

Launch of the FLEXcyte 96 – pushing the boundaries of cardiac safety screening

Munich, September 9th 2019: Nanion is pleased to announce the launch of the FLEXcyte 96 technology for cardiac contraction force measurements. Improving patient safety and reducing animal tests while saving time and money by replacing unnecessary in vivo experiments is the aim of this novel assay technology. The FLEXcyte 96 has been developed in cooperation with innoVITRO GmbH.

Although human induced pluripotent stem cell-derived cardiomyocytes (hiPSC-CMs) rapidly gain acceptance in drug development, their functional state is considered immature regarding their mechanical behavior in recent assay platforms. The FLEXcyte 96 utilizes biomimetic substrates to culture and study hiPSC-CMs under physiological mechanical conditions, allowing the cells to react in a mature manner to pharmacological compounds without the need for additional stimulation. The technology will be available as an add-on to the CardioExcyte 96 platform from Nanion Technologies.



Contraction of cellular monolayers is recorded with high resolution in 96 wells in parallel, enabling easy integration into standard lab procedures of the pharmaceutical industry. Additionally, the FLEXcyte 96 is compatible with all existing add-ons of the CardioExcyte 96 platform, including the incubation system for benchtop operation and the SOL head for optical pacing.



"The FLEXcyte 96 system has the potential to scale-up cardiac contraction force testing by combining physiological relevance with a higher throughput while providing an environment that reflects the mechanical properties of real human cardiac tissue." says Dr. Sonja Stoelzle-Feix, Director Scientific Affairs, Nanion Technologies, Germany.

Nanion and innoVITRO aim at maximizing the value of the assay to all potential users by providing both the device through Nanion as well as a screening service through innoVITRO.



"Human iPSC-derived cardiomyocytes are the future of safe and efficient drug development. Acute or chronic cardiac toxicity or efficacy assessment with comprehensive endpoints is possible. We at innoVITRO are proud to offer high quality screening services using Nanion's FLEXcyte 96 instruments as a CRO."

says Dr. Matthias Gossmann, CEO, innoVITRO, Germany.

About Nanion Technologies GmbH:

Nanion Technologies is a leading provider of instrumentation for ion channel drug discovery and screening. Founded in 2002, Nanion has grown over the last 17 years to a company with over 100 employees worldwide. With headquarters in Munich, Germany, Nanion has subsidiaries in the USA, Japan, China and Denmark, as well as distribution partners in seven other countries. Nanion's team has developed and successfully established four generations of automated patch clamp instruments for sophisticated and high throughput applications in ion channel research and drug discovery (Port-a-Patch, Patchliner and SyncroPatch product families). Further product lines are for cell monitoring and cardiotoxicity screening (CardioExcyte 96), for parallel bilayer recordings (Orbit family), and for parallel membrane transporter protein recordings (SURFE²R).

For more information, please visit www.nanion.de

About innoVITRO GmbH:

innoVITRO is a biotech company from Jülich, Germany, with core competence in the measurement of cellular forces, in particular of stem cell derived cardiomyocytes.

The company was founded in 2018 as a spin-off from the University of Applied Sciences Aachen. In a collaborative effort between innoVitro and Nanion Technologies, the CellDrum technology developed at the University was fused with the CardioExcyte 96 platform resulting in the FLEXcyte 96 system. innoVitro is the producer and exclusive supplier of FLEXcyte 96 plates. Additionally, innoVitro offers toxicity and efficacy services on the platform.

For more information, please visit www.innovitro.de

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