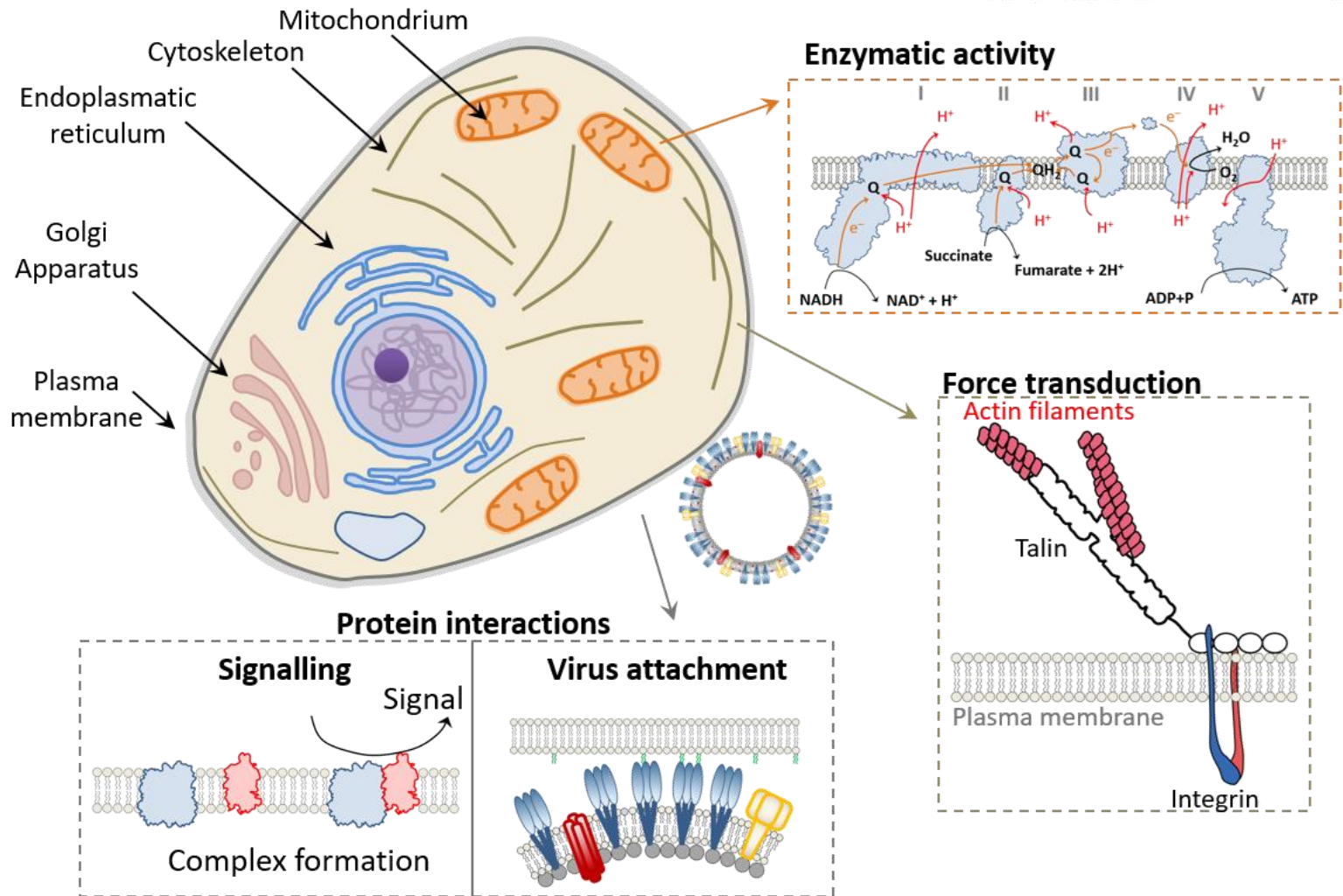
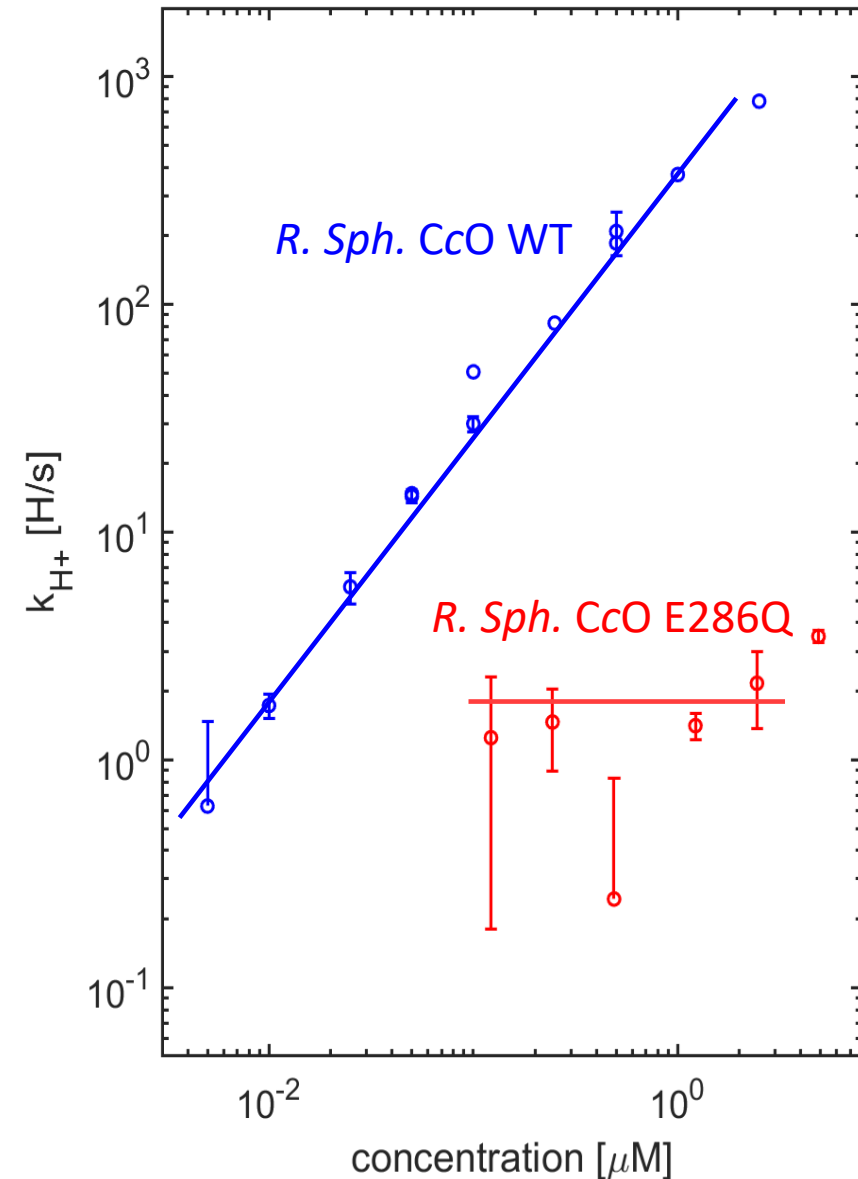
