

Advancing Macrophage Research with iPSC Technology: Creative Biolabs Leads the Way

With its wealth of experience, Creative Biolabs stands ready to support global researchers in advancing their iPSC-derived cell therapy studies.

SHIRLEY, NY, UNITED STATES, May 20, 2025 /EINPresswire.com/ -- In the rapidly expanding field of regenerative medicine and immunotherapy, the intersection of macrophage biology and induced pluripotent stem cells (iPSCs) is opening up new avenues for investigation and therapeutic uses. Creative Biolabs is at the forefront, providing innovative services with the use of iPSC technologies.

Macrophages play a key role in inflammation, tissue healing, and immune modulation. Dysfunctions of macrophages have been implicated in a range of diseases, including chronic inflammation, tumor growth, and wound repair.

"For work with these cells in the laboratory, it's historically been problematic due to variability between donors and small quantities. That's where Creative Biolabs' macrophage experience enters. Our ability to provide standard, functionally defined <u>macrophage products</u>—say M1 or M2, or some other subtype—is the basis for replicability in the research. In analyzing drug leads or modeling the mechanism of a disease, consistency is key," said a research scientist at Creative Biolabs.

Since they were discovered, iPSCs have played a tremendous role in regenerative medicine due to their potential to differentiate into almost any cell type. The recent FDA approval of the first iPSC-derived cell therapy, used in the treatment of age-related macular degeneration, is evidence of the technology's clinical utility. "However, scalability and differentiation efficiency remain issues. That's why products like Creative Biolabs' iPSC reprogramming and differentiation platforms are worth their weight in gold. Our protocols produce high-purity cells, cutting out the time scientists spend optimizing workflows," said a researcher at the company.

Creative Biolabs provides custom iPSC generation and differentiation services. Their induced pluripotent stem cell services include reprogramming adult cells to iPSCs and subsequent differentiation into research and therapeutic interest cell types. This kind of service would be well worth considering for researchers seeking to utilize iPSC technology for their studies.

"Patient-specific iPSC-derived macrophages allow us to model human disease in a dish," said a

researcher. "iPSC-derived macrophages are a homogeneous and scalable source of human macrophages, useful for disease modeling and drug discovery. They allow us to investigate macrophage behavior in a variety of disease contexts, facilitating the discovery of novel treatments."

The iPSC-derived macrophage service is one of Creative Biolabs' featured products. They have developed a full panel of iPSC-derived macrophage assays for offering an integrated iPSC-based solution for the immunotherapy of disease, including iPSC differentiation services towards macrophages, iPSC-derived macrophage polarization assays, and iPSC-derived macrophage disease modeling.

For additional information regarding iPSC-derived macrophages and related products at Creative Biolabs, please see https://www.creative-biolabs.com/stem-cell-therapy/.

About Creative Biolabs

Creative Biolabs offers comprehensive and versatile custom research and development solutions for pharma and life science companies. With rich experience in iPSC technology and macrophage therapeutic development, the company endeavors to be the industry leader in creating these cutting-edge technologies by employing focused and effective solutions for clients.

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