Prof. Dr. Steven Dooley



University Professor and Head of Section of Molecular Hepatology & Alcohol Associated Diseases – Department of Medicine II – Medical Faculty Mannheim

C-TIP-HCC Coordinator

Role in LiSyM-Cancer

- Coordinator and project leader in C-TIP-HCC
- Cellular processes that occur in the liver in response to damage, e.g. from alcohol abuse or malnutrition, specifically in the role of TGFβ family members, their signaling pathway regulators and target genes.

Expertise

- Liver cell biology, liver diseases, clinical translation, and systems biology
- Generating quantitative data with cutting edge technologies, e.g. laser-scanning microscopy, 2D/3D quantitative imaging, GeoMx imaging and spatial RNA-profiling, human and mouse liver cells, time-lapse data monitoring
- Mouse reporter and disease models

Degrees

- PhD studies at the Institute of Human Genetics, University of Saarland in Homburg
- Graduated in Biology at the University at Kaiserslautern

Professional Experience

- Since 2004, Full Professor at Heidelberg University
- 1998, Group Leader and Assistant Professor in the Department of Clinical Chemistry and Pathobiochemistry at the University Hospital RWTH Aachen
- Postdoc research on Molecular Cancer Research at the Institute of Human Genetics University of Kaiserslautern

Honors and Awards (selection)

- Gábor-Szász-Award of the Deutsche Vereinte Gesellschaft für Klinische Chemie und Laboratoriums-Medizin for outstanding scientific merits.

Publications

2026-06-10	Transient suppression of the ECM1 gatekeeper is essential for HGF/c-MET-driven liver regeneration
2026-06-07	DNMT mRNA stability and YB-1 cooperatively regulate ABCB1 to drive cisplatin chemoresistance in cholangiocarcinoma
2026-04-29	Phosphatidylserine-Dependent Clearance of Damaged Red Blood Cells by Liver Sinusoidal Endothelial Cells in Alcohol-Related Liver Disease *Biology*
2026-03-14	Semi-automated isolation of parenchymal and non-parenchymal liver cells from mice and humans with enhanced stellate cell fraction *Cell & Bioscience*
2025-12-01	Immunoglobulin G binding as a quantitative marker of hepatocellular death across acute and chronic liver injury
2025-12-01	NADPH oxidase 1/4 dual inhibition impairs transforming growth factor-beta protumorigenic effects in cholangiocarcinoma cancer-associated fibroblasts *Signal Transduction and Targeted Therapy*
2025-10-01	Transforming Growth Factor-β Signaling in Alcohol-Associated Liver Disease *The American Journal of Pathology*
2025-09-01	From cirrhosis to cancer: α-SMA+ CAF and CD68+ macrophage rewiring in the cirrhosis–HCC transition *79. Jahrestagung der DGVS mit Sektion Endoskopie Jahrestagung der Deutschen Gesellschaft für Allgemein- und Viszeralchirurgie mit den Arbeitsgemeinschaften der DGAV und Jahrestagung der CACP*
2025-08-02	The interplay between biomechanics and cell kinetics explains the spatial pattern in liver fibrosis
2025-07-17	ECM1 expression in chronic liver disease: Regulation by EGF/STAT1 and IFNgamma/NRF2 signalling. *JHEP Rep*
2025-06-07	Regulation of essential hepatocyte functions and identity by super-enhancers in health and disease
2025-06-05	TGF-β serves as a critical signaling determinant of liver progenitor cell fate and function
2025-02-06	ECM1 attenuates hepatic fibrosis by interfering with mediators of latent TGF-beta1 activation. *Gut*
2025-01-01	TGF-β critically determines the activation state of both, the macrophage subpopulation that is particularly recruited in the context of MASH progression, as well as of TAMs *41. Jahrestagung der Deutschen Arbeitsgemeinschaft zum Studium der Leber*
2024-11-05	The TGF-beta1 target WISP1 is highly expressed in liver cirrhosis and cirrhotic HCC microenvironment and involved in pro- and anti-tumorigenic effects. *Biochem Biophys Res Commun*
2024-09-29	Role of WISP1 in Stellate Cell Migration and Liver Fibrosis *Cells*
2024-09-09	Direct Ingestion of Oxidized Red Blood Cells (Efferocytosis) by Hepatocytes. *Hepat Med*
2024-08-23	A digital liver twin demonstrating the interplay between biomechanics and cell kinetics can explain fibrotic scar formation

