy22@bu.edu. www.bu.edu.