poietis
make tissues real

Press Release

Poietis launches its new 4D Bioprinting systems

Poietis, the first 4D bioprinting company, announces the commercialization of its new range of NGB systems («Next Generation Bioprinting») to cover all the tissue engineering needs, from research to clinical batches production.

Pessac, France, October 30, 2018 - For more than four years, Poietis has been invested in the development of the NGB 4D bioprinting platform to meet the development and production needs of human biological tissues. The company is thus involved in three target markets: in vitro tissue models as an alternative to animal experimentation in dermo-cosmetics, pharmaceutical research and regenerative medicine.

Poietis aims to establish a new standard in living tissue manufacturing by enabling users, researchers and clinicians, to design and bioprint tissues with cellular resolution. With this commercial launch, Poietis wants to provide tissue engineering stakeholders with new bioprinting solutions covering all needs, from research in biology and bioengineering to the production of clinical batches.

This new bioprinting platform NGB offers promising perspectives as the clinical and industrial applications of regenerative medicine are growing, when conventional methods of tissue engineering are still limited regarding standardization of manufacturing processes and in the functionality of the tissues produced.

Indeed, largely inspired by the principles of the 4.0 Industry, this new platform integrates automation and robotics technologies, coupled with numerous online sensors – including cell microscopy – and Artificial Intelligence processing. In addition, it now integrates all bioprinting techniques (laser, extrusion, inkjet by micro-valve), a world's first in the bioprinting market.

Poietis now declines its 4D bioprinting platform into two systems based on the same core technology: NGB-R, a bioprinter marketed today for research in biology and tissue engineering, and NGB-C, a clinical version intended to meet the future needs of Advanced Therapy Medicinal Products (ATMP) production and the requirements of Poietis' partners. The commonality of the two systems will facilitate the transposition of preclinical R&D results to the clinical phases and will accelerate the development and the access to innovative therapies for patients.

«We have upgraded the NGB platform to an automated robotic system to improve the standardization of manufacturing processes and the functionality of biological tissues,» said Fabien Guillemot, President and CSO of Poietis. «The combination of multimodal bioprinting with the acquisition and the online processing of printed cell images at cellular resolution will also ensure that what we design is what we print» he added.

«In parallel with our first applicative developments on bioprinted tissues for in vitro models, we continue to evolve our business model to meet the expectations of tissue engineering specialists and biology researchers» commented Bruno Brisson, Co-Founder and Business Development Director of Poietis. «The commercialization of NGB-R bioprinters will provide new opportunities for tissue engineering researchers at the preclinical stage, while the NGB-C system will support clinical developments that will be carried out initially in the framework of partnerships benefiting from the same manufacturing platform» he added.

Caption: NGB-R is a new generation, multimodal and high-end, 4D bioprinting system developed and designed specifically for researchers and biologists. Combining laser-assisted, micro-valve and/or extrusion bioprinting, it enables true versatility of bioprinting (from single cell to spheroids) and offers the possibility of using a large number of biomaterials and hydrogels. NGB-R includes an embedded cellular imaging system for real-time manufacturing monitoring and relies on a complete software suite for the management of bioprinting protocols, from biological CAD to data analysis of manufacturing.
Poietis introduced the NGB-R bioprinter at the International Congress on Biofabrication currently being held in Würzburg, Germany[1].

Caption: NGB-C is a bioprinting system designed specifically for clinicians to ensure standardization of functional tissue manufacturing processes that will be considered this time as Advanced Therapy Medicinal Products (ATMP). The system makes possible to perform a manufacturing process in a closed system, under completely aseptic conditions, within an insulator. It relies on robotization solutions and integrates technologies to ensure the repeatability and complete traceability of manufacturing operations.

1 Event until October 31, 2018

About Poietis

Poietis is a biotechnology company specialized in the development and the manufacturing of human tissues using 4D bioprinting. Since its inception in 2014, the company has been developing different physiological models, particularly in partnership with the world's leading pharmaceutical and cosmetic groups. Poietis markets Poieskin®, the first commercial bioprinted human tissue.
Based on its expertise in bioprinting technologies and in particular high resolution laser bioprinting, Poietis has also developed the multimodal bioprinting platform NGB («Next Generation Bioprinting»). The NGB platform aims to give tissue engineers and researchers greater freedom in the choice of biomaterials and hydrogels as well as greater versatility in their research and development.
Poietis has also developed the multimodal bioprinting platform NGB («Next Generation Bioprinting»). The NGB platform aims to give tissue engineers and researchers greater freedom in the choice of biomaterials and hydrogels as well as greater versatility in their research and development. Besides the commercially available NGB-R bioprinter, dedicated to R&D, the company is developing the NGB-C system for clinical applications. Based on the same core technology as NGB-R, NGB-C will face the requirements of translational research and the challenges associated with the industrial manufacturing of implantable tissues. The bioprinting technology of Poietis is the result of innovative researches conducted for ten years at Inserm and the University of Bordeaux. Poietis won the iLab competition in 2014, the World Innovation Challenge Phase II in 2017 and recently the EY Disruptive Strategy Award. The company today employs 34 people.

For more information, please visit: www.poietis.com

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