SFB 1078

Protonation Dynamics in Protein Function

Mon, **November 6 2023**

15:15 – 16:30

Freie Universität Berlin
SupraFAB

(Altensteinstr. 23a, 14195 Berlin-Dahlem)

Colloquium

Prof. Tilman Kottke - Biophysical Chemistry and Diagnostics, Bielefeld University, Bielefeld University, DE

In-Cell Spectroscopy Reveals Mechanisms of Aureochrome and Cryptochrome Photoreceptors

Flavin-binding photoreceptors such as aureochrome and cryptochrome regulate a variety of cellular responses to light and are applied as optogenetic tools for tailored dimerization and clustering. The primary photoreaction of the flavin comprises electron and proton transfer steps that lead to specific changes in secondary structure of the receptors. These structural changes propagate the light signal to the binding partners and have been identified by time-resolved infrared difference spectroscopy. An important question is whether these mechanisms of signal propagation are preserved under the complex conditions of the cellular environment. I will present our current view of the mechanisms of aureochrome and cryptochrome, supported by findings from spectroscopy in living cells.

Coffee and tea will be available. . www.sfb1078.de

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