Montreuil, December 17, 2024

Cherry Biotech secures €2.5 million from the European Union for its organ-on-chip technology

Cherry Biotech, a “TechBio” startup specializing in organ-on-chip and organoid technologies for biomedical research, announces its selection for the prestigious EIC Accelerator program.

The EIC Accelerator supports European companies with breakthrough innovations during their growth and commercialization phases. Through this program, Cherry Biotech will receive €2.5 million in grants and up to €15 million in equity investments, complemented by a lead investor.

"This selection is a significant validation of our vision and the potential impact of our approach in the development of new drugs. To our knowledge, Cherry Biotech is the only European organ-on-chip company awarded in this highly selective competition. Beyond recognizing our approach, this funding will allow us to finalize our Cubix platform and accelerate our commercial development, especially in the United States, which accounts for over 40% of the global pharmaceutical innovation market" said Jérémy Cramer, founder and CEO of Cherry Biotech.

An in vitro organ technology to test drug impacts

Cherry Biotech specializes in organ-on-chip technologies and the reconstruction of organoids—laboratory reproductions of human tissues used to evaluate the safety and efficacy of treatments.

Ten years of research and development, along with no fewer than five patents, have enabled Cherry Biotech to create its unique microfluidic technology, capable of reproducing human organs and their complex cellular interactions.

"We have primarily focused on three main areas: 1) Metabolic diseases such as type 2 diabetes and obesity using our adipose tissue model; 2) Oncology with two key models, metastatic melanoma and breast cancer; and 3) As part of the European collaborative program 'Delivery,' we are working on a liver model to evaluate the toxic effects of drug combinations."

Major players in the pharmaceutical and biomedical research industries, including Sanofi, Novo Nordisk, and the Gustave Roussy Hospital, are collaborating with Cherry Biotech.

"Biotech and pharmaceutical companies have two main requirements for adopting this innovation. First, they seek to integrate immune cells into human tissue models with a functional vascular system to validate new therapeutic targets and select drug candidates. Second, they need these microfluidic technologies to be compatible with their standard processes to enable industrial-scale deployment."

An alternative to animal testing supported by increasingly stringent regulations

Every year, up to 190 million animals are used for scientific research worldwide. Although significant efforts are being made to reduce this number, the transition to alternatives remains slow.

To accelerate this process, the United States is working on a new bill (FDA Modernization Act 3.0) to shorten the approval timelines for clinical trials that incorporate alternatives to animal testing.

Beyond the ethical issue, the use of animals in scientific research raises questions about efficacy: 90% of drug candidates validated in animal models fail when tested on humans during clinical trials.

"From an ethical and economic perspective (failures account for 75% of drug development costs), animal testing in drug development must be surpassed. To change what is currently the norm, our community must demonstrate the superiority of alternatives by providing the necessary scientific evidence to build trust and accelerate this transition. Cherry Biotech is fully committed to this effort, helping pharmaceutical companies, CROs, and academic research teams acquire this expertise" said Jérémy Cramer.

A data provider for artificial intelligence

The power of artificial intelligence represents an unprecedented opportunity to improve the relevance of pharmaceutical trials and accelerate the discovery and development of new drugs, especially with the rise of personalized medicine.

AI requires high-quality data from patients to operate effectively. Data derived from animal models does not provide a sufficiently robust knowledge base due to the low translational relevance of animal models to humans.

Cherry Biotech’s organoids are already being used in AI-driven collaborative programs (Plast Cell) to analyze multi-omics data generated by the Cubix platform. Patient-derived organoids (PDOs) from biopsies are used to identify the most aggressive cancer cells via imaging, enabling physicians to focus their therapeutic strategies on preventing recurrence.

"We are convinced that AI will accelerate the development of new drugs and that it needs high-quality, human-derived data (biological avatars) to reach its full potential. This is the qualitative data we provide with Cherry," said Jérémy Cramer.

With support from the EIC Accelerator, Cherry Biotech will strengthen its team and accelerate its North American expansion. A new funding round is already planned for 2025 to support its technological and commercial ambitions.

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