GATERSLEBEN LECTURE

Speaker: **Prof. Dr. Raphaël Mercier**
(INRA, Institut Jean Pierre Bourgin, Versailles, France)

Title: **Unleashing meiotic crossovers**

Time: **Wednesday, June 14, 2017, 2 pm**

Abstract:
Meiotic crossovers (COs) have two important roles, shuffling genetic information and ensuring proper chromosome segregation. Despite a large excess of precursors (i.e DNA double strand-breaks, DSBs), the number of meiotic COs is tightly regulated, typically one to three per chromosome pair. Nevertheless, the mechanisms that ensure DSBs repair mostly as non-crossovers, and the evolutionary forces that impose this constraint, are poorly understood. Following a specific genetic screen, we identified three pathways that antagonize crossover formation in Arabidopsis thaliana. Strikingly, the concomitant disruption of these pathways leads to a large increase in COs, the genetic map being enlarged more than 7 fold. However, the recombination increase is variable along the genome, suggesting that additional constrains limit CO formation. This raises the questions of the evolutionary forces that limit COs and opens the possibility to manipulate recombination in plant breeding programs.

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Place: **Lecture Hall, IPK Gatersleben**

Prof. Dr. Andreas Graner
(organizer)

Dr. Nils Stein
(host)

If you are interested in personal discussions with the speaker please contact the host (phone: 039482/5522) beforehand.