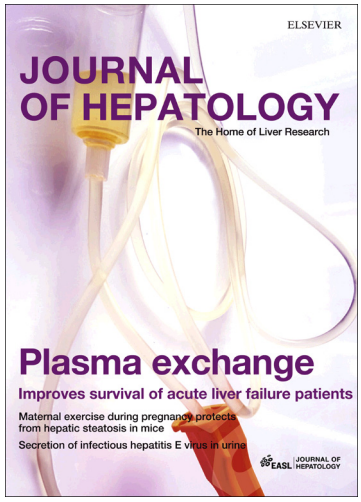
Accepted Manuscript




# Human stem cell-derived hepatocytes as a model for hepatitis B virus infection, spreading and virus-host interactions

Yuchen Xia, Arnaud Carpentier, Xiaoming Cheng, Peter Daniel Block, Yao Zhao, Zhensheng Zhang, Ulrike Protzer, T. Jake Liang

PII: S0168-8278(16)30572-4
DOI: http://dx.doi.org/10.1016/j.jhep.2016.10.009
Reference: JHEPAT 6288

To appear in: *Journal of Hepatology*

Received Date: 26 April 2016
Revised Date: 3 October 2016
Accepted Date: 3 October 2016

Please cite this article as: Xia, Y., Carpentier, A., Cheng, X., Block, P.D., Zhao, Y., Zhang, Z., Protzer, U., Jake Liang, T., Human stem cell-derived hepatocytes as a model for hepatitis B virus infection, spreading and virus-host interactions, *Journal of Hepatology* (2016), doi: http://dx.doi.org/10.1016/j.jhep.2016.10.009

# Human stem cell-derived hepatocytes as a model for hepatitis B virus infection, spreading and virus-host interactions

Yuchen Xia[1], Arnaud Carpentier[1], Xiaoming Cheng[1], Peter Daniel Block[1], Yao, Zhao[1], Zhensheng Zhang[1], Ulrike Protzer[2,3], T. Jake Liang[1*]

[1] Liver Diseases Branch, National Institute of Diabetes and Digestive and Kidney Diseases, National Institutes of Health, Bethesda, MD, United States

[2] Institute of Virology, Technical University of Munich / Helmholtz Zentrum München, 81675 Munich, Germany

[3] German Center for Infection research (DZIF), Munich partner site

***Corresponding author:** Dr. T. Jake Liang, Liver Diseases Branch, National Institute of Diabetes and Digestive and Kidney Diseases, National Institutes of Health, Bethesda, MD 20892, USA. Tel: +1-301-402-1972, Email: jakel@bdg10.niddk.nih.gov

**Keywords**: hepatitis B virus, stem cell, model, antivirals

**Abbreviations:** HBV (hepatitis B virus), HCC (hepatocellular carcinoma), NUC (nucleos(t)ide analogs), IFN-α (interferon-α), NTCP (sodium-taurocholate cotransporting polypeptide), rcDNA (relaxed circular DNA), cccDNA (covalently closed circular DNA), pgRNA (pregenomic RNA), HLCs (hepatocyte-like cells), PHHs (primary human hepatocytes), HBVcc, (cell culture derived HBV), MOI