

## BIOGRAPHICAL SKETCH

NAME: Liebner, Stefan

POSITION TITLE: Adj. Professor

EDUCATION/TRAINING



Technical University of Darmstadt, Germany	B.S.	09/1992	Biology
Eberhard Karls University of Tübingen, Germany	M.S.	09/1995	Animal Physiology, Biochemistry
Eberhard Karls University of Tübingen, Germany	Ph.D.	09/2000	Cell Biology
FIRC Institute of Molecular Oncology, Milan, Italy	Postdoc	01/2001	Cell and Developmental Biology
Habilitation, „Molecular Medicine with Focus on Vascular Biology“, Goethe University Clinic	PD (Adj. Professor)	11/2013	Vascular Biology

### A. Contribution to Science

1. Since my undergraduate work, my interests have been related to the vasculature of the central nervous system with special emphasis on the blood-brain (BBB) and blood-retina barrier (BRB). In this context, characterization of tight junction (TJ) development and structure, as well as their modulation under pathological conditions such as in human glioblastoma biopsies was a focus of research (group of H. Wolburg). Given that the endothelial adherens junction (AJ) comprising the protein  $\beta$ -catenin, are a prerequisite for TJ-formation, my postdoctoral project (group of E. Dejana) aimed to better understand the role of  $\beta$ -catenin and its transcriptional potential for angiogenic processes and vascular differentiation. We could show that endothelial  $\beta$ -catenin is indispensable for vascular structure in general as well as for signaling in heart valve development. These studies paved the way for my further career as an independent group leader (AG Liebner, [bbbsignaling.de](http://bbbsignaling.de)). Exploring further the Wnt/ $\beta$ -catenin pathway and its function in vascular differentiation we identified it as being crucial for the vascularization of the brain and for BBB induction in endothelial cells of the CNS. Thereafter, we demonstrated that the Wnt/ $\beta$ -catenin pathway normalizes tumor vessel differentiation in a mouse model of glioblastoma, that it is driven by astrocytic Wnt-release in the adult and that its absence is required for the local differentiation of leaky vessels in the circumventricular organs of the CNS. Currently, we investigate the contribution of the vasculature to neurodegenerative diseases like Alzheimer's disease and epilepsy. Moreover, understanding the local and temporal regulation of the Wnt/ $\beta$ -catenin pathway on a molecular level in the CNS is one of the burning questions in the group.

### B. Positions and Honors

List in chronological order previous positions, concluding with the present position. List any honors. Include present membership on any Federal Government public advisory committee.

#### Positions and Employment

2015	Faculty member of the German Center for Heart and Circulation Research (DZHK)
2005 – present	<b>Research Group Leader (tenure)</b> , Institute of Neurology (Edinger Institute), Medical School, Johann Wolfgang Goethe University Frankfurt/Main
2001 – 2004	<b>Post-Doc Position</b> at the Instituto FIRC (Fondazione Italiana per la Ricerca sul Cancro) Oncologia Molecolare (IFOM), Milano, Italia (Prof. Dr. Elisabetta Dejana)

#### Other Experience and Professional Memberships

2011-	Editorial Board member "PlosONE"
2011-	Editorial Board member "ISRN Vascular Medicine"
since 2006	Faculty Member of the Excellence Cluster Cardio-Pulmonary System (ECCPS)

#### Honors

2023	Invited Speaker Cold Spring Harbor Laboratory Meeting „Blood Brain Barrier“, USA
2022	Invited Speaker Gordon Research Conference „Barriers of the CNS“, USA
2019	Invited Speaker Cold Spring Harbor Laboratory Meeting „Blood Brain Barrier“, USA
2018	Invited Speaker Keystone Conference „Vascular Biology and Human Diseases“, USA
2016	Co-organizer Cold Spring Harbor Laboratory Meeting „Blood Brain Barrier“, USA
2016	Keynote Speaker, Gordon Research Seminar Barriers of the CNS, USA
2009	NeuroWiss price “Basic Research” of the Association for Neurologic Sciences, Frankfurt/Main e.V.
2009	„Outstanding Presentation Award“ CVB Meeting, Sendai, Japan
2001 – 2003	Marie-Curie Individual Post Doc Fellowship
2001	Eberhard-Karls University Tübingen, Fakultät für Biologie, Tübingen Germany Award of the annual PhD-Thesis Price of the Reinhold-and-Maria-Teufel-Foundation

#### Complete List of Published Work in MyBibliography:

<http://www.ncbi.nlm.nih.gov/myncbi/collections/bibliography/41513108/>