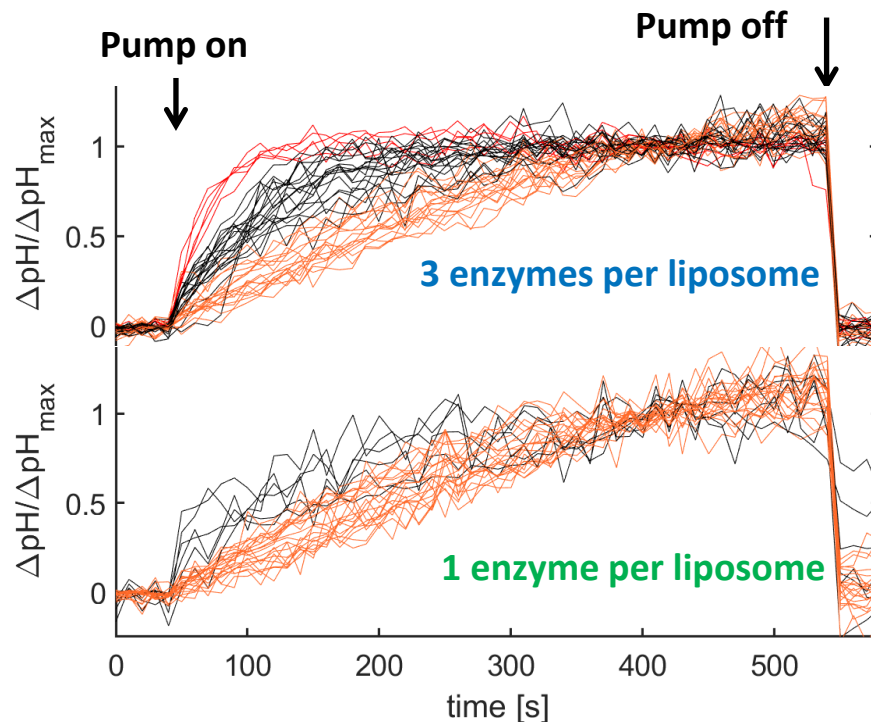
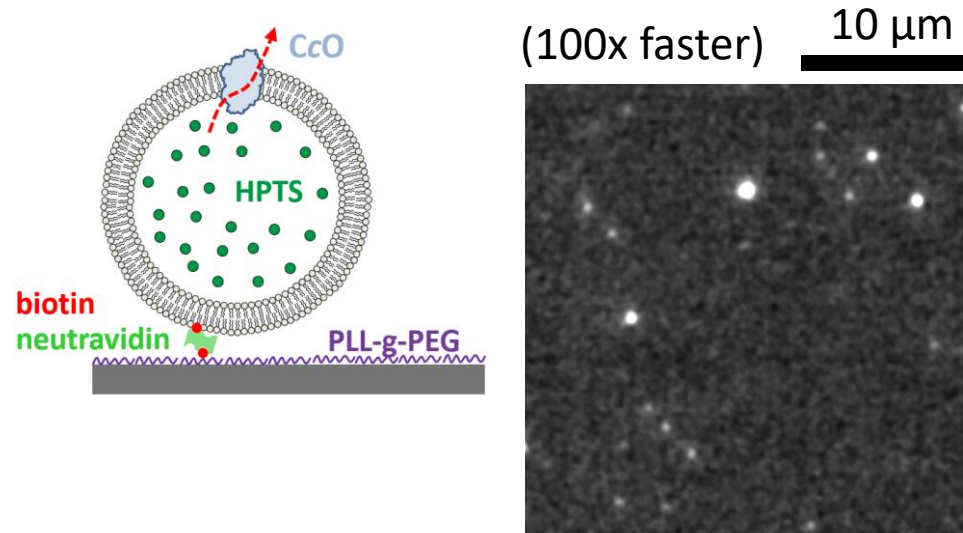




