Cologne Evolution Colloquium

CRC 1310 Predictability in Evolution

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Bacterial navigation in complex environments

Bacteria navigate natural habitats with a wide range of mechanical properties, from the ocean to the digestive tract and soil, by rotating helical flagella like propellers. Species differ in the number, position, and shape of their flagella, but the adaptive value of these flagellar architectures is unclear.

We use high-throughput 3D bacterial tracking to show that bacteria with different flagellar architectures differ in their ability to navigate complex environments and identify the underlying behavioral mechanisms. Our findings implicate flagellar architecture as a mediator of environment-specific benefits and point to a rich space of bacterial navigation behaviors in complex environments.

Wednesday, November 8, 2023, 17:00
Institute for Biological Physics, Zülpicher Str. 77a
Seminar Room 0.02, Ground Floor
Hosted by Berenike Maier