



Research Institute of Molecular Pathology

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PostDoc position

PROTACs & The Molecular Kiss of Death (Clausen Group, IMP Vienna)

An ERC-funded postdoctoral position is available in the laboratory of Dr. Tim Clausen at the Research Institute of Molecular Pathology (IMP) in Vienna to study mechanisms of how proteins are selected for degradation and how E3 enzymes can be reprogrammed by PROTACs.

Apart from its crucial biological role, the targeted degradation of proteins attracted much interest in the Medicinal Chemistry field. A recent approach termed PROTAC (Proteolysis Targeting Chimeras) is considered especially promising. PROTACs are bi-functional small molecules that physically link an E3 ligase and a protein-of-interest (POI), thus inducing ubiquitination and proteasomal degradation of the targeted protein. For various reasons, PROTACs, which eliminate a POI rather than inhibiting it, seem to be superior to classical pharmaceutical agents. However, the true potential of the PROTAC approach has not been reached, as from the >600 E3 ligases present in human cells only a handful are currently explored in Drug Discovery. In collaboration with Boehringer Ingelheim, we aim to establish novel E3's as PROTAC platforms. The studied E3's represent large protein assemblies (>500 kDa), have intricate yet little understood substrate-targeting mechanisms and are medically relevant.

To tackle the structure and mechanism of one of the E3 giants and develop a novel PROTAC system, we are looking for a highly motivated postdoc candidate. The position will provide a unique and multi-disciplinary exposure to modern Structural Biology including cryoEM and XL-MS. Located at the IMP (<https://imp.ac.at>), a leading international research institute in one of the world's best cities, our lab has access to cutting-edge service facilities and benefits from the excellent research community at the Vienna Biocenter Campus (<http://viennabiocenter.org>).

Applicants are required to have a strong background in biochemistry and structural biology, documented by a first-author publication. We particularly welcome applications from candidates experienced in chemical biology, mass spectrometry or cryoEM. Please send a letter of intent, your CV, and names of 2 referees to tim.clausen@imp.ac.at.