**Carb-X to Expand Funding of Specific Diagnostics to Support the Development of a Rapid Antibiotic Susceptibility Test to Treat Life-Threatening Blood Infections**

Specific’s Reveal antibiotic susceptibility testing system promises accurate drug susceptibility and identification of superbugs within 5 hours of a positive blood sample, improving patient care in the case life-threatening sepsis, especially in the case of drug resistant blood infections.

MOUNTAIN VIEW, Calif. (PRWEB) August 07, 2019 -- CARB-X is expanding its award to Specific Diagnostics, from $3.4 million to $5.1 million based on Specific’s successful completion of product development milestones. This grant supports the continued development of the company’s Reveal™ antibiotic susceptibility testing (AST) system. Reveal offers a higher throughput, lower cost solution to speed the diagnosis and treatment of drug-resistant blood infections than any currently available, and so promises to lower health costs and improve patient outcomes with a system that can plausibly win very wide adoption and use. This builds upon CARB-X’s previous decision to award Specific the Option Phase of its original award to Specific announced in April 2018 ([https://carb-x.org/carb-x-news/carb-x-funds-specific-diagnostics-to-support-the-development-of-a-rapid-accurate-test-to-diagnose-life-threatening-drug-resistant-infections-in-the-blood/](https://carb-x.org/carb-x-news/carb-x-funds-specific-diagnostics-to-support-the-development-of-a-rapid-accurate-test-to-diagnose-life-threatening-drug-resistant-infections-in-the-blood/)).

“We are honored by CARB-X’s decision to expand its funding of our instrument, Reveal. It is a testament to the success of our work thus far in developing an urgently-needed and practical solution for the rapid determination of antimicrobial susceptibility,” said Paul A. Rhodes, Ph.D., Specific’s CEO. “Reveal rapidly determines phenotypic antibiotic susceptibility directly from positive blood culture. CARB-X has widely regarded world-leading expertise and scope in assessing new diagnostics relevant to the global AMR battle, and Specific is grateful to have received this expansion of its support.”

Rapid diagnostics essential to winning the fight against drug resistant bacteria

CARB-X’s funding expansion will support the pilot line GMP manufacture of Reveal, which utilizes Specific’s proprietary low cost volatile-sensitive sensor arrays to quickly detect the emitted volatile molecules that are the first sign of bacterial growth. Based on this novel, elegant, simple, low cost means to ascertain antimicrobial susceptibility, with a 2-minute sample preparation work flow and large drug menu, Reveal meets the need with a practical system that can attract wide adoption. The Reveal instrument is stackable and modular, with each 7 ½” high and 17” wide module running 4 samples/shift. Thus a stack of 4 Reveals can process 48 samples/day 24/7, while a single module can serve the needs of a small hospital lab.

Expanding portfolio
The CARB-X portfolio is the world’s largest and most scientifically diverse portfolio of early development antibacterial projects with 30 projects including antibiotics and other therapeutics, vaccines and diagnostics to respond to the threat of drug-resistant bacteria. CARB-X, which stands for Combating Antibiotic Resistant Bacteria Biopharmaceutical Accelerator, funds projects around the world and is working to expand its pipeline with the best science from around the world.

Since it was established in 2016, CARB-X has announced awards totaling $130.5 million to accelerate the development of antibiotics and other products. These funds are in addition to investments made by the companies themselves.

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New antibiotics, diagnostics and other products are needed urgently to treat bacteria that are becoming increasingly resistant to existing antibiotics. According to the World Health Organization (WHO), an estimated 700,000 people die each year worldwide from bacterial infections. According to the CDC, in the United States alone, an estimated 23,000 people die each year from drug-resistant bacterial infections.

Partnership to drive antibacterial innovation
CARB-X is investing more than $500 million in antibacterial R&D between 2016-2021. 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). CARB-X is headquartered at the Boston University School of Law.

The goal is to support diagnostic development from feasibility through development and into the early phases of product verification and validation. In doing so, CARB-X funds up to 90% of diagnostic development costs for companies, significantly lowering the investment risk and funding required by additional private or public entities to successfully commercialize CARB-X portfolio products. The scope of CARB-X funding is restricted to projects that target drug-resistant bacteria highlighted on the ‘Antibiotic Resistant Threats in the United States’ report published by the Centers for Disease Control and Prevention (CDC) in 2013 or the Priority Bacterial Pathogens list published by the World Health Organization (WHO) in 2017 – with a priority on those pathogens deemed Serious or Urgent on the CDC list or Critical or High on the WHO list.

Responsible use of existing antibiotics and equitable access, particularly in low-income countries where need is greatest, is also vital to addressing the global health problem. Both are a condition of CARB-X funding.

