PhD student position

Physiological functions of GCPII orthologs in basal organisms

Summary: Human glutamate carboxypeptidase II (GCPII) is a zinc-dependent peptidase that is increasingly recognized as a target of therapeutic interventions in a variety of neurologic disorders as well as a marker for imaging and therapy of prostate cancer. However, despite of nearly universal expression of GCPII-like proteins in living organism there is limited knowledge of physiological function(s) of such orthologs in non-mammalian species.

Project: The project focuses on structure-function and enzymologic studies of non-mammalian orthologs of human GCPII, including enzymes from *C.elegans*, *F.hepatica*, *D.rerio*, *A.thaliana*, *S.mansoni* and yeast species. Used methodology includes cloning strategies (Gateway), mutagenesis, heterologous protein expression in various systems (*E.coli*, *K.lactis*, insect and mammalian cells), protein purification and characterization, enzymatic assays including high-throughput library screening, inhibition studies, cell biology (fluorescent microscopy), and X-ray crystallography. We believe that unravelling physiological function(s) of these proteins in non-mammalian species could shed light unto yet unknown functions of the protein in mammals, including humans. The project is supported by the grant from the Czech Science Foundation and will be carried out in collaboration with J. Dvorak lab, Czech University of Life Sciences in Prague.

Qualifications: Applicants should have a solid background in molecular biology and biochemistry or cell biology. We expect good communication skills, analytical thinking and the ability for teamwork. The successful candidate will participate in a PhD program at Charles University in Prague. The starting date is summer/fall 2018.

How to Apply: For more information please contact Cyril Bařinka (**cyril.barinka@ibt.cas.cz**) directly.

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