2024-08-01	Retinoic acid generates a beneficial microenvironment for liver progenitor cell activation in acute liver failure.	*Hepatol Commun*
2024-07-13	Tumour-specific activation of a tumour-blood transport improves the diagnostic accuracy of blood tumour markers in mice.	*EBioMedicine*
2024-03-01	ERRγ-inducible FGF23 promotes alcoholic liver injury through enhancing CYP2E1 mediated hepatic oxidative stress	*Redox Biology*
2024-02-16	A liver digital twin for in silico testing of cellular and inter-cellular mechanisms in regeneration after drug-induced damage.	*iScience*
2024-02-08	TGFβR1 inhibition drives hepatocellular carcinoma proliferation through induction of toll-like-receptor signalling	*International Journal of Experimental Pathology*
2024-01-01	Progression of MASLD goes along with significant changes of a recruited and TGFb sensitive macrophage population	*Zeitschrift für Gastroenterologie*
2024-01-01	Insulin Determines Transforming Growth Factor β Effects on Hepatocyte Nuclear Factor 4α Transcription in Hepatocytes	*The American Journal of Pathology*
2024-01-01	The Interplay of TGF-β1 and Cholesterol Orchestrating Hepatocyte Cell Fate, EMT, and Signals for HSC Activation	*Cellular and Molecular Gastroenterology and Hepatology*
2023-12-12	Extracellular Matrix Protein 1 Attenuates Hepatic Fibrosis by Inhibiting TSP-, ADAMTS-, and MMP-Mediated Latent TGF-β1 Activation	
2023-12-07	Rapid dexamethasone treatment inhibits LPS-induced cytokine storm in mice	
2023-08-01	GPNMB induces hepatic steatogenesis and modulates liver cancer cells	*Zeitschrift für Gastroenterologie*
2023-07-01	Tolerance of repeated toxic injuries of murine livers is associated with steatosis and inflammation	*Cell Death & Disease*
2023-05-01	Acute liver injury induces expression of FGF23 in hepatocytes via orphan nuclear receptor ERRγ signaling	*Genes & Diseases*
2023-04-01	Capsaicin receptor TRPV1 maintains quiescence of hepatic stellate cells in the liver via recruitment of SARM1	*Journal of Hepatology*
2023-01-01	Repeated toxic injuries of murine liver are tolerated through minute steatosis and mild inflammation	*39. Jahrestagung der Deutschen Arbeitsgemeinschaft zum Studium der Leber*
2023-01-01	Monitoring TGF-β1 effects on liver cells in vivo	*39. Jahrestagung der Deutschen Arbeitsgemeinschaft zum Studium der Leber*

2023-01-01	Hepatocytes reprogram liver macrophages involving control of TGF-β activation, influencing liver regeneration and injury	*Hepatology Communications*
2022-07-09	Serum Glial Cell Line-Derived Neurotrophic Factor (sGDNF) Is a Novel Biomarker in Predicting Cirrhosis in Patients with Chronic Hepatitis B	*Canadian Journal of Gastroenterology and Hepatology*
2022-04-20	FOXA2 prevents hyperbilirubinaemia in acute liver failure by maintaining apical MRP2 expression	*Gut*
2022-03-07	A hierarchical regulatory network ensures stable albumin transcription under various pathophysiological conditions	*Hepatology*
2022-02-01	Transforming growth factor β latency: A mechanism of cytokine storage and signalling regulation in liver homeostasis and disease	*JHEP Reports*
2022-01-18	Liver specific, systemic and genetic contributors to alcohol-related liver disease progression	*Zeitschrift für Gastroenterologie*
2022-01-18	Inflammation in alcohol-associated liver disease progression	*Zeitschrift für Gastroenterologie*
2022-01-01	Multi-omics profiling identifies molecular signatures of acute-on-chronic liver failure in Abcb4KO mice upon chemical intoxication	*38. Jahrestagung der Deutsche Arbeitsgemeinschaft zum Studium der Leber*
2022-01-01	Insulin-controlled C/EBPα expression determines the impact of TGF-β on HNF4α transcription in hepatocytes	*38. Jahrestagung der Deutsche Arbeitsgemeinschaft zum Studium der Leber*
2022-01-01	FOXA2 inhibits hyperbilirubinemia through maintaining apical MRP2 expression in acute liver failure	*38. Jahrestagung der Deutsche Arbeitsgemeinschaft zum Studium der Leber*
2022-01-01	Downregulation of ECM1 in hepatocytes as a damage response to liver injury	*38. Jahrestagung der Deutsche Arbeitsgemeinschaft zum Studium der Leber*
2022-01-01	Cold shock protein YB-1 upregulates MDR1 transcription and thus contributes to cholangiocarcinoma chemoresistance to cisplatin	*38. Jahrestagung der Deutsche Arbeitsgemeinschaft zum Studium der Leber*
2021-12-14	Follistatin-controlled activin-HNF4α-coagulation factor axis in liver progenitor cells determines outcome of acute liver failure	*Hepatology*
2021-12-14	Follistatin-controlled activin-HNF4α-coagulation factor axis in liver progenitor cells determines outcome of acute liver failure	*Hepatology*
2021-12-03	Mesenchymal stromal cells mitigate liver damage after extended resection in the pig by modulating thrombospondin-1/TGF-β	*npj Regenerative Medicine*
2021-10-14	MicroRNA-124 Alleviates Retinal Vasoregression via Regulating Microglial Polarization	*International Journal of Molecular Sciences*