



Innovation in Breast Cancer

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Prof. Heikenwalder (*1976) and his group investigate the molecular and cellular mechanisms that lead to chronic inflammation, tissue damage, cancer and metastasis. In tight collaboration with clinics he is working on new models and therapy approaches. Prof. Heikenwalder studied microbiology, genetics in Vienna. After a two-year-research trip at the Max-Delbruck-Zentrum for medicine in Berlin he graduated 1999 with highest honors. He then started his doctoral thesis at the institute of neuropathology in Zurich and successfully graduated 2004 on the field of prion diseases and neuro-inflammation/neuro-degeneration. After his habilitation at the medical faculty of the Universitatsspital Zurich he received 2007 a Max-Cloetta-Professorship and started his work as an assistant Professor and group leader with the research focus on "inflammation and cancer". In the year 2010 he became W2 professor at the TUM as well as group leader at the institute for virology at the Helmholtz Zentrum in Munich. Since 2015 Prof. Heikenwalder is head of the department „Chronic Inflammation and Cancer" at the German Cancer Research Centre in Heidelberg (DKFZ).

Personal statement:

Our laboratory aims at understanding the different immune signatures of chronic inflammatory human diseases using relevant preclinical mouse models - with the final aim to generate valid models of chronic inflammation induced tissue damage and cancer, potentially used for pre-clinical research. Thus, we focus on comparative studies of tissue specimen of human patients and animal models, recapitulating human disease on a histo-pathological and pathophysiological level. Our main focus is the understanding of the pathophysiology of primary and metastatic liver cancer and possible treatment thereof. We engage in classical molecular biology techniques complemented with sophisticated ways to receive as much information from tissue samples through histology (e.g. light microscopy/ immune fluorescence/ FISH/ in situ hybridization), histocytometry, single cell analysis other in vivo imaging techniques (e.g. MRI, IVIS, ultrasound) as well as through FACS analyses of tissue homogenates. At the same time we are also interested in the systemic functional effects of pathologies and the interplay between several affected non-lymphoid tissues and the immune system.

Finally, testing several therapeutic compounds in a single but also combinatorial fashion is one of our goals employing established and stratified pre-clinical mouse models.

Recently, work of my laboratory was rated the third most common cited laboratory in the field of cell-biology since 2012 in German speaking countries.

Since 2015 Department Head and Full Professor at the German Cancer Research Centre in Heidelberg

2010-2015 Group leader and Helmholtz Young Investigator at the Technische Universität München (TUM)/ Helmholtz-Zentrum München, Institute of Virology and (W2) Professor.

2009-09 Habilitation in "Experimental Pathology", at the Medical Faculty, University of Zürich.

2007-08 Prof. Dr. Max Cloëtta fellow and independent group leader at the Department of Pathology and start as a principal investigator (PI).

2006-07 Staff scientist and lecturer in the Department of Pathology, Institute of Neuropathology.

2004-10 Postdoctoral fellow at the Institute of Neuropathology, Pathology Department, University Hospital Zürich (USZ), Switzerland.

2001-03 Ph.D. student in the group of Prof. Dr. Adriano Aguzzi, Institute of Neuropathology, University Hospital Zürich (USZ), Switzerland.

1999-10 Diploma student in the group of Prof. Dr. Martin Zenke, Max- Delbrück Center for Molecular Medicine (MDC), Berlin, Germany.

1995-09 University Vienna, Austria studying Microbiology and Genetics