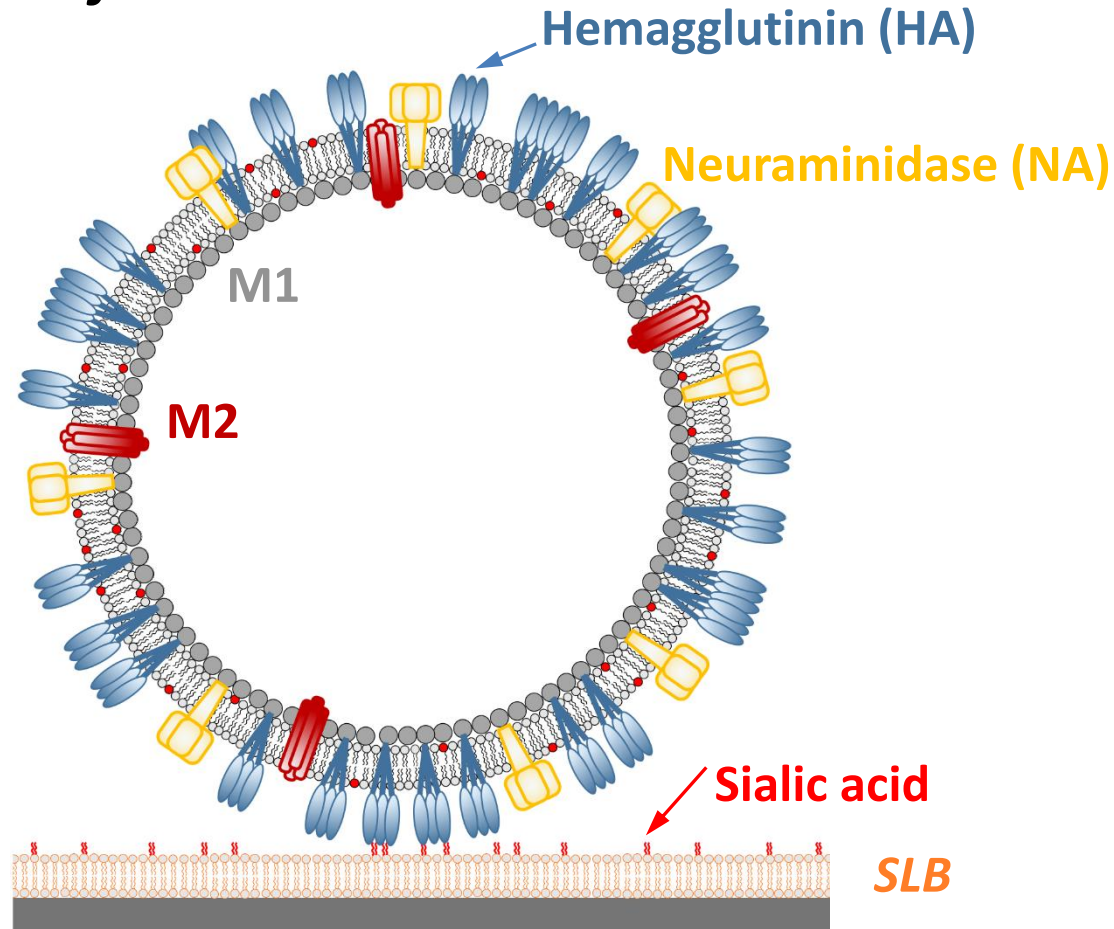
Stephan Block – **Bionanointerfaces Lab**
 Institut für Physikalische und Theoretische Chemie, FU Berlin

