PRESS RELEASE
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Belgian start-up Santero Therapeutics announces a discovery that could revolutionize the fight against antibiotic resistance!

Santero Therapeutics, a Belgian start-up active in the research of innovative drugs targeting highly antimicrobial-resistant (AMR) pathogens, announces a first in vivo result based on a completely new and very promising mode of action.

Faced with the growing threat of antimicrobial resistance (AMR) and in particular antibiotic resistance, two researchers from the ULB, co-founders of the start-up Santero Therapeutics, have just presented a major discovery at the 9th AMR Conference held in Basel at the end of February. An international reference in the field, this conference brings together biotech and pharmaceutical companies, the academic world, public institutions and investors who are committed to fighting the scourge of bacteria, viruses, molds and parasites that are resistant to current treatments.

"**We have reached a crucial milestone that validates some twenty years of research and will enable us to move towards a phase 1 clinical trial, with a view to developing a new generation of antibiotics**. In recent months, we have identified several very promising molecules (the so-called "hit-to-lead" phase) and we have twice demonstrated, in the last few weeks, the concrete in vivo action of two of them," said **Abel Garcia-Pino, co-founder of Santero Therapeutics** and professor at the ULB.

A 10 million euro fundraising to finance the next stage

On the strength of this success, in line with its development plan, Santero Therapeutics is embarking on a new fundraising campaign of 10 million euros to support the next phase of optimization ("lead optimization"), which is necessary before any tests on human beings can be considered. Since its creation in 2021, the start-up has already raised 10.5 million euros from private investors (the investment fund dedicated to life sciences Newton Biocapital and a consortium of business angels from the country's three regions) and public investors (SFPIM, WE and Sambrinvest).

"It is important to understand that **we have made a discovery that could help solve a serious public health problem. We have identified a new mode of action that works differently from historical and current antibiotics.** Our innovation consists of attacking a weak point in bacteria that is present in most of them: their resistance to chemical stress (temperature, acidity, lack of nutrients, etc.). If we manage to disrupt or break down this essential mechanism, we can block them or even kill them. This is what we have demonstrated in the laboratory: two of our molecules injected intravenously reduced the infection in the blood of a mouse with septicaemia by a factor of 100", explains **Cédric Govaerts, co-founder of Santero Therapeutics**, professor at the ULB and research director at the FNRS.

Furthermore, it has been demonstrated in vitro that the molecule used in the in vivo proof of concept demonstration presented at the AMR Conference is insensitive to current resistances. It was able to destroy both lambda bacteria and bacteria that are hyper-resistant to antibiotics. The new mode of action therefore seems promising in this respect too.

A global public health issue

According to the United Nations, antimicrobial resistance (AMR) is one of the ten main threats to humanity. **The number of deaths associated with AMR is estimated at around 5 million per year worldwide in 2020; a figure that could double by 2050, or even reach several tens of millions** of associated deaths according to recent scientific articles[1].

For its part, the European Antimicrobial Resistance Surveillance Network (EARS-Net)[2] estimates that infections with antibiotic-resistant bacteria affected around 14,000 people and caused more than 600 deaths in Belgium in 2020.

"If we do not innovate fast enough, the growing phenomenon of antimicrobial resistance will make surgical interventions much riskier and infections that are now treated in a few days will once again become potentially fatal. Antibiotics have so far been extremely effective, easy to develop and very cheap. **Today, we are entering a new era in which we must once again invest in research and development, considering this work and these costs at their true societal and financial value**," warns **Herman Goossens, chairman of the Scientific Advisory Board of Santero Therapeutics** and professor emeritus of medical microbiology at the University of Antwerp (UA) and the University Hospital (UZA).

Since the end of the 1980s, pharmaceutical companies have lost interest in this field, which is much less profitable than others. Antimicrobial drugs are administered to as few people as possible, as infrequently as possible and for the shortest possible duration to avoid the development of resistance. It is therefore not surprising that few new antibiotics have been brought to market in recent years. In its latest report, published in 2024, the WHO lists only 12 innovative antibiotics currently in development to treat infections on the WHO List of Priority Pathogens[3]. By way of comparison, the WHO lists 907 drug candidates in development (all stages combined) for breast cancer, 528 for Alzheimer's disease, and another 191 for asthma, compared to 99 antibacterial agents.[4]

Today, a certain level of interest from investors and the pharmaceutical sector is re-emerging with the realization of the risks to come if antimicrobial resistance continues to increase.

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[1] https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(24)01867-1/fulltext; https://www.nature.com/articles/d41586-024-03033-w

[2] https://www.healthybelgium.be/en/key-data-in-healthcare/general-hospitals/quality-and-innovation/antimicrobial-resistance

[3] https://www.who.int/publications/i/item/9789240094000

[4] https://www.who.int/observatories/global-observatory-on-health-research-and-development/monitoring/health-products-in-the-pipeline-from-discovery-to-market-launch-for-all-diseases

Developing a platform rather than a product

While Santero Therapeutics has so far concentrated on the search for molecules capable of blocking or destroying Gram-positive bacteria (including the dreaded Staphylococcus aureus), the start-up is now also developing molecules active against Gram-negative bacteria, which present a serious public health problem, particularly in hospitals.

"**Our long-term objective is to set up a technological platform that will enable us to develop a whole series of new antibiotics**. We could also envisage specific partnerships to work on a research program dedicated to a particularly virulent bacterium in a region of the world, for example," concludes Cédric Govaerts.

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About Santero Therapeutics

Santero Therapeutics SRL, founded in 2021 by Professors Cédric Govaerts, PhD and Abel Garcia-Pino, PhD, is a spin-off of the Université Libre de Bruxelles. It is based on some twenty years of fundamental research. Santero Therapeutics is developing an innovative platform aimed at enabling the development of drugs with new modes of action to target highly resistant pathogens. Santero Therapeutics thus intends to make an active contribution to tackling this growing public health challenge in Belgium and worldwide. The start-up is based in the Watson & Crick Hill science park in Mont-Saint-Guibert and employs around fifteen people. www.santero.be

Note to editors

Antimicrobials are drugs used to kill microorganisms or to prevent them from developing and multiplying. They include drugs that fight bacteria (antibiotics), viruses (antivirals), mold (antifungals) and parasites (antiparasitics).

A microorganism can be resistant to antimicrobials either because its genome has mutated (in which case we talk about "acquired resistance"), or because of intrinsic characteristics, such as the presence of a thick protective cell membrane. More information: https://www.sciensano.be/en/health-topics/antimicrobial-resistance-amr