



Prof. Dr. Jörn Walter

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“Epigenetic reprogramming in mammalian cells”

Shortly after the fertilization of a mammalian egg by a sperm, both maternal and paternal chromosomes are structurally reorganized. During the first cell cycle the two parental chromosomes are still separated in separate pronuclear compartments. In the fertilized egg (the zygote) chromosomes in both pronuclei become structurally reprogrammed in a differential manner. The paternal DNA is actively erased by a yet unknown enzymatic mechanisms and acquires a novel chromatin structure. The maternal chromatin remains largely unaffected and does not lose its DNA-methylation. Such early reprogramming effects are controlled by factors present in the egg cytoplasm. It is believed that reprogramming of chromosomes is important for the development of totipotency in the early cells. Our interest is to understand the nature of such reprogramming events, their timing and the underlying enzymatic mechanisms. In my talk I will briefly introduce major concepts of epigenetics and explain some of the questions of the described epigenetic reprogramming.

Dienstag, 20. Januar 2009, 14 Uhr c.t.

Gebäude E2 6, Seminarraum E.04

Alle Interessenten sind herzlich eingeladen.

Die Sprecher des Graduiertenkollegs
Manfred Lücke und Ludger Santen

**Strukturbildung und Transport
in komplexen Systemen**