

Leo van Grunsven

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Title of presentation: “Pathogenesis of Liver Fibrosis: Advances in Mechanistic Understanding and Methodological Development”

Biosketch

Leo van Grunsven obtained his biology degree in 1992 from the University of Utrecht and obtained his PhD in 1996 from the Ecole Normale Supérieure de Lyon (France). He had his postdoctoral training at the NINDS/NIH (Bethesda, USA) and the KU Leuven (Belgium) and joined the lab of the late Prof. Albert Geerts at the Vrije Universiteit Brussel (VUB, Belgium) in 2006 and became an assistant Professor in 2009 and heads the Liver Cell Biology research group since.

His group studies molecular mechanisms involved in liver -homeostasis, -fibrosis and –regeneration with a special focus on hepatic stellate cells. His group was the first to identify autophagy, AGE- and HIPPO-signaling as key mechanisms involved in hepatic stellate cell activation during liver fibrogenesis. His team established the first hepatocyte-injury dependent in vitro liver fibrosis model by using organoid cultures of human hepatocytes and hepatic stellate cells (2016) and subsequently more complex primary mouse 4-cell type liver cultures (2022). They recently established the first single cell HSC activation atlas covering multiple liver aetiologies. Current efforts are the continuous development of in vitro systems for chronic liver disease and cancer development using (iPSC-derived) liver cells and precision cut liver slices, and investigation of stress pathways in hepatic stellate cells and other sinusoidal liver cells during acute and chronic liver injury.