SFB 924-/BZR – Kolloquium

Freitag, 20. September 2019

14:00 Uhr, H53 (Sondertermin)

Prof Dr. William J. Snell

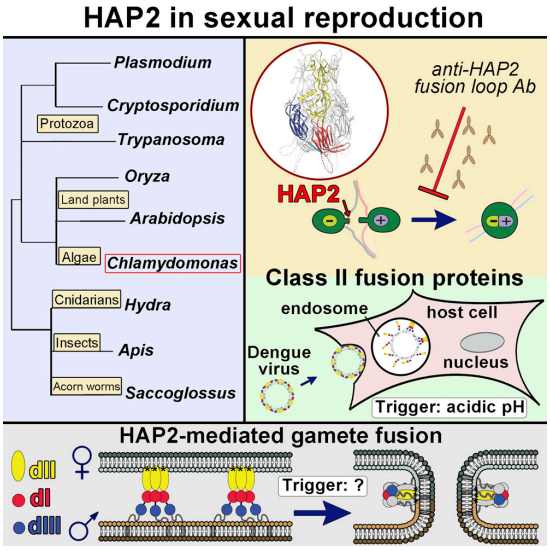
Department of Cell Biology and Molecular Genetics
University of Maryland, College Park, USA

"Using the green alga *Chlamydomonas reinhardtii* to study conserved cellular and molecular mechanisms of fertilization"

The Snell laboratory studies the cellular and molecular mechanisms that underlie gamete fusion during fertilization. In recent, collaborative studies with researchers at the Pasteur Institute in Paris, the Snell laboratory determined that the fertilization-essential HAP2 protein is structurally similar to the class II fusion proteins of viruses, including dengue and Zika.

The presence of HAP2 in organisms across kingdoms, including unicellular and multicellular organisms, suggests that as the early eukaryotes emerged from the primordial soup, they depended on HAP2 for sexual reproduction.

Dr. Snell will present an overview of the cell biology of HAP2 along with new results from studies in *Chlamydomonas* showing that mechanisms for regulation of eukaryotic and viral class II fusion proteins diverged long ago. Whereas the viral proteins are activated to carry out their function in membrane fusion by a simple environmental cue, regulation of eukaryotic members of this family is more complex and, at least in *Chlamydomonas,* depends on species-specific cell-cell adhesion proteins.



Host: PD Dr. Stefanie Sprunck

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