

Shionogi Announces Agreement with CARB-X for an Innovative AMR (Anti Microbial Resistance) Program

OSAKA, Japan, March 22, 2018 - Shionogi & Co., Ltd. (Head Office: Osaka, Japan; President and CEO: Isao Teshirogi, Ph.D.; hereafter "Shionogi") has signed collaborative agreement with CARB-X (Head Office: Boston, MA; Executive Director; Kevin Outterson). (The CARB-X press release is [here](#).)

CARB-X is one of the world's largest public-private partnerships and is dedicated to supporting innovation to help combat the global rise of drug-resistant bacteria . CARB-X's identifies and funds promising early development antibacterial projects to treat the most serious bacteria on the Serious or Urgent Threat List prepared by the US Centers for Disease Control and Prevention (CDC) and on the Priority Pathogens list published by the World Health Organization (WHO). CARB-X is funded with a total investment of up to \$455 million from 2016-2021. Under the agreement with CARB-X, Shionogi will receive an initial award of up to \$4.7 million, with the possibility of \$2.9 million more based on the achievement of certain project milestones, for development of a novel β -lactam antibiotic with potent activity against carbapenem-resistant Enterobacteriaceae (CRE) and other life-threatening Gram-negative bacteria.

According to the CDC, untreatable and hard-to-treat infections caused by CRE bacteria are on the rise among patients in medical facilities. CRE have become resistant to most types of antibiotics, and almost half of hospitalized patients who get bloodstream infections from CRE bacteria die from the infection. New antibiotics, rapid diagnostics and other treatment modalities are urgently needed to treat bacteria that are becoming increasingly resistant to existing antibiotics.

Shionogi's strength in small molecule drug discovery in the antibacterial area will support development of innovative therapeutics such as this program..

Shionogi has its vision, "Grow sustainably as a drug discovery-based pharmaceutical company contributing to a more vigorous society through improving healthcare", and is striving to contribute to protecting people from the threat of infectious diseases by promoting open innovation.

About CARB-X

CARB-X is the world's largest public-private partnership devoted solely to accelerating early development antibacterial R&D. CARB-X is investing up to \$455 million from 2016-2021 to support innovative antibiotics and other therapeutics, vaccines, rapid diagnostics and devices to address drug-resistant bacterial infections. CARB-X focuses on high priority drug-resistant bacteria, especially Gram-negatives. CARB-X is funded by Wellcome Trust in the United Kingdom, and the United States Department of Health and Human Services Biomedical Advanced Research and Development Authority (BARDA), part of the Office of the Assistant Secretary for Preparedness and Response (ASPR), and the National Institute of Allergy and Infectious Diseases (NIAID), part of the National Institutes of Health (NIH). CARB-X operates through Boston University. Other partners include RTI International, the Broad Institute of Harvard and MIT, MassBio, and the California Life Sciences Institute (CLSI).

<http://www.carb-x.org/>.

About Shionogi & Co., Ltd.

Shionogi & Co., Ltd. is a major research-driven pharmaceutical company dedicated to bringing benefits to patients based on its corporate philosophy of “supplying the best possible medicine to protect the health and wellbeing of the patients we serve.” Shionogi’s research and development currently targets two therapeutic areas: infectious diseases, and pain/CNS disorders. For over 50 years, Shionogi has developed and commercialized innovative oral and parenteral anti-infectives. In addition, Shionogi is engaged in new research areas, such as obesity/geriatric metabolic diseases and oncology/immunology. Contributing to the health and QOL of patients around the world through development in these therapeutic areas is Shionogi’s primary goal. For more details, please [visit www.shionogi.co.jp/en/](http://www.shionogi.co.jp/en/).

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