

Zürich, 1. October 2014

PhD/Postdoc Positions in Bacterial Cell Biology and Electron Cryotomography

PhD and Postdoc positions are available in the Pilhofer Lab at ETH Zürich– pilhoferlab.ethz.ch. Our research is focused on understanding the structure and function of bacterial macromolecular machines; especially those mediating cell-cell interactions. Intriguing examples include sea mine-like MAC arrays (image), or the Type VI Secretion system acting as a spring-loaded molecular dagger. In the future we will strengthen our efforts to capture cell-cell interactions in the moment of engagement, to resolve the mechanisms of the involved macromolecular assemblies in the scenarios of bacterial competition, infection and symbiosis.

Our key-technique, electron cryotomography, allows for resolving complexes in their native cellular context, in three dimensions and to macromolecular resolution. In an interdisciplinary approach we complement electron microscopy with methods from bacterial cell biology, infection biology, light microscopy and structural biology.

The ETH Department of Biology provides an international and collaborative research environment. We have access to state-of-the-art 300kV electron cryomicroscopes (equipped with energy filter and direct electron detector) as well as shared facilities for light microscopy and functional genomics. PhD students will be members of the Zürich Life Sciences Graduate School (lszgs.uzh.ch), offering complementary courses and close interactions with peers.

Please apply by email to Martin Pilhofer (pilhofer@biol.ethz.ch), including a CV and a brief statement why you would like to join the lab. Postdoc applicants should explain how they plan to acquire external funding. Experience in bacterial cell biology, infection biology, light- or electron microscopy is advantageous.

