Special Colloquium jointly organized by UniSysCat and CRC1078

Prof. Katrina Forest

University of Wisconsin, USA

Start Time: Thursday, May 25, 2023 05:15 pm

End Time: Thursday, May 25, 2023 06:30 pm

Room PC203 at TU Berlin

A Possible Light-Independent Role for Microbial Rhodopsins in Building the Lipid Bilayer

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In a cellular context, phospholipids synthesized inside a cell must re-orient from the inner leaflet to the outer leaflet to create the bilayer characteristic of biological membranes. Given the recent demonstrations of scramblase activity by eukaryotic and archaeal opsins, we ask if the abundant bacterial opsins have the same activity – in vitro and in nature. I will present our preliminary evidence that bacterial opsins are scramblases, discuss our nascent plans to build on this information to identify the unknown protein(s) that catalyze lipid scrambling in well-studied bacterial model systems which do not encode opsins, and finally consider the evolution of scramblases. Please be forewarned this will be a data-light, future-looking talk and your feedback will be welcome.

Prof. Dr. Peter Hildebrandt

Organizer