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iPSZÜRICH

A Lecture Series Focused on Induced Pluripotent Stem Cells

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IDIBAPS

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UNDERSTANDING LIVER FIBROSIS WITH iPSCs-DERIVED HEPATIC STELLATE CELLS

Fibrosis is associated with 45% of deaths in industrialized countries. In the liver, it is the result of most chronic liver diseases and one of the main adverse outcome of drugs and liver toxicity. Liver fibrosis can lead to liver cirrhosis and liver failure, being end stage liver diseases the 11th cause of death worldwide. Unfortunately, there are no therapeutic strategies to mitigate the progress of liver fibrogenesis. Hepatic Stellate Cells (HSCs) are the main fibrogenic cell type in the liver and therefore are important for the generation of *in vitro* models of liver disease and for drug development. In this lecture I will discuss our work on differentiating hepatic stellate cells from iPSCs and how we are using them to model disease and to identify pathways involved in liver fibrosis. I will summarize how our current studies of sequential proteomic and single cell analysis are helping us to understand hepatic stellate cells development and to identify targets to treat fibrosis.

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