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# MARTIN HRABĚ DE ANGELIS

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CV

PARTICIPANT AT:

## FUTURE TOOLS FOR BIOMEDICAL RESEARCH. IN VITRO, IN SILICO AND IN VIVO DISEASE MODELING

**October, 1<sup>st</sup>-2<sup>nd</sup>, 2015, Barcelona**

**Martin Hrabě De Angelis**, Director Institute for Experimental Genetics (IEG), Helmholtz Zentrum München, Germany

Professor **Hrabě** de Angelis studied biology at Philipps Universität in Marburg and completed his PhD on the influence of growth factors on early embryonic development in 1994. During his time as a postdoctoral researcher (1994 – 1997) at Jackson Laboratory in Bar Harbor (USA) he examined the Delta/Notch signaling pathway and mouse models in somitogenesis. Since 2000 Professor **Hrabě** de Angelis has directed the Institute for Experimental Genetics at Helmholtz Zentrum München (German Research Centre for Environmental Health). In 2001 he founded the German Mouse Clinic (GMC) for the systemic analysis of mouse models for human diseases. In 2003 he was appointed to the Chair of Experimental Genetics at TUM. Prof. **Hrabě** is also the director of the European Mouse Mutant Archive (EMMA), cofounder of INGENIUM Pharmaceuticals AG (1998), NanoRepro AG (2006) and cofounder and director of INFRAFRONTIER GmbH (2013). He has published over 350 original works and is an author of many textbooks. He directs international research projects and is a founder as well as member of the board of directors of the German Center for Diabetes Research (DZD), which was set up in 2009.

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**ABSTRACT**

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## FUTURE TOOLS FOR BIOMEDICAL RESEARCH. IN VITRO, IN SILICO AND IN VIVO DISEASE MODELING

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### **Deciphering Genetic and Epigenetic Function in Diabetes**

The GMC (German Mouse Clinic) was originally founded as the world first open access mouse clinic for systemic phenotyping in order to characterize pleiotropic gene functions and to identify affected organs in mutant mouse lines. GMC has been instrumental for the elucidation of undiscovered gene functions and the development of new pre-clinical models for human diseases. With its comprehensive phenotyping data, GMC I contributes to the worldwide initiative to fully annotate the first mammalian genome with at least one function for every coding gene (IMPC). For secondary analysis we have set a focus on genes relevant for metabolism and diabetes. Strategy and first results will be presented. Besides the importance of genetic elements for metabolism and diabetes epigenetic factors seem to play an important role. We focus on trans-generational epigenetic factors for acquired diabetes. Evidence will be presented for both germ lines that trans-generational epigenetic events exist and play an important role with respect to susceptibility to body weight gain and insulin resistance.

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