# SFB 680

MOLECULAR BASIS OF
EVOLUTIONARY INNOVATIONS


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## Adaptation speed of a large population in absence of sex and when one plus one is less than two


The adaptation of large asexual populations in laboratory evolution experiments is a complex and highly stochastic situation, which can be tackled with statistical physics tools. It is generally characterized by competition between clones carrying different beneficial mutations, and by negative "diminishing-returns" epistasis, the phenomenon by which the relative advantage of new mutations decreases as they accumulate. I will present a simplified modeling framework including both phenomena, describe simulation results and basic scaling arguments that capture the model behavior, and propose a way to match the parameters with experimental data.


## January 23, 17:00

**Institute for Genetics, Zülpicher Str. 47a, Lecture Hall, 4th Floor**

Host: Michael Lässig

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