



SFB 635

Posttranslational control  
of protein function

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## Seminars in Genetics and Molecular Cell Biology

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### **Mitochondrial evolution in anaerobic eukaryotes**

Every eukaryotic cell has a mitochondrion. The organelle respire and provides the cell for most of its ATP, some amino acids and lipids and participates in cell signaling and programmed cell death. Evolution has created great variety of mitochondrial adaptations most of which is present amongst the unicellular eukaryotes – protists, which, in fact, represent the largest part of the eukaryotic diversity.

I am interested in the function and mainly the biogenesis of the organelles called hydrogenosomes and mitosomes. These organelles exist in protists which inhabit low oxygen environments and during last decade number of studies provided the evidence that they, in fact, represent extreme mitochondrial adaptations. While hydrogenosomes are still capable of providing ATP for the cells, mitosomes seem to have lost all but single pathway for the biosynthesis of iron-sulfur centers.

Mitosomes of human pathogen *Giardia intestinalis* are the simplest mitochondrial compartment known and during the talk their function and the biogenesis will be discussed.

**New date:**

**Tuesday, August 30, 2011 at 02.00 p. m.**

Institute for Genetics,  
Zùlpicher Str. 47 a, Lecture hall, 4<sup>th</sup> floor

Host: Thomas Langer, Institute for Genetics,  
University of Cologne

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