Dr. rer. nat. Stephanie Daniela Wolf



Postdoc - Department of Gastroenterology, Hepatology and Infectious Disease - University Hospital Düsseldorf

Role in LiSyM-Cancer

- Collection, processing, and biobanking of clinical patient samples and associated clinical data
- Development and application of mouse models for MASLD, MASH, and hepatocellular carcinoma (HCC)
- Investigation of the roles of PAR4, MK2, and MK3 in liver disease progression
- Characterization of macrophage subpopulation dynamics during the progression from MASLD to HCC
- Analysis of the role of TGF-β signaling in macrophage-mediated disease progression
- Investigation of intercellular communication between macrophages and hepatocytes during liver disease progression
- Supervisor: Prof. Johannes G. Bode (P07)

Expertise

- Isolation of different liver cell types (Hepatocytes, non-parenchymal cells), mouse and human
- Cell-cell communication: co-cultivation of primary cells
- Liver injury and regeneration: partial hepatectomy
- MASLD disease progression / HCC
- Preclinical mouse models, animal experimentation, and biobanking
- Molecular biology, flow cytometry, CITE-seq analysis, IHC, IF
- Immunology, inflammation, Macrophages
- Data Analysis
- Coordination of research alliances and network management
- Scientific Project Management

Professional Experience

- Reseach project/networks:
    - Virtual liver network (BMFTR, 2011 – 2015)
    - SFB974: "*Communication and Systemic Relevance in Liver Injury and Regeneration*" (DFG, 2015 – 2021)
    - LiSyM-Krebs I / II (BMFTR, 2021 – 2026)
    - Characterization of the cell type-specific role of protease-activated receptor 4 (PAR4) in MASLD pathogenesis and disease progression (DFG, since 2026)

Degrees

- PhD (Dr. rer. nat.)
  Faculty of Medicine & Düsseldorf University Hospital, Heinrich Heine University
  Department of Gastroenterology, Hepatology and Infectious Disease:
  Identification of differentially regulated mediators during liver regeneration and investigation of the reciprocal modulation of macrophage and hepatocyte function through intercellular communication.
- Diploma thesis
  Ernst-Moritz-Arndt University, Greifswald Department of Pharmacology, Center for Pharmacology and Experimental Therapeutics
  Functional characterization of the transporter SLC2A9

Honors and Awards

- Poster Award, German Association for the Study of the Liver Annual Meeting, for the poster "*Interference of TGFb with the activation state of liver macrophages and consequences for liver injury and regeneration*."
- Poster Award, Experimental Hepatology Days, for the poster "*Changes in macrophage subpopulations towards a recruited, TGFb-sensitive population accompany progression of NASH*"

Publications

2026-06-10	Transient suppression of the ECM1 gatekeeper is essential for HGF/c-MET-driven liver regeneration
2026-01-01	During the acute phase response, MK2 is differentially and cell type-dependently involved in the control of the acute phase response *42. Jahrestagung der Deutschen Arbeitsgemeinschaft zum Studium der Leber*
2025-12-01	Immunoglobulin G binding as a quantitative marker of hepatocellular death across acute and chronic liver injury
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*
2025-09-01	Expression von Thrombozytenaktivierungsmarkern bei Patienten mit Leberzirrhose vor und nach TIPSS-Anlage *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
2025-03-01	Regulation of KIF23 by miR-107 controls replicative tumor cell fitness in mouse and human hepatocellular carcinoma *Journal of Hepatology*
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*
2024-12-16	Interleukin 1 β suppresses bile acid-induced BSEP expression via a CXCR2-dependent feedback mechanism *PLOS ONE*
2024-08-23	A digital liver twin demonstrating the interplay between biomechanics and cell kinetics can explain fibrotic scar formation
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	Protease-activated receptor 4: A key player in the progression of metabolic-induced steatohepatitis and tumor development *Zeitschrift für Gastroenterologie*
2024-01-01	Role of hypersplenism and transjugular intrahepatic portosystemic shunt implantation on cytopenia in decompensated liver cirrhosis *Zeitschrift für Gastroenterologie*
2023-08-01	GPNMB induces hepatic steatogenesis and modulates liver cancer cells *Zeitschrift für Gastroenterologie*
2023-08-01	Protease-activated receptor 4 is substantially involved in the progression of MAFLD to steatohepatitis and fibrosis as well as tumor-development *Zeitschrift für Gastroenterologie*

2023-01-01 Hepatocytes reprogram liver macrophages involving control of TGF-β activation, influencing liver regeneration and injury
Hepatology Communications