

HeartBeat.bio and Molecular Devices announce collaboration to automate and scale cardiac organoids for high-throughput screening in drug discovery

VIENNA and SAN JOSE, CA – Sept. 12 – HeartBeat.bio AG, a biotech company developing cardiac organoids (Cardioids) for drug discovery, and Molecular Devices, LLC., a leading provider of high-performance life science solutions, have entered into a co-development agreement. With cardiovascular diseases the leading cause of death worldwide – claiming 34 lives every minute – and cardiotoxicity a leading cause of drug withdrawals, this collaboration will provide automated solutions to better model disease physiology, discover novel drugs, and test pre-clinical candidates for cardiac toxicity using 3D cell cultures that more accurately represent human biology as compared to traditional 2D or animal models. The commercialized offering will enable researchers to reliably scale production of Cardioids and advance cardiac drug discovery, and will be compatible with Molecular Devices’ Organoid Innovation Center solutions available today.

“The combination of HeartBeat.bio’s proprietary Cardioid technology and Molecular Devices’ automated 3D cell culture and image analysis solutions, defines a powerful and compelling partnership. Together, we are committed to develop and commercialize the world’s first integrated, end-to-end high-throughput human cardiac organoid screening platform,” said Michael Krebs, CEO of HeartBeat.bio. “The collaboration establishes the foundation for HeartBeat.bio’s strategy to apply this unique 3D biology platform for cardiac drug development partnerships with pharma and proprietary discovery programs in heart failure.”

In addition to its role in cardiac diseases research, the application for cardiac safety is of great importance as cardiovascular safety concerns remain a leading cause of failure in clinical trials, which can be attributed in part to reliance on models that are limited in predictivity. The Molecular Devices platform built around HeartBeat.bio’s Cardioid technology is expected to improve preclinical research, leading to higher clinical trial success rates along with reduced costs and time for compound development.

“By collaborating with HeartBeat.bio, we’ll equip more researchers with the physiologically-relevant cell models, automated bioimaging technology, and reproducible workflows needed to drive development of novel heart disease treatments and reduce cardiovascular safety risk of drugs entering clinical trials,” said Susan Murphy, President of Molecular Devices. “Our ultimate goal is to help unleash the full potential of organoid research so that scientists are empowered to bring safer and more effective therapeutics to patients faster.”

With a leading pharmaceutical company already identified to help validate the offering for cardiac drug safety, the companies are open for additional customers to test and assess the predictive value of the platform as compared to today’s existing drug development methods.

“As Cardioids represent better predictive models than cardiomyocytes or engineered spheroid models, this collaboration has the potential to considerably improve preclinical drug profiling and significantly increase the efficiency of pharmaceutical drug development,” Murphy concluded.

To learn more about how HeartBeat.bio and Molecular Devices technologies are helping advance drug discovery, listen to [this recorded panel discussion](#) hosted by Drug Target Review.

About HeartBeat.bio

HeartBeat.bio AG is dedicated to developing the first high-throughput human organoid screening platform for cardiac drug discovery. The technology platform is built on self-organizing, highly scalable cardiac organoids which recapitulate the human heart physiology and enable modeling of diseases such as drug-induced and genetic cardiomyopathies as well as myocardial infarction, heart remodeling and regeneration. HeartBeat.bio AG was founded in 2021 based on technology from the Institute of Molecular Biotechnology (IMBA) (www.imba.oeaw.ac.at) by a seasoned team with in-depth experience in organoid research, drug discovery and business development. The Company is supported by aws Seedfinancing of the Austrian promotional bank (www.aws.at/en/) as well as grants from the Austrian Research Promotion Agency (www.ffg.at/en/) and the Vienna Business Agency (www.viennabusinessagency.at). HeartBeat.bio AG is located at the Vienna BioCenter in Austria. For further information, visit www.heartbeat.bio.

About Molecular Devices

Molecular Devices is one of the world's leading providers of high-performance bioanalytical measurement systems, software and consumables for life science research, pharmaceutical and biotherapeutic development. Included within a broad product portfolio are platforms for high-throughput screening, genomic and cellular analysis, colony selection and microplate detection. These leading-edge products enable scientists to improve productivity and effectiveness, ultimately accelerating research and the discovery of new therapeutics. Molecular Devices is committed to the continual development of innovative solutions for life science applications. The company is headquartered in Silicon Valley, California with offices around the globe. Visit Molecular Devices at www.moleculardevices.com.

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