



Signia Therapeutics, Cynbiose and the VirPath academic laboratory are partnering on an ambitious collaborative R&D project to advance the development of innovative therapeutic treatments in the field of respiratory infections.

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Signia Therapeutics, Cynbiose and the VirPath academic laboratory announce the launch of the METABIOSE project, winner of the 2019 R&D Booster award, supported by the Regional Innovation Fund of the Auvergne Rhône Alpes region.

The METABIOSE project aims to advance the development of new therapeutic treatments in the field of respiratory infections as part of a unique collaboration between a biotech with a disruptive technology, an innovative preclinical CRO and an academic laboratory of excellence.

Acute respiratory infections are the leading causes of death among communicable diseases, with an estimated 3.9 million deaths worldwide each year according to the WHO. Among these infections, pneumopathy and bronchiolitis caused by respiratory syncytial virus (hRSV) or human metapneumovirus (hMPV) generate a large number of hospitalizations in people at risk, with severe infections and are the leading cause of death for children under the age of 5.

The lack of effective therapeutic treatment and vaccine against these pathogenic viruses today also contributes to the prevalence of bacterial overinfections and the recurrent emergence of antibiotic resistance. Respiratory infections represent a direct economic cost of \$10 billion (\$80 billion in indirect costs).

The METABIOSE project aims to develop and characterize a translational model of metapneumovirus infection (hMPV), then to validate in preclinical studies a drug repositioned as a pneumovirus inhibitor from Signia Therapeutics's portfolio, as well as a new nebulization delivery thanks to an approved medical device.

On the medical and social level, this project will contribute significantly to the development of a future treatment for the bronchiolitis and pneumovirus pneumopathy that is lacking today.

"The METABIOSE project will enable Signia Therapeutics to reach an essential preclinical validation stage for its drug candidate repositioned in the treatment of pneumovirus infections. This very important value creation step will thus strengthen the drug candidate's preclinical record in a translational relevant model and key for the validation of the drug delivery by nebulization," says **Philippe Personne, President of Signia Therapeutics**. "We welcome the strong support of the Auvergne Rhône Alpes region for this METABIOSE project, which opens up concrete outlooks for future human clinical trials which is an essential level of validation to consider a licensing agreement with a pharmaceutical company that will ensure the next development steps and take the drug candidate to the market."

"The challenge of this collaborative R&D project is indeed extremely important in terms of public health, as it aims to contribute to the development of innovative and effective treatments to counterbalance the current lack of a specific therapeutic solution against pneumovirus infections. Through this project, our laboratory is also particularly interested in the development of this new translational model of infection, which will be very complementary to our existing models and will allow us to take several other our research projects to a much more advanced and physiologically relevant assessment stage," says **Manuel Rosa-Calatrava, co-director of the VirPath laboratory**. "We are very pleased to be a partner of Signia Therapeutics and Cynbiose for this R&D project, which is part of a high-value collaborative and industrial translational research programme between public and private actors, thus strengthening the Auvergne Rhône Alpes region's position in this field at European and global level".

"This collaborative research and development program in respiratory infections is consistent with our vision for developing innovation and will strengthen our offer in the field of infectious diseases. Our in-depth knowledge of a preclinical translational model combined with our ability to implement research projects with outstanding partners in line with the requirements of the biopharmaceutical industry, will enable us to quickly achieve concrete results" says **Hugues Contamin, CEO of Cynbiose**. "We are very pleased to be part of this project, which combines the skills of industrial and academic actors in the region, creates value and actively participates in the fight against respiratory infections worldwide."

- About Signia Therapeutics

Signia Therapeutics is a biotech and a spin-off of the VirPath laboratory (CIRI, U1111 INSERM - UMR 5308 CNRS - UCBL1 - ENS Lyon), which proposes a breakthrough strategy for the development of innovative and effective antimicrobial therapeutic approaches, including in the area of respiratory infections (flu, infant bronchiolitis, lung disease in children or the elderly, bacterial overinfections). Signia Therapeutics holds an exclusive portfolio of 4 international patent families (licensed from the VirPath laboratory) protecting 8 drugs already on the market and repositioned for new antimicrobial therapeutic indications Respiratory. One of the drug is currently being evaluated in a Phase 2 clinical trial (FLUNEXT) for the therapeutic management of patients suffering from severe influenza in critical care.

<https://signiatherapeutics.com>

- About VirPath

The VirPath laboratory is an academic research laboratory (Claude Bernard Lyon University 1, INSERM, CNRS, ENS Lyon) specializing in virology and human respiratory pathologies. VirPath is associated with the World Health Organization and houses the National Respiratory Virus Reference Centre. To contribute to a better control of respiratory viruses, the laboratory conducts multidisciplinary research incorporating complementary approaches to basic, clinical and technological research. In particular, Virpath has developed methodological tools (reverse genetics, models of in vitro infection, ex-vivo and transrational) and technologies (vaccine antigen production processes, transcriptomic and metagenomic analysis pipeline) and is equipped with BSL-2 and BSL-3 infrastructures. VirPath is a coordinator or partner in many collaborative academic or industrial projects labelled by several national and international competitiveness clusters.

<https://www.virpath.com>

- About Cynbiose

Cynbiose is an innovative CRO founded in 2008 that offers preclinical research services based on a nonhuman primate translational model. Cynbiose has an extensive experience in developing innovative physiopathological models and their standardization, especially in the infectious and respiratory field. The company already proposes a preclinical model for respiratory syncytial virus (hRSV) infections. Moreover, Cynbiose has set-up a subsidiary, Cynbiose Respiratory, whose expertise covers respiratory infections, nebulization studies and pulmonary drug deposition.
<https://www.cynbiose.com>

- About the R&D Booster program

The Regional Innovation Fund of Auvergne-Rhône-Alpes aims to promote collaborative research and development projects (at least two research organizations and knowledge dissemination) in response to an issue of developing new products, processes or services.



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