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About CARB-X
CARB-X is a global non-profit partnership led by Boston University and dedicated to accelerating early development antibacterial R&D to address the rising global threat of drug-resistant bacteria. CARB-X 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 (UK 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 more than $500 million from 2016-2021 to support innovative antibiotics and other therapeutics, vaccines, rapid diagnostics and devices. 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 Specific Diagnostics
Specific Diagnostics has developed in vitro diagnostic systems for the detection and identification of microorganisms while they grow in culture. The company’s unique patented technology leverages a low-cost printed chemical sensor array, enabling diagnostic products that simplify workflow and speed time-to-answer at low cost. During growth in culture, bacteria emit organism-specific small molecule metabolite mixtures. Specific’s products utilize inexpensive printed sensor arrays to obtain a profile of such mixtures, enabling detection of growth, antibiotic efficacy, and microorganism ID with simple, automated, low-cost instruments and disposables. Accuracies of minimum inhibitory concentration (MIC) determination meet those of gold standard broth microdilution methods, but with results obtained within four hours of a positive blood culture, directly from a diluted positive blood sample. The system will streamline lab workflow, reduce costs, and substantially shorten the time from sample arrival to selection of effective therapy, saving patients faced with fast-moving and deadly drug-resistant blood infections. Specific is located in Mountain View, California. For more information, visit http://www.specificdx.com, or email us at press@specificdx.com.

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 HHS, ASPR and NIH
HHS is the principal federal agency for protecting the health of all Americans and providing essential human services, especially for those who are least able to help themselves. ASPR’s mission is to save lives and protect Americans from 21st century health security threats. ASPR leads the federal public health and medical preparedness and response to disasters and other emergencies, on behalf of the Secretary of HHS. Within ASPR, BARDA provides a comprehensive integrated portfolio approach to the advanced research and development, innovation, acquisition, and manufacturing of vaccines, drugs, therapeutics, diagnostic tools, and non-pharmaceutical products for public health emergency threats. These threats include chemical, biological, radiological, and nuclear threat agents, pandemic influenza, and emerging infectious diseases.
NIAID is one of the 27 Centers and Institutes of the National Institutes of Health (NIH) a component of the U.S. Department of Health and Human Services. NIH is the nation’s medical research agency, and is the primary 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. For more information about NIH and its programs, visit http://www.nih.gov. News releases, fact sheets and other NIAID-related materials are available on the NIAID website: https://www.niaid.nih.gov.

About Boston University
A leading research university with over 33,000 undergraduate and graduate students from more than 130 countries, nearly 10,000 faculty and staff, 17 schools and colleges, and 250 fields of study. Boston University is consistently ranked among the world’s best research universities and is a member of the American Association of Universities. For further information, see http://www.bu.edu or contact Ann Comer-Woods anncomer@bu.edu.

About the Broad Institute of MIT and Harvard
Broad Institute of MIT and Harvard was launched in 2004 to empower this generation of creative scientists to transform medicine. The Broad Institute seeks to describe all the molecular components of life and their connections; discover the molecular basis of major human diseases; develop effective new approaches to diagnostics and therapeutics; and disseminate discoveries, tools, methods, and data openly to the entire scientific community. Founded by MIT, Harvard, Harvard-affiliated hospitals, and the visionary Los Angeles philanthropists Eli and Edythe L. Broad, the Broad Institute includes faculty, professional staff, and students from throughout the MIT and Harvard biomedical research communities and beyond, with collaborations spanning over a hundred private and public institutions in more than 40 countries worldwide. For further information about the Broad Institute, http://www.broadinstitute.org. In support of CARB-X, the Broad Institute created the Collaborative Hub for Early Antibiotic Discovery (CHEAD), which serves an interdisciplinary center that partners with academic investigators engaged in antibiotic development and/or resistance research to accelerate their early-stage, small molecule therapeutics toward Investigational New Drug (IND) application.

About MassBio
MassBio is a not-for-profit organization founded in 1985 that represents and provides services and support for the world’s leading life sciences supercluster. MassBio is committed to advancing Massachusetts’ leadership in the life sciences to grow the industry, add value to the healthcare system and improve patient lives. Representing 1000+ biotechnology companies, academic institutions, disease foundations and other organizations involved in life sciences and healthcare, MassBio leverages its unparalleled network of innovative companies and industry thought leaders to advance policy and promote education, while providing member programs, events, industry information, and services. Learn more at MassBio

About the California Life Sciences Institute (CLSI)
The mission of the California Life Sciences Institute (CLSI) is to maintain California’s leadership in life sciences innovation through support of entrepreneurship, education and career development. Located in the birthplace of biotechnology, CLSI strives to ensure that the economic and intellectual power of the region’s life sciences industry and its employees remains strong. By maintaining its focus on entrepreneurship, education and career development programs, CLSI supports the foundations of innovation that have made California home to the world’s most prominent life sciences ecosystem. As a non-profit 501(c)(3), CLSI’s objectives are met through collaborations, partnerships, and the generosity of individuals, sponsors and foundations. CLSI is a member of the CARB-X consortium, serving as an accelerator. Learn more at http://califsciencesinstitute.org.

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