

Press release

[9 March 2015]



### **Phico Therapeutics Receives Translation Award To Advance Its SASPject™ PT4 aimed at *Escherichia coli* and *Klebsiella pneumoniae* Towards Clinical Trials**

**Cambridge, UK, [9 March 2015]:** Phico Therapeutics, a biotechnology company developing a novel platform technology for a new generation of antibiotics aimed at overcoming antibacterial resistance, has been awarded a £2.25M Translation Award by the Wellcome Trust to develop its **SASPject™** PT4 antibiotic, aimed at *Escherichia coli* and *Klebsiella pneumoniae*.

**SASPject™**'s PT4 is targeted at *E. coli* and *K. pneumoniae*, including multi-drug resistant strains. The Translation Award will support Phico's development of the product and pre-clinical efficacy testing, together with development of a scalable manufacturing process.

**SASPject™** is a novel approach which has the potential to provide a number of significant advantages over traditional antibiotics. These include a unique mode of action which makes it unlikely that the bacteria will be able to develop resistance to its antibacterial protein. It also has the ability to target any selected bacteria, including those that are multi-antibiotic resistant.

*K. pneumoniae* and *E. coli* are examples of Enterobacteriaceae, a normal part of the human gut bacteria. However, in an infection, this group of bacteria can be particularly difficult to treat because they can have high levels of resistance to many antibiotics, including the so-called antibiotics of last resort, the carbapenems, giving rise to the name Carbapenem-resistant Enterobacteriaceae, or CRE. This superbug contributed to two deaths in a recent Los Angeles outbreak and, according to one report, can kill up to half of all infected patients.<sup>1</sup>

The aim of Wellcome Trust Translation Awards is to develop innovative and groundbreaking new technologies in the biomedical area and, particularly in areas of high unmet medical need. Projects must have already demonstrated proof of principle, supported by experimental data.

Dr Heather Fairhead, Chief Executive Officer of Phico Therapeutics, commented: "This Translation Award from the Wellcome Trust is an important validation of our **SASPject™** technology, which we believe holds the potential to be a powerful new tool in the war against antimicrobial resistance.

"This award will enable us to advance PT4 towards clinical trials and to develop a scalable manufacturing process, and we look forward to beginning work on the project."

1. Source: Centers for Disease Control and Prevention

**For further information contact:**

**Phico Therapeutics**, Heather Fairhead: +44 (0)1223 496562

[hf@phicotx.co.uk](mailto:hf@phicotx.co.uk),

**Consilium Strategic Communications**, Jessica Hodgson, Mary-Jane Elliott: +44 (0)203 709 5000

[phico@consilium-comms.com](mailto:phico@consilium-comms.com)

**Notes for editors:**

**About Phico Therapeutics:**

Phico Therapeutics, founded in Cambridge by Dr Heather Fairhead, is built around the **SASPject™** platform, which utilises a unique anti-bacterial protein, **SASP**, which targets and deactivates bacterial DNA stopping bacteria from metabolising or reproducing. Phico has raised almost £16M from business angels, high net-worth individuals, and the Wellcome Trust and Government grants. Phico's goal is to advance the science of antibacterial therapy to help overcome the problem of bacterial resistance.

**About SASPject™**

**SASPject™** delivers pan-spectrum anti-bacterial proteins called small acid-soluble spore proteins, or SASPs, to selected bacterial species using targetable nano-delivery vehicles (NDVs). **SASPject™** works by injecting a gene that encodes SASP 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 the Wellcome Trust**

The Wellcome Trust is a global charitable foundation dedicated to improving health. We provide more than £700 million a year to support bright minds in science, the humanities and the social sciences, as well as education, public engagement and the application of research to medicine.

Our £18 billion investment portfolio gives us the independence to support such transformative work as the sequencing and understanding of the human genome, research that established front-line drugs for malaria, and Wellcome Collection, our free venue for the incurably curious that explores medicine, life and art.