

Postdoctoral researcher

in the Laboratory of Structural Biology (<http://lsb.avcr.cz/>), with the focus on understanding

Mechanisms of cargo recognition by kinesin molecular motors

Job description:

The successful candidate will co-lead a project aimed at structure-function studies of anterograde transport mediated by conventional kinesins and their interactions with cargo molecules. You will use a bottom-up approach to define a kinesin/cargo transport system at the molecular level. You will express and purify individual protein components to reconstitute kinesin/cargo complexes and analyze their structural and functional properties. You will apply mutagenesis, biophysical approaches, and structural biology techniques to pinpoint motifs mediating cargo/kinesin interactions and delineate the interaction interface(s). The total internal reflection microscopy will be used to visualize the complexes and elucidate their functional properties up to the single molecule level *in vitro*. Neuronal cell-based assays will be exploited to translate and validate *in vitro* data in physiological environment of the axonal transport. You will contribute to supervision of junior colleagues, manuscript writing, and present your results at international meetings.

Basic education, experience, and skills required for consideration:

- PhD in molecular biology, biochemistry, biology, biophysics or related subjects
- Publication record in peer-reviewed international journals
- Excellent communication skills and teamwork, ability to plan and work independently
- Good English command (oral and written)
- Prior experience with heterologous protein expression and purification, biophysics, structural methods, and enzyme kinetics is a plus

We offer:

- Successful candidates will lead or co-lead one or more key projects in the lab
- A dynamic, multidisciplinary and highly collaborative international team
- Access to state-of-the-art technologies in structural biology, biophysics, and omics
- Excellent training conditions in preparation for your future career
- Extensive network of collaborators

Institute and workplace:

The Institute of Biotechnology (IBT, www.ibt.cas.cz), a constituent of the BIOCEV center of excellence (www.biocev.eu), is a multi-disciplinary research center focused on cancer and developmental biology, metabolism, gene expression, and structural biology & protein engineering. IBT/BIOCEV brings together >500 international scientists and students in >50 research groups. Research is supported by state-of-the-art core facilities (gene core, molecular structure and biophysics, animal clinic, flow cytometry & imaging, and omics). Located in Vestec, approximately 30 minutes (public transport) from the Prague center.

Additional information:

- **Application deadline: January 31, 2023. Fully funded position is available immediately.**
- For more information, please, contact Dr. Cyril Bařinka (cyril.barinka@ibt.cas.cz).
- To apply please submit your CV, motivation letter, and 2 references to hr@ibt.cas.cz.

More details on the processing of personal data are available on the website: <https://www.ibt.cas.cz/cs/o-ustavu/oficialni-dokumenty/gdpr/>.