



PHICO  
THERAPEUTICS

## Phico Therapeutics awarded up to \$18.2 million USD (c.£13.2 million GBP) CARB-X funding to advance SASPject antibacterial therapy through Phase 1 clinical trials

- *Funding will support first-in-man intravenous studies to tackle antibiotic resistant *Pseudomonas aeruginosa* in ventilated associated pneumonia*
- *\$5.3 million USD (c.£3.8 million GBP) first grant followed by up to \$12.9 million USD (c.£9.4 million GBP) in milestone payments*

**CAMBRIDGE, UK, 19<sup>th</sup> March 2021:** Phico Therapeutics Ltd ('Phico'), a biotechnology company developing engineered phage technology as the basis of a new generation of antibiotics to overcome antibacterial resistance, has been awarded a grant of up to \$18.2 million USD (*circa.* £13.2 million GBP) from Combating Antibiotic Resistant Bacteria Biopharmaceutical Accelerator (CARB-X), a global non-profit partnership dedicated to accelerating antibacterial research to tackle the global rising threat of drug-resistant bacteria. The funding will support the progression of Phico's lead product SASPject™ PT3.9 through clinical trials with \$5.3 million USD (*circa.* £3.8 million GBP) available immediately and a further \$12.9 million (*circa.* £9.4 million GBP) contingent on reaching specific project milestones.

SASPject PT3.9 has been developed for the intravenous treatment of hospital infections due to the bacterium, *Pseudomonas aeruginosa* using Phico's SASPject platform. The platform utilises unique antibacterial small acid-soluble spore proteins (SASP) which target selected bacterial species to inactivate bacterial DNA, stopping them from metabolising or reproducing. The Phase I clinical trials will be first-in-man, intravenous studies and will focus on establishing the safety and kinetics of PT3.9 in healthy volunteers and, potentially, patients with ventilated hospital acquired pneumonia and ventilator associated pneumonia.

*P. aeruginosa* is a leading cause of pneumonia in hospital patients, especially those on a ventilator. The increasing incidence of strains showing multi-drug antibiotic resistance has resulted in the U.S. Centers for Disease Control and Prevention classifying *P. aeruginosa* as a serious threat to human health. With antimicrobial resistance also listed as a Top 3 Global Health Threat by the [World Health Organisation](#), the SASPject platform could provide a new range of innovative antibiotic treatments to help overcome this challenge.

**Dr. Heather Fairhead, Phico Founder and CEO said:** "To receive funding from CARB-X is important validation for our SASPject technology platform and its potential in fighting bacterial resistance. It has been awarded at the end of a thorough due diligence process which reinforces the credibility of the company and our team - I am delighted to now look forward to progressing our lead product to clinical trials and developing a product pipeline that will advance the science of antibacterial therapy and in time, save millions of lives round the world."

"Phico's innovative approach delivers the antibiotic effect of SASPs by using engineered bacteriophages to precisely target *P. aeruginosa* infections in the lungs," **said Erin Duffy, R&D Chief of CARB-X.** "This approach has the potential to target bacteria without damaging other cells, and without contributing to the rise of resistance. If successful, this new intravenous drug could transform the way patients with ventilator-associated pneumonia are treated in hospitals, and save lives."

For more information, please visit: [www.phicotx.co.uk](http://www.phicotx.co.uk)

**ENDS**

### **Note to Editors**



*Dr Heather Fairhead,  
Founder and CEO at Phico*

For high-res images contact Zyme Communications

### **For further information, please contact:**

Sarah Jeffery  
Zyme Communications  
Tel: +44 (0)7771 730919  
E-mail: [sarah.jeffery@zymecommunications.com](mailto:sarah.jeffery@zymecommunications.com)

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### **About Phico Therapeutics [www.phicotx.co.uk/](http://www.phicotx.co.uk/)**

Phico Therapeutics (Phico) is a biotechnology company developing engineered phage technology as the basis of a new generation of antibiotics to overcome antibacterial resistance, particularly those caused by multi-drug resistant bacteria.

Phico's SASPject™ platform technology utilises engineered bacterial viruses, or phages, to deliver a gene encoding a unique antibacterial small acid-soluble spore protein (SASP) that inactivates bacterial DNA. This stops the bacteria from metabolising or reproducing, whilst the SASP remains unaffected by the sequence of the bacterial DNA, including mutations, making resistance unlikely to develop. SASPject can target any chosen bacteria including those that are treatment resistant.

Founded in Cambridge, UK by Dr Heather Fairhead, Phico is building an innovative intravenous antibacterials pipeline focused on serious infections with few existing treatment options and targeting key superbug threats including a *Pseudomonas aeruginosa*, *Klebsiella pneumoniae* and *Escherichia coli*. The company has previously received backing from independent investors, the Wellcome Trust and Government grants, and has a clear path to take lead intravenous product, *P. aeruginosa* targeted, SASPject PT3.9 through a study in patients.

### **About SASPject™**

SASPject™ is a pan-spectrum antibacterial technology that can target selected bacterial species by using engineered bacteriophages. SASPject™ works by injecting a gene that encodes small acid-soluble spore proteins, or SASPs, directly into the targeted bacteria. The injected gene then produces SASPs, which bind to bacterial DNA and inactivate it. SASPs “turn off” DNA so the targeted bacterial cell cannot metabolise or reproduce. The immune system can then remove the bacteria from the body.

SASPs bind to all bacterial DNA, irrespective of the sequence of that DNA. Spontaneous mutations in DNA, or the import of new DNA that gives new characteristics to the bacterial cell, are key ways in which bacteria develop resistance to antibiotics. Neither of these strategies affects the ability of SASP to bind to and inactivate bacterial DNA.

### **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). CARB-X is investing up to \$480 million from 2016-2022 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/](http://carb-x.org/). Follow us on Twitter @CARB\_X.