GRK 2213

Joint guest lecture of the
Philipps-Universität Marburg and
Max-Planck-Institute for Heart & Lung Research

22rd of March 2018

Guests are welcome

DIETMAR GRADL

Abt. für Zell- und Entwicklungsbiologie,
Karlsruher Institut für Technologie (KIT), Karlsruhe

"Wnt signalling and endocytosis regulate convergent extension movements in *Xenopus*"

Gastrulation and positioning of the germ-layers involves complex cell behaviors including polarization and convergent-extension (CE) movements controlled by canonical and non-canonical Wnt signaling cascades. In particular, CE movements are regulated by an orchestre of different Wnt-triggered signal transduction pathways. Herein, the Wnt11/PCP pathway regulates polarization of the mesodermal cells, the Wnt5A/Ror2 pathway their migration towards the dorsal midline. The role of the Wnt/β-Catenin pathway and the integration of differnt pathways regulating this process is only poorly unterstood.

We found that Lef-1 regulates the expression of caveolae core components including caveolin1. Wnt5A, instead, regulates the expression of the MAPKK pbk. As initial response to the ligand Wnt5a we observe clustering of receptor molecules and internalization of receptor complexes. Thus, target genes of the Wnt/β-Catenin pathway (caveolin) are required for non-canonical Wnt5a/Ror2 signaling.

5:00 pm
Fachbereich 17
Großer Hörsaal

Philipps Universität Marburg

Max-Planck-Institut
für Herz- und Lungenforschung
W.G. Kerckhoff-Institut