

Seminar Speaker Series

in the framework of Interreg V-A project CAPSID

presents

Prof. Matthias Wilmanns

EMBL Hamburg, DE

The sarcomeric protein myomesin has it all-in-one: Rigidity, flexibility and elasticity

04. 02. 2021 at 14:00

Online virtual talk via Zoom

Join this talk [here](#)



Organized by:





Prof. Matthias Wilmanns

Head of EMBL, Hamburg

EMBL



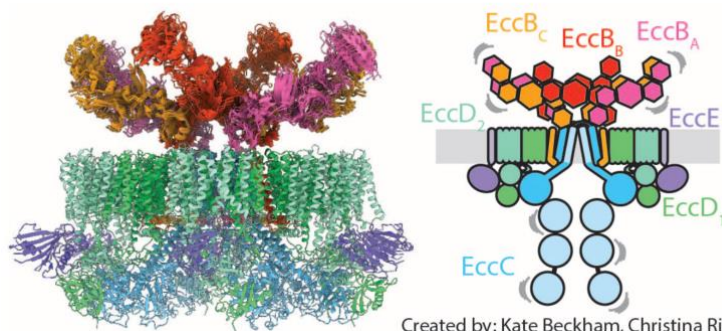
Matthias
Wilmanns

ORCID iD

<https://orcid.org/0000-0002-4643-5435>

RESEARCH INTERESTS

The Wilmanns group aims to unravel the overall architecture of machineries for protein translocation across membranes and mechanisms of molecular elasticity, by employing an integrative structural biology approach complemented by functional experiments.



Created by: Kate Beckham, Christina Ritter

CURRENT RESEARCH AND FUTURE GOALS

We are investigating the overall structures of challenging protein complexes of biomedical relevance to address major research questions in the infection process of pathogenic bacteria but also in cancer, cardiology, and nephrology. To achieve these goals, we combine X-ray crystallography and single-particle cryo-electron microscopy and other complementary structural biology techniques. At the centre of our research interest is achieving an in-depth understanding of molecular translocation processes across membranes. A second research focus is to study how proteins react to external forces within the cell by means of molecular elasticity.

REFERENCES

- Schulz EC, Henderson SR, Illarionov B, Crosskey T, Southall SM, Krichel B, Uetrecht C, Fischer M, **Wilmanns M.** (2020) The crystal structure of mycobacterial epoxide hydrolase A. *Sci Rep* 10(1) doi: 10.1038/s41598-020-73452-y.
- Beckham KSH, Staack S, **Wilmanns M**, Parret AHA. (2020) The pMy vector series: a versatile cloning platform for the recombinant production of mycobacterial proteins in *Mycobacterium smegmatis*. *Protein Sci* 29(12):2528-2537. doi: 10.1002/pro.3962
- Rosenthal M, Metzl-Raz E, Bürgi J, Yifrach E, Drwesh L, Fadel A, Peleg Y, Rapaport D, **Wilmanns M**, Barkai N, Schuldiner M, Zalckvar E. (2020) Uncovering targeting priority to yeast peroxisomes using an in-cell competition assay. *PNAS*. 117(35):21432-21440. doi: 10.1073/pnas.1920078117

Organized by:

