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Molecular Basis of Evolutionary Innovations

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Competition and cooperation in microbial spatial expansions

The expansion of populations into new territory is a common event in evolutionary history. Examples range from the growth of microbial biofilms on surfaces to the migration of prehistoric humans out of Africa. We are interested in the effects of evolutionary forces during such spatial expansions. We use the growth of colonies of the budding yeast *Saccharomyces cerevisiae* on agar surfaces as a model system. This spatial expansion leads to intriguing spatio-genetic patterns that can be visualized by fluorescence microscopy. The basic effect of spatial expansion is the formation of genetically uniform spatial sectors due to genetic demixing. We study how selection and species interactions modify this pattern. In particular, mutualistic interactions between yeast strains can prevent the genetic demixing.

November 27, 12:00

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

Hosts: Berenike Maier and Michael Lässig

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