

EpiLAB raises €1 million to develop its portable, simple and rapid tuberculosis diagnostic kit to be deployed in West Africa

EpiLAB, a medtech start-up based in the Paris region, has announced that it has raised 1 million from Bpifrance, CIC and Business Angels to finalize the development of the first version of its portable test for the rapid diagnosis of tuberculosis, the leading cause of death in the world. After a necessary R&D phase, the company will carry out the first field evaluations of its kit in West Africa, with local health authorities, notably in Togo and Benin, two countries that have shown interest in this technology.

« Tuberculosis is a global pandemic that affects more than 10 million people each year, with 4.2 million still undetected in 2020. Covid-19 has only deepened its under-diagnosis and what motivates us is to make tb screening tests accessible to all populations far from health facilities, in priority in developing countries, and thus to help health organizations and governments in the fight against tuberculosis, » explains Maurice Lubetzki, CEO d'EpiLAB.

Portable, easy to use, reliable and rapid, this new generation diagnostic kit meets the specifications defined by the World Health Organization. Requiring neither health care facilities nor medical personnel, it has been designed to detect numerous tuberculosis patients, in less than two hours, in populations affected by the disease, and helps to limit the transmission of the disease.

The bet of public research to accelerate its development

EpiLAB's test encapsulates the patented EDMYC (Electrochemical Detection of MYCobacteria) technology developed by the Agroecology Joint Research Unit of Dijon, matured and transferred by SATT Sayens to EpiLAB, a company in which it is also a shareholder since March 2, 2021.

This innovative process, developed by researchers Murielle Rochelet and Elodie Barbier of the University of Burgundy, quickly reveals the presence or absence of mycobacteria in a respiratory sample, thanks to an enzymatic reaction coupled with electrochemical detection.

A year after the transfer of the technology by SATT Sayens, EpiLAB has 9 employees and continues its ambitious R&D with its academic partners (Cerba Laboratory, INSERM, INRAE, Ecole Polytechnique, Pierre-Gilles de Gennes Institute). The technological groundwork of the start-up EpiLAB is undoubtedly the technology resulting from French research in Burgundy. Combined with the energy and vision of the founders and a solid network of scientific, industrial and institutional partners, EpiLAB positioned itself as a start-up with a strong innovative vertical that responds to a pressing need in developing countries. Under the French banner, the start-up is supported by international bodies - e.g. FIND, The

Union - whose mission is to accelerate the development and marketing of technologies that solve global health problems.

"Enhancing the value of technologies from public research laboratories and contributing to their transfer to industry is a crucial issue for France. French research is the source of many amazing results and is a very powerful leverage for the growth of start-ups", explains Clément DUBOIS, CTO d'EpiLAB.

R&D initiatives to bring even more diagnostic efficiency to the field

In the context of patent optimization, EpiLAB is collaborating with the National Center for the Fight against Tuberculosis of the Bichat Hospital. Thanks to this actor, very encouraging first performance data have been obtained in the laboratory.

Sustained work has been undertaken on a microfluidic chip, a technology that allows the miniaturization of the test and the integration of the innovative tuberculosis detection process. The first chips have been successfully tested at the Ecole Polytechnique and an operational prototype is expected in the next few months.

"The potential of our innovation is very broad and our ambition is global. Thanks to the unique process for detecting mycobacteria using an electrochemical reaction developed by researchers Murielle Rochelet and Elodie Barbier at the University of Burgundy, the mobile test that we plan to industrialize will help eradicate tuberculosis in developing countries. With the experience gained from the marketing of the first EpiLAB product, we will have the experience and maturity to develop and deploy screening tests for other infectious diseases and thus contribute to the improvement of the global health context," concludes Maurice Lubetzki, CEO d'EpiLAB.

About EpiLAB

Founded by two engineers from the Ecole Centrale and Arts et Métiers, Maurice Lubetzki and Clément Dubois, EpiLAB is a company developing a simple and rapid diagnostic platform for infectious diseases.

The start-up is focusing primarily on tuberculosis. The test relies on a patented method of detection of the disease, combining microbiology and analytical electrochemistry.

EpiLAB won the "Prix du Public" at Syntec-Ingénierie's Prix de l'Ingénierie du Futur, whose 2020 theme was #TechForGood. The start-up also participated in the final of the Challenge des Ecoles Centrales, is one of the 2020 Deep Tech pioneers of the Hello Tomorrow organization and was incubated at the Ecole Polytechniques (Class 13 & 14).

The founders have also obtained honorary loans from the Arts et Métiers foundation and the IGEU network.

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