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Cellectric, Resistell and Lausanne University Hospital will collaborate on a joint Eurostars project to build Phenotech-CF, a workflow that will reshape how antimicrobials are delivered to patients suffering from cystic fibrosis. In total, the project has been awarded nearly €2.7 million, and is projected to last three years.

Muttenz and Lausanne, Switzerland, Vienna, Austria – March 4, 2024 – Cellectric and Resistell are delighted to announce the launch of a collaborative project which will see the two develop a workflow capable of accelerating the pace at which cystic fibrosis patients receive targeted antibiotic treatments.

The two companies will combine Cellectric's proprietary sample purification and preparation technology with Resistell's innovative nanomotion-based antimicrobial susceptibility testing platform to form Phenotech-CF, one complete operational workflow.

Phenotech-CF will begin development on April 1st; a process that is projected to take two years. Afterwards, researchers at Lausanne University Hospital (CHUV) and University of Lausanne (UNIL) will subject it to a full year of validation testing.

The joint effort has been awarded funding from Eurostars, an initiative of the Horizon

program that financially supports projects between small and medium enterprises.

In total, the three-year project will receive nearly €2.7 million in backing. Resistell will receive €1.54 million and Cellectric, €830,000. The remainder will go to CHUV.

Beyond helping those with cystic fibrosis, Phenotech-CF will serve as a valuable tool in the fight against antimicrobial resistance, an issue the World Health Organization **claims contributed to nearly 5m deaths** worldwide in 2019, and one that is only set to get worse without intervention.

Phenotech-CF will also be used to help patients suffering from other types of infection and, going forward, could be used to test new antimicrobial agents, including phages.

Managing director and co-founder of Cellectric, Dr. Terje Wimberger, said: "We are incredibly excited to partner with Resistell on this project and are hugely appreciative of Horizon Europe for its recognition. For too long, clinicians have lacked adequate insights about the nature of bacterial infections, leading to improper antibiotic use. As AMR becomes a global issue, it is vital that companies like ours act now to combat its spread."

CEO of Resistell, Danuta Cichocka, added: "Pharmaceutical companies are waking up to the fact that unless they act quickly, their current generation of antibiotics will soon stop working. By combining Resistell and Cellectric's technologies, we will create a tool that will prolong their lifespan, while also creating a platform for the subsequent development and testing of new agents, a process that could save millions of lives."

Dr Grégory Resch, head of CHUV's Laboratory of Bacteriophages and Phage Therapy of the Center for Research and Innovation in Clinical Pharmaceutical Sciences (CRISP), said: "We at CHUV are incredibly excited to serve as the hosts for this project. We believe that the combined workflow, Phenotech-CF, will not only help our clinicians in their day-to-day work, ensuring vulnerable cystic fibrosis patients are given the correct treatment, but also help in our search for new antimicrobial agents."

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Notes To Editors

About Cellectric

Founded in 2021 as a spin-off from the Austrian Institute of Technology, Cellectric has developed a new way of manipulating cell-containing media using state-of-the-art dielectric materials to induce highly targeted electrodynamic effects, allowing for selective permeabilization or destruction of specific target cells in a complex sample.

Cellectric is initially looking to apply its technology in sepsis and sepsis-adjacent indications, where its platform can be used to rapidly isolate and identify bacteria, hastening the pace at which diagnoses can be made. Beyond these initial showcase indications, the company plans to apply its platform to the isolation of leukocytes from human whole blood, from which a plethora of advanced therapy-related steps can be improved and simplified.

About Resistell

Resistell was founded as a spin-off from École Polytechnique Fédérale de Lausanne (EPFL) in 2018 with the goal of preventing the development of antimicrobial resistance. It hopes to do this by enabling clinicians to deliver targeted antibiotic therapies as quickly as possible.

The company's Antibiotic Susceptibility Testing (AST) platform measures vibrations produced by living bacterial cells to gauge their presence. Because this approach is growth-independent, it can be performed almost instantly from a blood sample, reducing the time-to-result from days to just hours. Moreover, using antibiotic libraries, Resistell's technology can indicate which antibiotic will be most effective in treating any one specific infection.

About Lausanne University Hospital (CHUV) and Dr Grégory Resch

Since 2019, Lausanne University Hospital (CHUV) has been ranked among the top best hospitals in the world, according to the US magazine **Newsweek**. The CHUV is one of five Swiss academic public health care centres, and plays a leading role in the fields of medical care, research, teaching and training, in collaboration with the Faculty of Biology and Medicine at the University of Lausanne. With its mission lying at the crossroads between medicine, sciences and humanities, CHUV offers a personalized

approach to patient care. Dr Grégory Resch heads up CHUV's Laboratory of Bacteriophages and Phage Therapy, where he investigates the use of bacteriophages (phages) and phage lysins as new antimicrobial agents.

About Eurostars

Eurostars is a European subsidy program that funds and supports innovative partnerships between small and medium enterprises. The funding comes from the Horizon Europe program and is available to innovators looking to work with universities and research centres in 37 participating countries.

Since 2014, almost €2 billion has been given out by Eurostars. A **2017 analysis** of completed Eurostars projects found that nearly 90% delivered on their intended goals and that companies who successfully completed their projects saw their revenues grow 18%.

Source:
www.cellectric.com/news/cellectric-resistell-and-lausanne-university-hospital-will-collaborate-on-a-joint-eurostars-project/