







BioVersys and Partners from Lille Sign Long-term Collaboration Agreement Creating a Unique Cross-Border AMR Cluster in Antimicrobial Research Excellence

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BioVersys and partners at the Pasteur Institute Lille and University of Lille, Les Hauts de France, sign long-term collaboration agreement creating a unique cross-border cluster of research excellence, focused on unmet medical needs in antimicrobial resistance

BioVersys is strengthening its ties with two institutes of scientific excellence, that of the Institut Pasteur de Lille and University of Lille, with whom we enjoy a long-standing and fruitful collaboration, that already resulted in a clinical development candidate for tuberculosis, also in collaboration with GSK, which enters clinical trials in 2H 2020.

The new collaboration called "**State-of-the-art Medicines to Abort ResisTance joint research laboratory**" "**SMART-Lab**" builds on the strengths of program on tuberculosis, to develop new programs to address the priority unmet medical need related to hospital and community acquired infections by Gram-negative and Gram-positive bacteria. **SMART-Lab** encompasses three research groups, that of Pr Nicolas Willand (INSERM U1177, Drugs and Molecules for Living Systems), Dr Alain Baulard and DrRuben Hartkoorn (Center of Infection and Immunity of Lille, INSERM U1019 - CNRS UMR8204) at the academic institutions, and the French subsidiary BioVersys SAS of the Swiss biotech BioVersys AG - creating a unique cross-border AMR cluster in antimicrobial research excellence.

Dr. Marc Gitzinger, CEO and co-founder of BioVersys: "This collaboration is a sign of strength of innovation beyond borders, to address antimicrobial resistance (AMR) through applying excellence in science and innovation. In times of the current COVID-19 viral pandemic, it is crucial that we don't forget that the next burgeoning infectious disease killer is right at our doorstep in the form of antimicrobial resistance (AMR). We must rapidly develop truly novel solutions to meet this increasing challenge. BioVersys with its talented partners is determined to make a difference in AMR patient care world-wide by delivering novel therapeutic treatment options that can deliver better patient outcomes."

Benoit Deprez, Scientific Director of the Institut Pasteur de Lille.

This collaboration is in the line of a long history of public private partnerships seeking to deliver industry-ready innovations and enable the translation of scientific discoveries into real progress for human health.

Professor Nicolas Willand, Professor of Organic and Medicinal Chemistry at the School of Pharmacy, University of Lille and coordinator of the SMARt-Lab: "The current situation in terms of antimicrobial resistance is very problematic and the combination of our strengths and expertise within a public-private partnership can only increase our chances of finding new therapeutic









alternatives. Together we have optimized and selected a new drug candidate to treat multi-resistant tuberculosis. We will do everything to be succesful again in the context of nosocomial diseases."

Pr. Lionel Montagne, Vice-président in charge of the Research, University of Lille : "The University of Lille is developing cutting-edge research programs in the field of precision healthcare. We are very pleased that this collaboration with Bioversys is taking on an additional and long-term impulse with the support of the Hauts-de-France Region and the European Union. It will undoubtedly strengthen the position of the Lille site as a leader in the field of health research."

About AMR

In Europe ~4 million hospital-acquired infections (HAIs) occur annually and antibiotic resistance is responsible for an estimated 33,000 deaths/yearⁱ, with EUR 1.5 billion in healthcare costs and productivity losses/yearⁱⁱ. AMR is not only a European problem, but a global one. Each year in the U.S. at least 2.8 million people are infected with resistant bacteria leading to 35,000 attributed deathsⁱⁱⁱ. Worldwide 700'000 lives are estimated to be lost annually, and this is predicted to rise to 10 million by 2050^{iv}. HAIs can affect patients undergoing surgeries, treatments for cancer, or viral infections, such as the recent corona virus pandemic^v.

