UNIVERSITÄT BAYREUTH

BZMB

Bayreuther Zentrum für Molekulare Biowissenschaften

GBM

BZMB, Physikalisches Institut & GBM

laden ein zum interdisziplinären Kolloquium

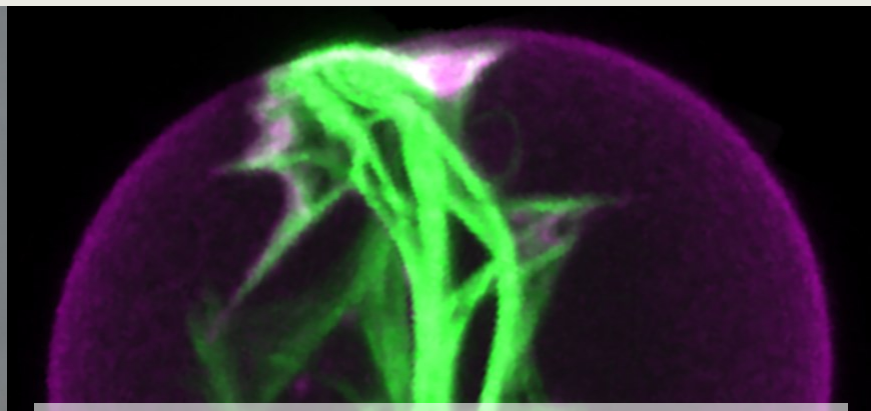
Towards artificial life from the bottom-up

All living things are connected through a very special mode of matter with the ability to evade the inorganic state and evolve. How exactly life could have started is fundamentally unknown and most likely eludes any archaeological approach. However, the question how exactly the very first cell could have come into existence, or better, on which laws its fundamental origin was based rather fascinates the quantitative sciences, such as physics and chemistry, that generally aim to derive phenomena from first principles. Following a famous quote by physicist Richard Feynman "What I cannot create, I do not understand", for about ten years there has been a rapidly growing community of quantitative researchers teaming up with biologists and aiming for the bottom-up construction of living cells with a minimal number of components. Fundamental features, such as metabolism, replication, and evolution are supposed to be reconstructed with a defined set of well-characterized functional modules and their interactions. My group approaches the bottom-up assembly of a minimal functional machinery to accomplish the spontaneous division of a vesicle-based artificial cell. I will discuss our latest results on the successful reconstitution of key components of the bacterial divisome towards autonomous assembly, positioning and contraction of a minimal division ring.

Datum: Dienstag, 11. Juli 2023 | Zeit: ab 17:15 Uhr | Raum: H15 (NW I)

Prof. Dr. Petra Schwille

Director, Cellular and Molecular Biophysics
Max Planck Institute of Biochemistry



Programm:

16:00-16:45 Uhr: „Meet the Prof" Gespräch mit Prof. Schwille für Studierende

16:45-17:15 Uhr: Kaffee und Kekse vor H15

ab 17.15 Uhr: Preisverleihung & Festvortrag

im Anschluss:

Sommerfest der jGBM!