

LIVER CENTER SEMINAR

Friday, October 28, 2016
3:00-4:00 PM, RMB Boardroom, Parnassus

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Genome Engineering in the Liver: from Disease Models to Novel Therapeutic Approaches



Dr. Bissig is physician-scientist who focused on human liver disease and human disease modeling. He is considered a leader in the field of human liver chimeric mouse models. He has established a replication system for viral hepatitis in humanized FRG mice¹. His laboratory has developed a novel metastatic patient-derived xenograft model for pediatric liver cancer², the first xenograft model for metabolic liver disease³ and more recently introduced a new therapeutic concept, called metabolic pathway reprogramming⁴, holding a great potential for many currently not treatable disorders of liver metabolism.

1. Bissig KD, *et al.* Human liver chimeric mice provide a model for hepatitis B and C virus infection and treatment. *The Journal of clinical investigation* **120**, 924-930 (2010).
2. Bissig-Choisat B, *et al.* Novel patient-derived xenograft and cell line models for therapeutic testing of pediatric liver cancer. *J Hepatol* **65**, 325-333 (2016).
3. Bissig-Choisat B, *et al.* Development and rescue of human familial hypercholesterolaemia in a xenograft mouse model. *Nature communications* **6**, 7339 (2015).
4. Pankowicz FP, *et al.* Reprogramming metabolic pathways in vivo with CRISPR/Cas9 genome editing to treat hereditary tyrosinaemia. *Nature communications* **7**, 12642 (2016).