12. November 2025

Activity (Turnover Rate) of Single Enzymes

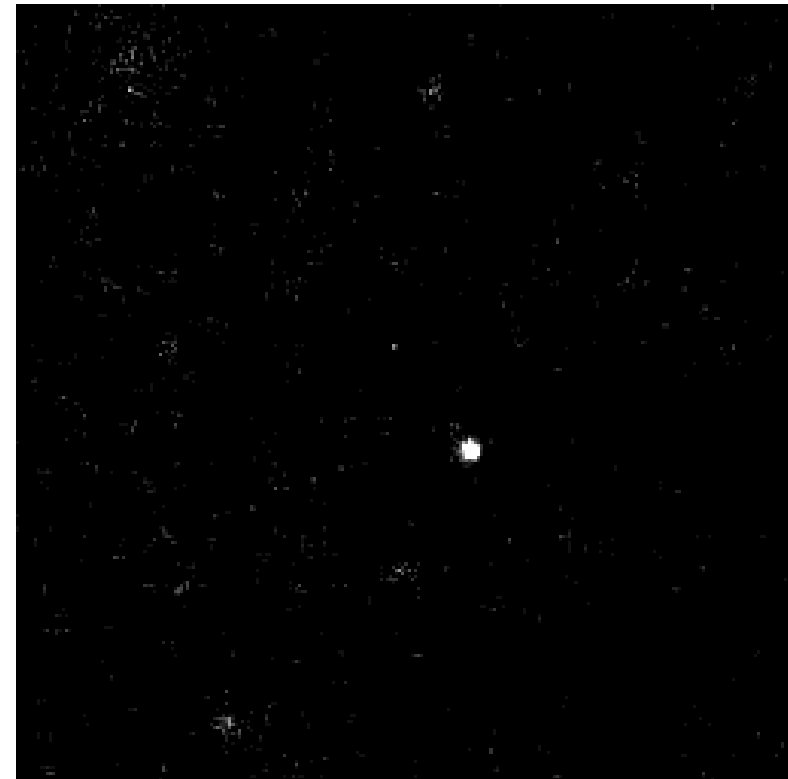


Influenza A Virus



(realtime)

