

PhD students: Open positions in the laboratory of Molecular Neuroscience

Positions are available for **highly motivated Ph.D students** for the project “Role of mTORC1 signaling in intracellular processing and trafficking of Alzheimer’s disease (AD)-associated amyloid precursor protein and its derivatives”. The project was recently approved for funding by Czech Science Foundation. mTORC1 is a key intracellular signaling component with a proposed role in Alzheimer disease. The project is focused on the link between mTORC1 and β -amyloid processing in neuronal cells. Molecular processes are investigated directly in cells using fluorescence techniques, including super-resolution microscopy available in the laboratory.

Techniques planned for the project:

1. molecular biology
 - a) recombinant DNA cloning
 - b) CRISPR/Cas9 and RNA silencing tools for mutagenesis in mammalian cells
 - c) tissue culture
 - d) immunofluorescence
2. fluorescence techniques including super-resolution microscopy
3. image data analysis and bioinformatics

The applicant:

- Master in medicine, molecular biology, biochemistry or biophysics
- Highly motivated to learn new interdisciplinary methods
- Previous experience in abovementioned techniques is advantageous

We offer:

- Young international working environment
- Possibility to work on the state-of-the-art instruments
- Possibility to learn a large variety of advanced fluorescence techniques

The laboratory is part of J. Heyrovsky Institute of Physical Chemistry, which is one of the leading research institutes of the Czech Academy of Sciences. Our Institute is repeatedly evaluated at the top in the research activities quantified by the number of publications in highly impacted journals. The institute’s biological section was established in the year 2010.

Preferential starting date: Spring/Summer 2019

Submission deadline: April 1, 2019

Candidates should submit their motivation letter, CV and list of publications to:

Dr. Martin Štefl (martin.stefl@jh-inst.cas.cz) or **Dr. Petra Riegerová** (maiden name Barešová; petra.riegerova@jh-inst.cas.cz)