

Advancing Clinical Trials with iPSC-Derived Liver Organoids

AMSBIO has published a blog about Dr. Satoshi Okamoto's groundbreaking research on the production of induced pluripotent stem cells (iPSC)-derived liver organoids, and their significant potential in clinical research trials.

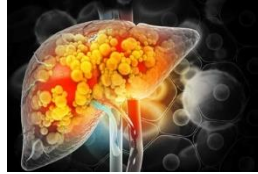


Image captions : Illustrative image of liver cirrhosis

The primary objective of Dr. Okamoto's

research program at the Yokohama City University Graduate School's Department of Regenerative Medicine was to achieve large-scale, stable production of clinical-grade liver organoids. These organoids have the potential to revolutionize treatment for liver diseases and could be administered to patients with liver diseases as a therapeutic treatment.

To assist in their study,

Professor Okamoto's research group partnered in the development of StemFit® for Differentiation – a chemically defined and animal component-free supplement for differentiation of induced pluripotent stem (iPS) cells.

Dr. Okamoto commented “

StemFit® for Differentiation is very easy-to-use and has allowed us to produce a stable differentiation induction protocol. In our study, three types of liver progenitor cells (endoderm, vascular endothelial and mesenchymal) were induced to differentiate from human iPS cells and then cultured to produce small liver organoids. The supplement's versatility was vital to our project. In addition, we believe the reason we have been able to achieve stable culture, even when scaled up, is because StemFit® for Differentiation is a fully defined chemical supplement.”

He added

“The next stage of our research and development program will be to evaluate our iPS cell-derived liver organoids in two clinical trials: one for urea cycle disorder, and the other for liver cirrhosis”.

Available from AMSBIO - StemFit®

for Differentiation is proven to enable unmatched differentiation of human Induced Pluripotent Stem (hiPS) and Embryonic Stem (hES) cells. The unique chemically defined composition of StemFit® for Differentiation minimizes lot-to-lot variation, enabling highly consistent cell differentiation. Free of animal derived components, StemFit® for Differentiation can be used to eliminate the risk of immunogenic contamination. Applications proven to benefit from StemFit® for Differentiation include lineage-specific (endodermal, mesodermal, and ectodermal) differentiation where this new product has been used to replace serum-free supplements, as well as spontaneous differentiation of hiPSCs to organoids via embryoid body formation.

To read the blog

in full please visit <https://www.amsbio.com/news/ipsc-derived-liver-buds/>. For further information on StemFit® for Differentiation please visit <https://www.amsbio.com/stemfit-for-differentiation/> or contact AMSBIO on +31-72-8080244 / +44-1235-828200 / +1-617-945-5033 / info@amsbio.com.



AMS Biotechnology (AMSBIO)

Founded in 1987, AMS Biotechnology (AMSBIO) is recognized today as a leading transatlantic company contributing to the acceleration of discovery through the provision of cutting-edge life science technology, products, and services for R&D in the medical, nutrition, cosmetics, and energy industries. AMSBIO has in-depth expertise in extracellular matrices to provide elegant solutions for studying cell motility, migration, invasion, and proliferation. This expertise in cell culture and the ECM allows AMSBIO to partner with clients in tailoring cell systems to enhance organoid and spheroid screening outcomes using a variety of 3D culture systems, including organ-on-a-chip microfluidics. For drug discovery research, AMSBIO offers assays, recombinant proteins, and cell lines. Drawing upon a huge and comprehensive biorepository, AMSBIO is widely recognized as a leading provider of high-quality tissue specimens (including custom procurement) from both human and animal tissues. The company provides unique clinical grade products for stem cells and cell therapy applications. This includes GMP cryopreservation technology, and high-quality solutions for viral delivery.

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