

Creative Biolabs Launches Scalable Liposome Manufacturing Platform to Empower Nanomedicine Innovators

Creative Biolabs has introduced an advanced liposome platform to accelerate and streamline lipid-based drug development.

SHIRLEY, NY, UNITED STATES, October 22, 2025 /EINPresswire.com/ -- Recent advances in microfluidic engineering have proven the significant potential of large-scale liposome manufacturing systems. Studies demonstrate that modulated microfluidic platforms can enable the high-throughput formulation and purification of lipid nanoparticles, offering a promising path to uniform and reproducible drug delivery solutions. The catch, however, is that this technology is turned into practical, real-world applications by a significant number of research groups.



Creative Biolabs is bridging the gap.

The company has introduced a next-generation platform for liposome manufacturing and purification, designed to help scientists and developers accelerate their lipid-based therapeutic endeavors. Built on its <u>LipoDrive™ microfluidic system</u>, Creative Biolabs' platform combines precision engineering with real-time process control to deliver liposomes that boast uniform particle size, high encapsulation efficiency, and batch-to-batch reproducibility.

"Liposomes are extremely effective drug delivery vehicles," said one senior scientist at Creative Biolabs. "But so far, the industry has struggled with inconsistent production and inefficient purification. We wanted to change that."

Unlike traditional batch operations, LipoDrive™ utilizes continuous-flow microfluidics to automate liposome preparation, making it equally adaptable for initial stage formulation screening and bulk production. "Think of the scaling from hand-make to high-precision automation," said the scientist. "Our platform enables scientists to focus on innovation, not debug."

Aside from formulation, Creative Biolabs also offers tailored process optimization services, enabling clients to develop robust, scalable, and cost-effective manufacturing and purification procedures.

"We actually work with customers to design and optimize liposome formulations using the most advanced microfluidic equipment," said the researcher. "We want to allow them to achieve targeted particle size, encapsulation efficiency, and long-term stability."

For the assurance of nanoplatform performance and regulatory compliance, Creative Biolabs also provides comprehensive analytical services. They include particle size distribution, zeta potential analysis, encapsulation efficiency, and release profiling—clues to the validation of nanoplatform performance.

The platform is suitable for a wide range of applications, including cancer medicines and vaccines, as well as dietary and cosmetic products. "We've seen growing interest in liposomal delivery for vitamins, antioxidants, and skin care actives," the researcher added. "Whether it's CoQ10, ceramides, or glutathione, we help customers increase stability, absorption, and bioavailability."

Creative Biolabs offers turn-key services—ranging from feasibility studies and formulation screening to scale-up and quality control. Its modular equipment is space-efficient and easy to use, facilitating seamless integration into laboratory routines.

"At the end of the day, our mission is to empower scientists," said the scientist. "We're here to help them take promising ideas and turn them into real-world solutions—faster, safer, and more efficiently."

To learn more about Creative Biolabs' liposomal drug delivery solutions, visit https://www.creative-biolabs.com/lipid-based-delivery/.

About Creative Biolabs

Creative Biolabs offers expert, scalable liposome formulation, purification, and analysis services to accelerate lipid-based therapeutic development worldwide.

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