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How do proteins evolve under opposing selection factors?

Models of evolutionary dynamics often focus on trajectories of variation due to a specific condition of selection, but the natural process often involves multiple, potentially opposing selection events. In such complex adaptive landscapes, when multiple opposing selection factors are simultaneously present or rapidly fluctuating in an environment, evolution is expected to be a genetic search on a convoluted fitness landscape with several pitfalls due to incompatibilities between genetic changes. In my talk, I will try to address (i) how evolutionary constraints on multiple fitness conditions arranged in a protein sequence and, (ii) how the rate and mechanism of protein evolution can vary under different (opposing or overlapping) selection conditions.

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University of Cologne
Institute for Biological Physics
Zülpicher Str. 77a
Seminar Room 0.03, Ground Floor

Hosted by Tobias Bollenbach