

MEPSGEN showcases ProMEPS™ at BIO KOREA 2024

- Will demonstrate the world's first automated microphysiological modeling system 'ProMEPS™', and an automated scalable nanoparticle synthesis system 'NanoCalibur™'



[Photo. ProMEPS™]

[Seoul/May 2, 2024] MEPSGEN, today announced that it will be exhibiting at BIO KOREA 2024, taking place from May 8 to 10 at COEX in Seoul, South Korea.

MEPSGEN is a biotechnology company that develops human microphysiological system (MPS) for advanced prediction of drug toxicity and efficacy and that engineers microvortex system for uniform and scalable nanoparticle synthesis from lab-scale discovery to GMP manufacturing.

At the event, MEPSGEN will be showcasing ProMEPS™, the world's first automated MPS modeling system for all-in-one processing of MPS modeling, developed and launched in November last year, for the first time in public. ProMEPS™ conducts all the modeling processes from cell injection to uniform medium perfusion while monitoring the model integrity in real time. This innovative system enables efficient development and mass production of high-quality organ models with high reproducibility, while minimizing the time required for cell culture operations and precluding frequent manual variations for laborious protocol steps.

MEPSGEN plans to introduce a new 'Organoid Chip' designed to accommodate 32 organoids (0.2~3mm) and be applied to ProMEPS™ for long-term stable production of organoids, addressing the current

challenges of organoid manufacturing.

MEPSGEN will also preview NanoCalibur™, a scalable nanoparticle synthesis system with high-precision feedback control of precursor flows to produce uniform LNPs carrying mRNA with high encapsulation efficiency, uniformity, and scalability. Last December, MEPSGEN was granted a patent for a microfluidic chip capable of mass-producing nanoparticles, and in January, MEPSGEN applied for a patent for a unique method of preparing mRNA-LNPs for vaccines. By leveraging these technologies, MEPSGEN plans to launch NanoCalibur™ for laboratory use in June 2024, followed by NanoCalibur™ GMP in August 2024.

“The mass production of MPS with high reproducibility through ProMEPS™ will contribute to the increased reliability of preclinical experimental results in areas that are difficult to verify through preclinical animal experiments, accelerate standardization in the field of alternatives to animal testing, and increase the success rate of new drugs in clinical trials, ultimately leading to a paradigm shift in drug development,” said Dr. YongTae Kim, CEO of MEPSGEN. “And we expect NanoCalibur™ to be a key manufacturing partner in the mRNA therapeutics market, which is expanding beyond vaccines into new therapeutics such as cancer drugs and more.”