



Department and function:

Director, Molecular Biology

Education:

1982	B.S.	Eberhard-Karls-University, Tübingen,)
1983	M.S.	Friedrich-Miescher-Laboratory (FML) of the Max-Planck-Society, Tübingen
1986	Ph.D.	Max-Planck-Society, Tübingen
1987 - 1989		Postdoc at the Mount Sinai Hospital Res. Institute, Toronto, Canada

Positions:

June 1989- July 1994		Head of an independent research group at Max-Delbrück-Lab., Cologne, Germany
April 1994	Habilitation:	University of Cologne
Aug. 1994 - July 1997		Associate Staff Scientist, The Jackson Laboratory, Bar Harbor, ME
Aug. 1997 - June 1999		Staff Scientist , The Jackson Laboratory
since July 1999		Professor for Molecular Biology, MHH

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Major research interests:

The main research interest of the group lies on the analysis of the molecular mechanisms underlying developmental processes during mammalian embryogenesis.

Development of the Notochord The notochord is a transient embryonic structure that serves as a signaling center that is essential for the dorsoventral patterning of the spinal cord and somites. Various mutations in mice disturb the development or maintenance of the notochord. Identification and functional characterization of the genes affected by these mutations is the subject of several projects.

Somitogenesis Somites form as the result of segmentation of the paraxial mesoderm. They give rise to the vertebrae, ribs, the epaxial and hypaxial muscles and the dorsal dermis. Their formation lays the basis for the metameric arrangement of the vertebrae and of the spinal ganglia. The formation of segments as well as their subdivision into cranial and caudal compartments is the subject of our investigations. We analyse the role of Notch signalling in these processes as well as spontaneous mouse mutants in which somitogenesis is disrupted.

Selected Publications:

Schroder N, Sekhar A, Geffers I, Muller J, Dittrich-Breiholz O, Kracht M, Wedemeyer J, Gossler A. *Gastroenterology*. 2006;130(3):902-7.

Schuster-Gossler K, Cordes R, Gossler A. *Proc Natl Acad Sci U S A*. 2007; 104(2): 537-42.

Geffers I, Serth K, Chapman G, Jaekel R, Schuster-Gossler K, Cordes R, Sparrow DB, et al. *J Cell Biol*. 2007;178(3):465-76.

Beckers A, Alten L, Viebahn C, Andre P, Gossler A. *Proc Natl Acad Sci U S A*. 2007; 104(40):15765-70.

Feller J, Schneider A, Schuster-Gossler K, Gossler A. *Genes Dev*. 2008;22(16):2166-71.

Sorensen I, Adams RH, Gossler A. *Blood*. 2009 Jan 14. [Epub ahead of print]

Schuster-Gossler K, Herzig B, Johnson KB, Serth J, Gossler A. *BMC Dev Biol*. 2009;