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## Evolution of gene expression in *Drosophila*

Temperature is a major environmental factor affecting many traits, including gene expression. While at benign temperatures the gene expression pattern is very similar between genotypes, at more extreme temperatures large genotype specific differences can be detected. Most of the expression differences in expression can be attributed to cis-effects. Nevertheless, it is not apparent to what extent these differences in gene expression reflect adaptive responses. We address this question by exposing a natural *Drosophila* population to new temperature environments and study the change in gene expression after more than 60 generations of experimental evolution. We show that the ancestral plasticity in natural *Drosophila* populations is most likely adaptive, because after 60 generations most of the ancestrally plastic genes increased their plasticity at the extreme laboratory environments. I will discuss to what extent sexually antagonistic evolution is a major driver of gene expression evolution.

Monday, November 20, 2017, 17:00

University of Cologne, Institute for Theoretical Physics

Conference Room 2, Ground Floor

Hosted by Michael Lässig