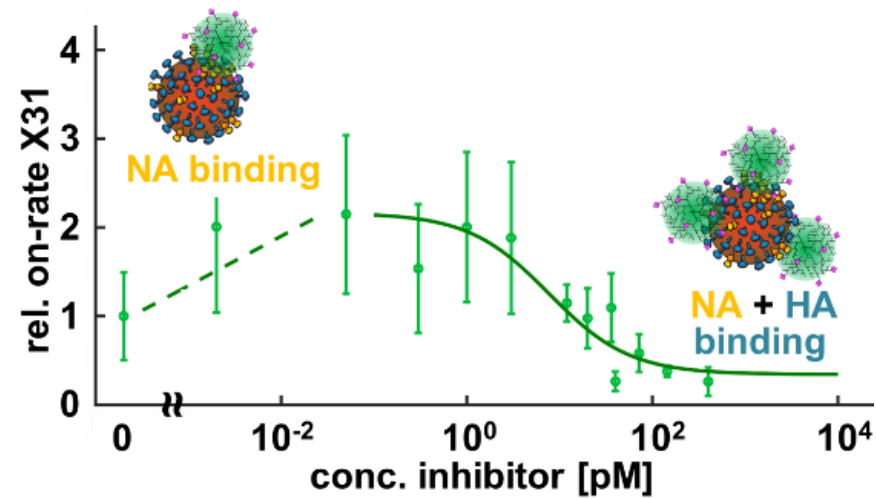
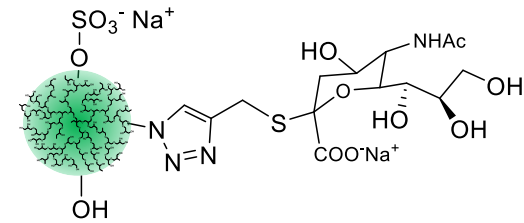
10 μm



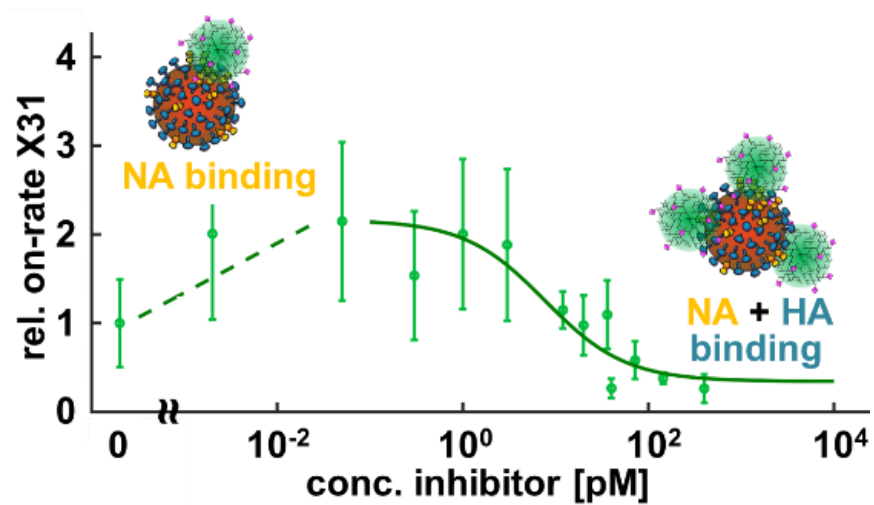
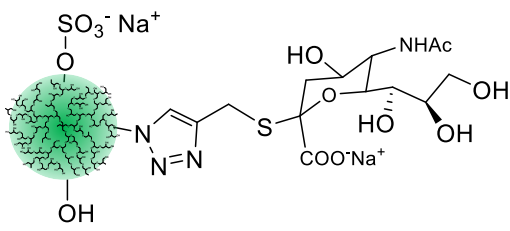
**total internal reflection
fluorescence (TIRF) microscopy**

