



PRESS RELEASE

Servier and Poietis announce scientific partnership in 4D bioprinting of liver tissues

Paris and Pessac, France - 19 September 2018 – Servier, an independent international pharmaceutical company, and Poietis, a leader in the production of living bioprinted tissues, have announced a scientific partnership to use Poietis's 4D bioprinting technology for the development and production of liver tissues.

This partnership seeks to improve the detection of drug-induced liver lesions as early as the preclinical trial phase. Such lesions are rare¹ but can have serious consequences for patients. This hepatotoxic² potential is poorly detected by current preclinical models. Beyond animal models, various models based on human cell cultures are available, but most lack longevity and complexity, which limits their usefulness in toxicology. Poietis's 4D bioprinting technology has emerged as an innovative technology capable of helping to overcome these limitations.

The partnership is based on the reproduction of a new, complex, bioprinted human liver tissue containing lines of human liver cells and immunocompetent cells within a defined architecture designed to imitate human liver tissue *in vitro*.

"This project will advance our understanding of hepatotoxicity mechanisms and allow us to offer tests to detect, as early as possible, any adverse effects when developing our medicinal products," said Nancy Claude, Director of Non-Clinical Safety at Servier. *"We can expect to see fewer undesirable hepatic effects in patients as early as the clinical test phase."*

"This new technology's ability to include different cell types within a single extracellular matrix will make it possible to recreate a microtissue in which inflammatory response and tissue remodeling phenomena can be studied in vitro," explained H el ene Aerts, in charge of Biologie Servier's *in vitro* platform.

"We are thrilled to announce the launch of this partnership with Servier. Their non-clinical safety team is highly competent when it comes to using the full range of in vitro toxicology tools, and it is very gratifying to have been selected as a partner in their search for new cellular models and new techniques. The developments we are planning will strive for greater precision, and the associated application requirements, in which control over morphogenesis and standardization issues, are essential," said Bruno Brisson, General Manager and Chief Business Officer at Poietis.

"This long-term partnership to develop liver tissue with bioprinting technology is an important step in the deployment of 4D bioprinting in the pharmaceutical industry. Following our collaboration with KUL³ on

¹ Chen M, Suzuki A, Borlak J, Andrade RJ, Lucena MI. Drug-induced liver injury: Interactions between drug properties and host factors. *J Hepatol.* 2015;63(2):503-514.

² Hepatotoxicity is defined as the power of a substance to damage the liver.

³ Katholieke Universiteit Leuven, a Dutch/English/Belgian University with its headquarters in Louvain.



cartilage bioprinting for the purposes of tissue repair, this new scientific partnership with Laboratoires Servier is in line with the strategy of Poietis, which aims to extend the use of its technology beyond its initial applications in dermocosmetics,” added Dr. Fabien Guillemot, CEO and Chief Scientific Officer at Poietis.

About Servier

Servier is an international pharmaceutical company governed by a non-profit foundation, with its headquarters in France (Suresnes). With a strong international presence in 149 countries and a turnover of 4.152 billion euros in 2017, Servier employs 21 700 people worldwide. Entirely independent, the Group reinvests 25% of its turnover (excluding generic drugs) in research and development and uses all its profits for development. Corporate growth is driven by Servier’s constant search for innovation in five areas of excellence: cardiovascular, immune-inflammatory and neuropsychiatric diseases, cancer and diabetes, as well as by its activities in high-quality generic drugs. Servier also offers eHealth solutions beyond drug development.

More information: www.servier.com

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About Poietis

Poietis is a biotechnology company specializing in the production of living bioprinted tissues. Since the company was founded in 2014, it has developed physiological models and built partnerships with some of the world’s major pharmaceutical and cosmetic groups. Poietis sells Poieskin®, the first bioprinted tissue to be available on the market. Its bioprinting technology, for which the company holds an exclusive worldwide license, is the result of ten years of innovative research conducted by Inserm (French National Institute of Health and Medical Research) and the University of Bordeaux. Poietis is the winner of the 2014 iLab competition and of the Concours Mondial d’Innovation (Phase I in 2016 and Phase II in 2017). The company currently employs 33 people. For more information, please visit: www.poietis.com

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