

## **AiCuris and Lysando join forces in the fight against antimicrobial resistance**

- **Cooperation focused on the joint development and optimization of human anti-infective drug candidates against gram-negative and gram-positive bacteria in relevant indications using Lysando's Artilysin®s technology platform**
- **Artilysin®s represent a completely new class of molecules with a novel mode of action with the potential to replace conventional antibiotics; platform already validated in veterinary medicine and medical devices**
- **Unparalleled expertise in anti-infective drug development best positions AiCuris to exploit the potential of Lysando's Artilysin® technology platform in the fight against antimicrobial resistance**

**Wuppertal, Germany and Balzers, Liechtenstein, July 9, 2019** - The biotechnology company Lysando AG with its Regensburg-based subsidiary Lisando GmbH and AiCuris Anti-infective Cures GmbH, a leading company in the discovery and development of drugs against infectious diseases, today announced the signing of a long-term cooperation for the development and optimization of Artilysin®-based drug candidates for various anti-bacterial indications.

Under the terms of the agreement, AiCuris will receive exclusive access to Lysando's Artilysin® technology to generate Artilysin®s for specific treatments of gram-positive and gram-negative bacterial infections in humans. Both companies will collaborate in the identification and optimization of new Artilysin®-based drug candidates for the treatment of bacterial infections, including e.g. hospital-acquired pneumonia, sepsis and cystic fibrosis. Financial details of the agreement were not disclosed.

“With this cooperation, we further strengthen AiCuris’ position as a leading pharmaceutical company in anti-infective drug development,” **said Dr. Holger Zimmermann, CEO of AiCuris.** “Antimicrobial resistance is one of the biggest threats to human health worldwide, and innovation is desperately needed to address the high and increasing medical need. AiCuris today is one of the few European companies active in that field and remains committed to fight resistant bacteria and develop new antibacterial agents. With our unparalleled expertise in anti-infective drug development AiCuris is best positioned and determined to drive the fight against antimicrobial resistance with novel approaches. Artilysin®s represent a new class of molecules with a mechanism of action that differs from all known antimicrobial agents. We are very much looking forward to working with Lysando on the development of drug candidates with the potential to truly make a difference in the treatment of infections with multidrug-resistant bacteria.”

With the rapid emergence and spread of multidrug-resistant (MDR) bacterial infections, antimicrobial resistance (AMR) has become a major global public health threat. According to the World Health Organization, every year two million people acquire bacterial infections in U.S. hospitals alone and 90,000 of these patients die. About 70% of these infections are caused by bacteria resistant to at least one drug. Patients in intensive care units (ICUs) are particularly vulnerable to infections. The consequences range from chronic wounds following surgeries to sepsis and fatal infections. Gram-negative and gram-positive pathogens are considered to be amongst the most serious threats to public health and represent a

major unmet medical need. Increasingly, these infections are resistant to a range of antibiotics, leaving doctors with only few options to treat their patients.

### **Artilysin® - a new class of molecules with a novel resistance-breaking mode of action and the potential to replace common antibiotics**

Artilysin®s represent a completely new class of molecules with a novel mode of action. Their effectiveness is not dependent on binding to a specific receptor nor interfering with the cell's metabolism. Artilysin®s are able to pass the protective outer membrane of gram-negative bacteria and have increased affinity to the cell wall of gram-positive bacteria. The interaction of the Artilysin®s with peptidoglycans destabilizes and degrades the bacteria cell envelop, causing the cell to burst from the high osmotic pressure within seconds.

The use of Artilysin®s in other areas such as veterinary medicine and medical devices has shown that this molecule class is more stable against resistance formation than all other known antimicrobial agents. Artilysin®s can therefore also be used against multidrug-resistant germs, where antibiotics today are no longer effective. Notably, Artilysin®s tested to date have shown no toxicity in vitro or in vivo within a wide dosing window.

“We are delighted to join forces with such an experienced partner like AiCuris. This cooperation goes beyond normal agreements as it brings together a specialist in anti-infective drug development and a technology platform with the highest potential to fight the fast-growing threat of resistant and highly resistant germs,” **said Markus Graf Matuschka von Greiffenclau, Chairman of Lysando**. “We are observing a steadily increasing persistence and resistance of pathogenic germs reducing the effectiveness of common antibiotics. This trend cannot be reversed. We strongly believe that the combination of our outstanding platform of Artilysin®s with AiCuris' excellence in the development of human pharmaceuticals promises groundbreaking success in the fight against the biggest scourge of the 21<sup>st</sup> century - antimicrobial resistance.”

#### **About Lysando AG**

Lysando AG with subsidiaries in Regensburg and Bangkok was founded in Liechtenstein in 2009. Lysando AG is focused on the development of its proprietary Artilysin® platform to become the world's leading antimicrobial technology. Artilysin® technology has already been successfully established in the fields of medical devices and veterinary medicine. With licensing Artilysin® to AiCuris, the technology has now gained a foothold in the field of human pharmaceuticals.

The Artilysin® technology is effective against all germs classified as particularly dangerous by the WHO. Artilysin® is resistance breaking, environmentally friendly and gently to the microbiome. As of today, Lysando AG has granted over a dozen licenses to global companies.

#### **About AiCuris Anti-infective Cures GmbH**

AiCuris was founded in 2006 as a spin-off from Bayer and focuses on the discovery and development of drugs targeting infectious diseases. SANTO Holding is the Company's majority investor. PREVYMIS™ (Letermovir), a first-in-class non-nucleoside cytomegalovirus (CMV) inhibitor acting via a novel mechanism of action that was licensed to MSD in 2012, is approved for use in bone marrow transplants in the EU, the USA, Japan and other parts of the world for prevention of CMV infections in adult recipients

of an allogeneic hematopoietic stem cell transplant. The Company develops drugs for the treatment of viruses such as human CMV, herpes simplex virus (HSV), hepatitis B virus (HBV), and adenoviruses. In the field of antibacterials, AiCuris seeks to develop innovative treatment options for life-threatening, (multidrug)-resistant hospital-treated pathogens.

In 2018 Prof. Dr. Helga Rübsamen-Schaeff, Founding-CEO, and Dr. Holger Zimmermann, CEO of AiCuris, were awarded the German Future Prize 2018 (German President's Award for Innovation in Science and Technology) for the development of Letermovir and their project "Protection in the Absence of the Immune System - a Life-Saving Innovation against Dangerous Viruses" (original title: "Schutz bei fehlendem Immunsystem - die lebensrettende Innovation gegen gefährliche Viren").

For more information, please visit [www.aicuris.com](http://www.aicuris.com).

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