Inhibition of Virus Binding

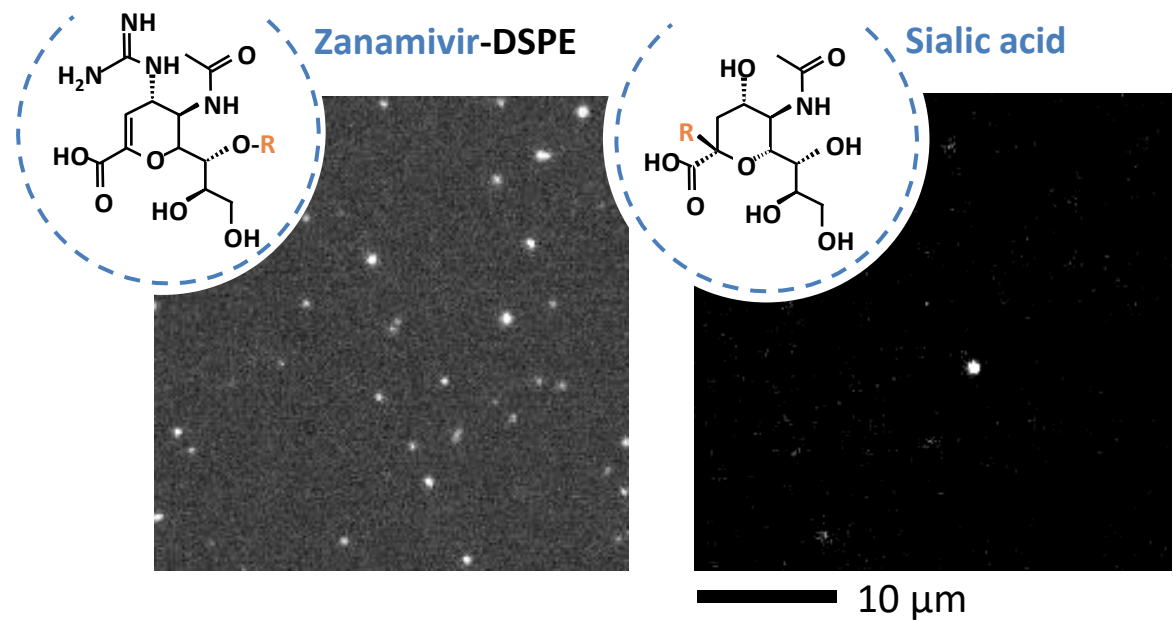
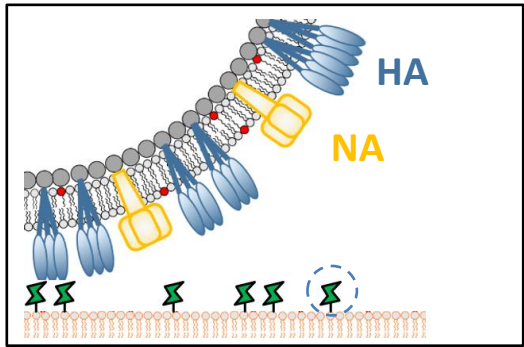
Impact of Binding Inhibitors



Impact of Binding Inhibitors

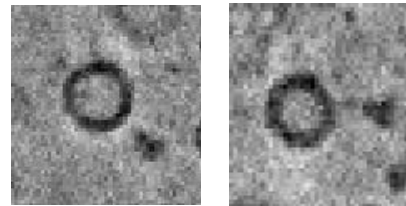
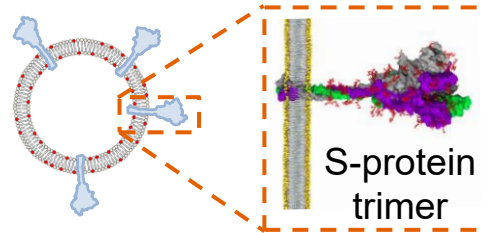


Impact of Binding Sites

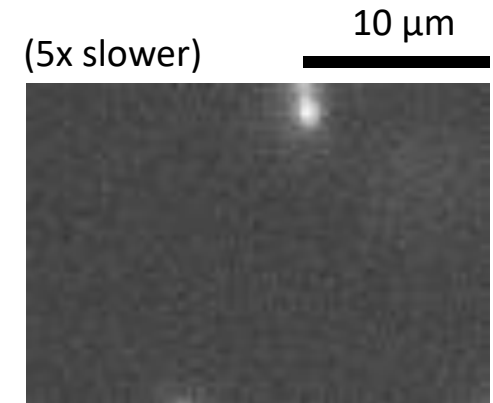


Preparation/Fabrication

- ▶ Lipids: Bilayer, Liposomes...
 - ▶ Proteins: Functionalization, reconstitution
 - ▶ Viruses, Bacteria
 - ▶ Hydrogels: synthetic, biogen
- Interaction/Activity Studies



Cryo-EM (K. Ludwig)



(K. Diestelhorst)

Microscopy and Data Analysis

- ▶ Atomic force microscopy: Imaging, Force measurements
- ▶ Optical scattering microscopy
- ▶ Fluorescence microscopy: WF, confocal; TIRF, FCS, FLIM, ...
- ▶ Single particle tracking (2D, 3D)
- ▶ Analysis of large data sets