About tuberculosis – TB

Tuberculosis remains a formidable Global Health challenge particularly considering the fact that about 1.7 billion people, 23% of the world's population, are estimated to have a latent TB infection, and are thus at risk of developing active TB disease during their lifetime, as currently estimated by the Centers for Disease Control and Prevention (2018).^{vi} 1.5 million people died from TB in 2018 and it remains one of the top 10 causes of death worldwide and the leading cause from a single infectious agent (above HIV/AIDS).^{vii} In 2018, there were an estimated 10 million new TB cases worldwide, 5.7 million men, 3.2 million women and 1.1 million children, 860 thousand (8.6%) were people living with HIV. It was estimated that up to 430'000 new cases of isoniazid and rifampicin resistant (MDR-TB).^{vii} Worldwide, only 55% of MDR-TB patients are currently successfully treated. In the modern world of global travel, and ease with which infections spread, it is very worrying to note that three countries accounted for almost half of the world's cases of MDR/RR-TB in 2017: India (27%), China (14%) and the Russian Federation (9%).

About the University of Lille

The University of Lille, a multidisciplinary university of excellence at the heart of Northern Europe, boasts an outstanding cultural and scientific heritage that is etched into the Hauts-de-France Region's history. With 67,000 students (including 7,300 international students), 6,300 staff members, 66 research units, and diplomas in all fields of study, the University of Lille is a major player in the region in training, research, innovation, and its commitment to social issues.

For more information about the University of Lille, see its website and check it out on Facebook and Twitter.

About the Institut Pasteur de Lille

The Institut Pasteur de Lille is a renowned private foundation that has been serving the public since 1898 through scientific research on disease prevention and health. The Institut is an internationally recognized scientific hub in Hauts-de-France, and plays an important role in economy and innovationas well, through its biotechnology platforms and startups. With a staff of 800, the campus of the Institut Pasteur de Lille devotes itself to fundamental research and public health on a daily basis, striving to bring us **longer, better lives**. At the Centre de Recherche sur la Longévité (Longevity Research Centre), 33 research teams are engaged in the battle against cardiovascular or neurodegenerative diseases, infectious, parasitic and inflammatory diseases, metabolic diseases, cancers and diabetes.

To prolong the period of healthy life after the age of 60, the Institut Pasteur de Lille also counts on the Centre Prévention Santé Longévité (Prevention Centre for Health and Longevity) along with specialised resources to investigate the impact of pollution on health.

As a financially and legally independent member of the Pasteur Institutes network (RIIP), Institut Pasteur de Lille is authorised to receive donations, bequests and sponsorship for its research projects. www.pasteur-lille.fr

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BioVersys AG is a privately owned Swiss pharmaceutical company focusing on research and development of small molecules acting on novel bacterial targets with applications in Anti-Microbial Resistance (AMR) and targeted microbiome modulation. With the company's award-winning TRIC technology we can overcome resistance mechanisms, block virulence production and directly affect the pathogenesis of harmful bacteria, towards the identification of new treatment











options in the antimicrobial and microbiome fields. By this means BioVersys addresses the high unmet medical need for new treatments against life threatening resistant bacterial infections and bacteria-exacerbated chronic inflammatory microbiome disorders. Our most advanced R&D programs are in preclinical development for nosocomial infections (hospital infections), and Tuberculosis in collaboration with GlaxoSmithKline (GSK) and a consortium of the University of Lille. In 2020 BioVersys plans to launch its first Phase I clinical trials. BioVersys is located in the Technologiepark in the thriving biotech hub of Basel, please visit www.bioversys.com. Follow us on Twitter @Bioversys.

BioVersys Contact: Alina Lundin, Executive Assistant to CEO, Tel. +41 61 633 22 50; Mail: info@bioversys.com



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- i https://ec.europa.eu/health/amr/antimicrobial-resistance en
- iii https://www.cdc.gov/drugresistance/biggest-threats.html
- ^{iv} The review on antimicrobial resistance May 2016
- ^v Fei Zhou et al. titled "Clinical course and risk factors for mortality of adult inpatients with COVID-19 in Wuhan
- ^{vi} <u>https://www.cdc.gov/globalhealth/newsroom/topics/tb/index.html</u>,
- vii http://www.who.int/en/news-room/fact-sheets/detail/tuberculosis and Global Tuberculosis Report 2019 WHO

¹ https://www.ecdc.europa.eu/en/news-events/33000-people-die-every-year-due-infections-antibiotic-resistant-bacteria