PRESS RELEASE

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

Basel, Switzerland, July 14th, 2020. 09:00 CEST

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

BioVersys continues to strengthen ties with two institutes of scientific excellence, the Institut Pasteur de Lille and the University of Lille, with whom we already enjoy a long-standing and fruitful collaboration. Our collaboration has already resulted in a therapeutic compound for tuberculosis that will enter clinical development in 2H 2020, in collaboration with GSK.

The new public-private joint laboratory called **"State-of-the-art Medicines to Abort ResisTance joint research laboratory" "SMART-Lab"**, funded by FEDER and I-SITE ULNE, builds on the strengths of the collaboration on tuberculosis, to develop new drug discovery programs to address the unmet medical need related to hospital and community acquired infections from high priority Gram-negative and Gram-positive bacteria. **SMART-Lab** encompasses three research groups, namely those of Prof. Nicolas Willand (INSERM U1177, Drugs and Molecules for Living Systems), Dr. Alain Baulard and Dr. Ruben Hartkoorn (Center of Infection and Immunity of Lille, INSERM U1019 - CNRS UMR8204) at the academic institutions, and BioVersys SAS, a subsidiary of the Swiss biotech BioVersys AG. This creates a unique cross-border AMR Cluster in Antimicrobial Research Excellence (AMR-CARE).

Dr. Marc Gitzinger, CEO and co-founder of BioVersys: "This collaboration is a sign of strength of cross-border innovation within Europe that addresses antimicrobial resistance (AMR) through applying excellence in science and development. In times of the current COVID-19 viral pandemic, it is crucial that we do not forget that the next burgeoning infectious disease killer right at our doorstep is likely to be in the form of AMR. We must rapidly develop truly novel solutions to meet this increasingly urgent challenge. BioVersys, with its talented partners, is determined to make a difference in AMR patient care worldwide by delivering novel therapeutic treatment options that will deliver better patient outcomes."

Prof. 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 this public-private partnership will increase our chances of finding new therapeutic alternatives. Together we have already optimized and selected a new drug candidate to treat multidrug-resistant tuberculosis. Tomorrow we will write new success stories in the context of nosocomial infections, and we are very proud to do it in Lille."

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Prof. Benoit Deprez, Scientific Director of the Institut Pasteur de Lille: "This collaboration follows a long history we have built in public-private partnerships, seeking to deliver industry-ready innovations and enable the translation of scientific discoveries into real progress for human health. This very program strengthens the link with BioVersys and feeds the pipeline of anti-infective drug discovery projects run on the campus in the frame of the INThREPIDE initiative."

Prof. Lionel Montagne, Vice president 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 impetus with the support of the Région Hauts-de-France 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/year,[1] with EUR 1.5 billion in healthcare costs and productivity losses/year.[2] AMR is not only a European problem, as each year in the U.S. at least 2.8 million people are infected with resistant bacteria leading to 35,000 attributed deaths.[3] Worldwide 700'000 lives are estimated to be lost annually, and this is predicted to rise to 10 million by 2050.[4] HAIs can affect patients undergoing surgeries, treatments for cancer or viral infections (e.g. the recent corona virus pandemic), and as such pull at the fiber of our modern healthcare systems.[5]

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 World Health Organization (2018).[6] 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).[6] In 2018, there were an estimated 10 million new TB cases worldwide, 5.7 million men, 3.2 million women, 1.1 million children and 860 thousand were people living with HIV. Multidrug-resistant TB remains a public health crisis and a health security threat. WHO estimates that there were 484'000 new cases with resistance to rifampicin – the most effective first-line drug, of which 78% had MDR-TB. Worldwide, only 56% of MDR-TB patients are currently successfully treated.[7] 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 2018: India (27%), China (14%) and the Russian Federation (9%). Furthermore, 3.4% of all new and 18% of reoccurring TB cases were MDR/RR-TB and about 6.2% of MDR-TB cases had extensively drug-resistant TB (XDR-TB) in 2018.[7]

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, @univ_lille.

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 innovation as well, through its biotechnology platforms and start-ups. 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 specialized resources to investigate the impact of pollution on health. As a financially and legally

[1] https://www.ecdc.europa.eu/en/news-events/33000-people-die-every-year-due-infections-antibiotic-resistant-bacteria
[2] https://ec.europa.eu/health/amr/antimicrobial-resistance_en
[3] https://www.cdc.gov/drugresistance/biggest-threats.html
[4] The review on antimicrobial resistance May 2016
[5] Fei Zhou et al. titled "Clinical course and risk factors for mortality of adult inpatients with COVID-19 in Wuhan
[6] Global Tuberculosis Report 2019 WHO
[7] http://www.who.int/en/news-room/fact-sheets/detail/tuberculosis

independent member of the Pasteur Institutes network (RIIP), Institut Pasteur de Lille is authorized to receive donations, bequests and sponsorship for its research projects. *www.pasteur-lille.fr*. Follow us *on* Facebook *and* Twitter @PasteurLille.

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 antimicrobial 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.

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Le projet **SMARt-Lab** est cofinancé par l'Union européenne avec le Fonds européen de développement régional (FEDER)