SFB 680

MOLECULAR BASIS OF
EVOLUTIONARY INNOVATIONS

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Evolution of Stochastic Variation in Microbial Genomes

Simple sequence repeats or microsatellites have high rates of mutation leading to rapid and stochastic generation of genetic variation. The power of this mutability has been harnessed in microbes due to evolution of long SSRs in specific ‘contingency loci’. Multiple contingency loci are present in bacterial genomes and control expression of surface determinants. Mutations in these long SSRs produce reversible switches in gene expression or ‘phase variation’. My talk will cover analysis of the determinants of SSR mutability and the frequency of SSR mutations during persistent asymptomatic carriage of two bacterial pathogens (Campylobacter jejuni and Neisseria meningitidis). I will also discuss the nature of the non-selective and selective forces influencing SSR population structure and present a model of the evolution of SSRs as a mechanism of phase variation.

Oktober 1, 16:00

Institute for Genetics, Zülpicher Str. 47a, Lecture Hall, Ground Floor

Host: Berenike Maier

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