



Research Institute of Molecular Pathology

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PostDoctoral Scientist

Molecular mechanisms against proteotoxic stress

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 molecular machines linked to protein misfolding diseases.

In general, our laboratory is interested in (i) protein quality control and stress response pathways, (ii) the role of specific protein modifications therein, and (iii) the networking of chaperones carrying out the assembly of multi-protein complexes. We recently discovered protease-chaperone machineries that are of fundamental importance for intercellular signaling (*Cell*, 2013, 155, 647) and for forming myosin filaments (*Cell*, 2013, 152, 183), and identified a novel post-translational protein modification (phospho-arginine; *Science*, 2009, 324, 1323), marking proteins for degradation by Clp proteases (*Nature*, 2016, 539, 48). In fact, the discovered degradation pathway appears to represent a simple, bacterial version of the ubiquitin-proteasome system.

By applying a specialized methodology for characterizing dynamic protein complexes, we will analyze the structure and function of molecular machines mediating the degradation and disaggregation of damaged proteins, having a special interest in the proteasome, Clp proteolytic complexes and HSP100 disaggregases. Unpublished data from our lab point to novel structural features that are critical for the various housecleaning activities and for taming the otherwise dangerous protein shredders. To pursue a further, in-depth mechanistic analysis, we are looking for a highly motivated postdoc candidate.

The position will provide a unique and multi-disciplinary exposure to modern Structural Biology. Located at the IMP (<http://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://www.viennabiocenter.org>).

The ideal candidate will have a doctoral degree and a published expertise in Biochemistry, Structural Biology or related fields. We particularly welcome applications from candidates trained in cryo-electron microscopy or mass spectrometry. Please send a letter of intent, your CV, and names of 3 referees to tim.clausen@imp.ac.at.