

Special Issue Reprint

Bioengineering Liver Transplantation

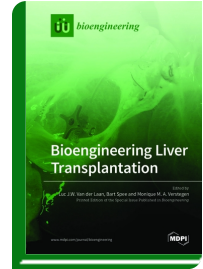
www.mdpi.com/books/reprint/1810

Edited by

Luc J.W. Van der Laan

Bart Spee

Monique M. A. Verstegen



ISBN 978-3-03921-744-1 (Softback)

ISBN 978-3-03921-745-8 (PDF)

The aim of this Special Issue is to review, understand, and evaluate new and exciting opportunities from the field on regenerative medicine, biomaterials, and stem cell research for the bioengineering of human liver grafts that can be applied for transplantation and personalized treatment of end-stage liver disease. The development of culture conditions for long-term expansion of LGR5+ intestinal stem cells as crypt-villus structures demonstrated the feasibility of deriving complex, organ-like structures in vitro from primary adult tissues, including the liver. Moreover, human pluripotent stem cells (hPSCs) can be applied to generate functionally matured liver and bile duct epithelial cells. In this Special Issue, we welcome reviews and original papers focussing on hepatic cell sources, including adult hepatic stem cells, organoids, fetal and induced pluripotent stem cells, and primary cells (i.e., hepatocytes, cholangiocytes, and endothelial cells) and how these cells can be applied in tissue engineering strategies to generate implantable and personalized liver grafts. Potential topics include, but are not limited to, the following: liver tissue engineering, liver regeneration, graft repair, liver stem cells and organoids, bio-scaffolds, and 3D printing. We invite you to contribute original research papers, as well as comprehensive reviews, aligned with these themes, to advance and improve the actual state-of-the-art in liver bioengineering and providing new opportunities for the imminent medical problem of organ and tissue shortage for transplantation.

MDPI Books offers quality open access book publishing to promote the exchange of ideas and knowledge in a globalized world. MDPI Books encompasses all the benefits of open access – high availability and visibility, as well as wide and rapid dissemination. With MDPI Books, you can complement the digital version of your work with a high quality printed counterpart.



Open Access

Your scholarly work is accessible worldwide without any restrictions. All authors retain the copyright for their work distributed under the terms of the Creative Commons Attribution License.



Author Focus

Authors and editors profit from MDPI's over two decades of experience in open access publishing, our customized personal support throughout the entire publication process, and competitive processing charges as well as unique contributor discounts on book purchases.



High Quality & Rapid Publication

MDPI ensures a thorough review for all published items and provides a fast publication procedure. State-of-the-art research and time-sensitive topics are released with a minimum amount of delay.



High Visibility

Due to our global network and well-known channel partners, we ensure maximum visibility and broad dissemination. Title information of books is sent to international indexing databases and archives, such as the Directory of Open Access Books (DOAB), and the Verzeichnis Lieferbarer Bücher (VLB).



Print on Demand and Multiple Formats

MDPI Books are available for purchase and to read online at any time. Our print-on-demand service offers a sustainable, cost-effective and fast way to publish MDPI Books printed versions.