

Prof. Dr. Jan Hengstler



Head of Research Group – System Toxicology – Leibniz Research
Centre for Working Environment and Human Factors (IfADo), Dortmund

Role in LiSyM-Cancer

- Project leader in C-TIP-HCC
- Mouse model for hepatocyte transformation from necroptosis
- Morphological profiling and in vivo live cell intravital imaging
- Reporter mice for in vivo imaging of DAMP release using the two-photon toolbox

Expertise

- Liver physiology, functional liver imaging and hepatotoxicity
- Functional imaging techniques based on two-photon microscopy, photoactivation, raster image correlation spectroscopy and MALDI-MSI for the analysis of intact tissues in living organisms
- Hepatocyte in vitro systems, including 3D culture techniques and organoids

Degrees

- 1998, Habilitation in Pharmacology and Toxicology, Faculty of Medicine, University of Mainz, Germany
- 1997, Physician specialized in Pharmacology and Toxicology
- 1992, License to practice medicine (Approbation)
- 1991, Thesis (MD): DNA damage in patients treated with alkylating agents Faculty of Medicine, University of Mainz, Germany
- 1984-1990, Study of Medicine, Faculty of Medicine, University of Mainz, Germany

Professional Experience

- Since 2007, W3 Full Professor and Scientific Director, Department of Toxicology, Leibniz Research Centre for Working Environment and Human Factors (IfADo), Dortmund Technical University, Germany
- 2003-2007, Professor of Molecular Pharmacology and Toxicology, Department of Pharmacology, Faculty of Medicine, University of Leipzig, Germany
- 2006-2007, Provisional head of the Institute of Forensic Medicine and Forensic Toxicology, Department of Forensic Medicine, Faculty of Medicine, University of Leipzig, Germany
- 1990-2002 Research scientist at the Institute of Toxicology, Faculty of Medicine, University of Mainz, Germany

Honors and Awards (selection)

- 2017-2019 Clarivate, highly cited researcher in the category Pharmacology and Toxicology
- 2016, Ebert Prize of the American Pharmacists Association
- 2009, Bo-Holmstedt Memorial Lecture of the EUROTOX
- 2002, Aventis-Award 2002
- 2001, Rudolf Buchheim Award of the German Society of Pharmacology and Toxicology (DGPT)
- 1999, Innovation Award of Rhineland Palatinate, Germany

Publications

2025-12-01	Stage-dependent effects of systemic ASBT inhibition in a cholestasis-induced cholemic nephropathy mouse model <i>JHEP Reports</i>
2025-12-01	Immunoglobulin G binding as a quantitative marker of hepatocellular death across acute and chronic liver injury
2025-08-02	The interplay between biomechanics and cell kinetics explains the spatial pattern in liver fibrosis
2025-03-01	Regulation of KIF23 by miR-107 controls replicative tumor cell fitness in mouse and human hepatocellular carcinoma <i>Journal of Hepatology</i>
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. <i>Biochem Biophys Res Commun</i>
2024-09-29	Role of WISP1 in Stellate Cell Migration and Liver Fibrosis <i>Cells</i>
2024-08-23	A digital liver twin demonstrating the interplay between biomechanics and cell kinetics can explain fibrotic scar formation
2024-02-16	A liver digital twin for in silico testing of cellular and inter-cellular mechanisms in regeneration after drug-induced damage. <i>iScience</i>
2024-01-12	Basal MET phosphorylation is an indicator of hepatocyte dysregulation in liver disease <i>Molecular Systems Biology</i>
2023-07-04	Basal MET Phosphorylation is an Indicator of Hepatocyte Dysregulation in Liver Disease (preprint) <i>bioRxiv</i>
2023-07-01	Sublethal necroptosis signaling promotes inflammation and liver cancer <i>Immunity</i>
2023-07-01	Tolerance of repeated toxic injuries of murine livers is associated with steatosis and inflammation <i>Cell Death & Disease</i>
2023-01-01	Repeated toxic injuries of murine liver are tolerated through minute steatosis and mild inflammation <i>39. Jahrestagung der Deutschen Arbeitsgemeinschaft zum Studium der Leber</i>
2023-01-01	Digital twin demonstrates significance of biomechanical growth control in liver regeneration after partial hepatectomy <i>iScience</i>
2022-01-18	Liver specific, systemic and genetic contributors to alcohol-related liver disease progression <i>Zeitschrift für Gastroenterologie</i>