GARDP announces partnership with Calibr, HZI/HIPS and the University of Queensland

- Multi-actor partnership tests natural products and compound libraries for antibacterial activity
- Discovery efforts will focus on World Health Organization’s (WHO) priority pathogens

The Global Antibiotic Research and Development Partnership (GARDP) is partnering with Calibr, the Helmholtz Centre for Infection Research (HZI), in particular its location Helmholtz-Institute for Pharmaceutical Research Saarland (HIPS), and the University of Queensland’s (UQ) Community for Open Antimicrobial Drug Discovery (CO-ADD) in its efforts to develop and ensure new antibiotics are globally available to all patients who need them. The agreement allows GARDP to access and test Calibr’s ReFRAME compound library and HIPS natural products library. Both libraries will be screened by CO-ADD to discover novel compounds or combinations of drugs that will kill the priority pathogens identified by the WHO in critical need for research and development of new antibiotics. (1)

With few antibiotics in development since the early 1990s, antimicrobial resistance (AMR) is a major and rapidly growing global health challenge that is already making previously easy to treat infections harder to treat. Approximately 700,000 people worldwide die of drug-resistant infections every year and this number is expected to increase significantly in the future. (2) Serious bacterial infections, and in particular Gram-negative bacterial infections, have been identified by the WHO as a global public health priority. (1)

“One of the biggest challenges in the fight against AMR is discovering new antibiotics to treat the critical priority pathogens. That’s why it’s essential we conduct novel discovery research to populate a robust pipeline,” said Professor Laura JV Piddock, Director of Scientific Affairs at GARDP. “We’re very excited about today’s announcement. Natural products have yielded many of the antibiotics developed for clinical use to date. Through Calibr, we are aiming to identify compounds that will potentiate the activity of an important antibiotic rendered ineffective by resistance.”

This is GARDP’s first discovery collaboration that links partners in Germany and the USA with Australia. Through this screening, GARDP seeks to identify novel compounds suitable for optimization and clinical development as drugs for patients.

“There is an urgent need to find new antibiotics against pathogens that have developed drug resistance, and partnering with GARDP is a terrific opportunity to leverage Calibr’s ReFRAME collection to explore whether existing drugs can be repurposed as effective antibiotics,” says Arnab Chatterjee, Vice President of Medicinal Chemistry at Calibr, the drug discovery division of Scripps Research.

“This is a superb opportunity allowing us to combine the expertise of GARDP, CO-ADD and HZI/HIPS in our search for novel antibiotics, especially against the most threatening pathogens according to WHO’s classification. We very much hope that this joint development can be expanded and intensified in the future to also include, for example, additional partners from the German Center for Infection Research (DZIF),” says Prof Rolf Müller, Executive Director, HIPS and
Head of Microbial Natural Products Department.

“CO-ADD has been highly successful in helping the global chemistry community to identify over 1500 potential new antibiotics since its launch in 2015,” said Dr Mark Blaskovich, co-founder of CO-ADD. “We are looking forward to applying our screening expertise to discover new antibiotics within the interesting libraries of compounds identified by GARDP. International initiatives such as this are essential to refuel the antibiotic pipeline, which has been neglected in recent years and placed us dangerously close to a return to the pre-antibiotic era, when even simple infections caused death.”

The announcement of this multi-partner agreement comes as over 10,000 experts come together to present their latest findings at the European Society of Clinical Microbiology and Infectious Diseases’ annual conference.

About GARDP
GARDP is a not-for-profit research and development organization that addresses global public health needs by developing new or improved antibiotic treatments, while endeavouring to ensure their sustainable access. Initiated by the World Health Organization (WHO) and the Drugs for Neglected Disease initiative, GARDP is an important element of WHO’s Global Action Plan on Antimicrobial Resistance that calls for new public-private partnerships to encourage research and development of new antimicrobial agents and diagnostics. www.gardp.org.

About Calibr
Calibr represents a first-of-its-kind, nonprofit translational research institute dedicated to creating the next generation of medicines. A division of Scripps Research and situated in the heart of San Diego’s Torrey Pines Mesa biomedical research hub, Calibr is uniquely positioned to create and proliferate innovative partnerships. Calibr’s research interests span a broad range of human diseases, including cancer, autoimmunity and inflammatory diseases, metabolic and cardiovascular diseases, infectious and neglected diseases, as well as age-related and degenerative diseases.

About CO-ADD
CO-ADD is a global open-access screening initiative launched in February 2015 to uncover significant and rich chemical diversity held outside of corporate screening collections. Established within the Centre for Superbug Solutions at The University of Queensland’s Institute for Molecular Bioscience (IMB), CO-ADD is led by a multidisciplinary team including Principle Investigators Prof Matthew Cooper and Dr Mark Blaskovich, Project Leader Dr Johannes Zuegg (operations and cheminformatics), and Program Coordinators Dr Alysha Elliott (microbiology) and Dr Karl Hansford (chemistry). CO-ADD offers free testing against five pathogenic bacteria and two fungi, and has tested nearly 300,000 compounds submitted by over 300 academic groups from 45 countries, identifying over 1500 potential new antibiotics. CO-ADD is supported by funding from the Wellcome Trust, UQ and IMB.

About HIPS
Scientists at the Helmholtz Centre for Infection Research (HZI) in Braunschweig, Germany, are engaged in the study of different mechanisms of infection and of the body’s response to infection. Helping to improve the scientific community’s understanding of a given bacterium’s or virus’ pathogenicity is key to developing effective new treatments and vaccines. The HZI is a member of the German Center for Infection Research (DZIF). www.helmholtz-hzi.de/en

The Helmholtz Institute for Pharmaceutical Research Saarland (HIPS) in Saarbrücken is a location of the Helmholtz Centre for Infection Research (HZI) and was established by the HZI and Saarland University in 2009. Its researchers are searching mainly for new agents against infectious diseases, optimise these agents for application in humans and research ways how these agents can be transported best through the body to the site of action. www.helmholtz-hzi.de/hips
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