



PhD student position in Proteomics and Protein Biochemistry

We are seeking for highly motivated PhD candidate to join Laboratory of Biotechnology at AMU on a project aiming to elucidate mechanisms regulating WHIRLIES function and targeting. The position is founded by NCN OPUS 2021/41/B/NZ3/00711.

The WHIRLY proteins belong to a small family of DNA/RNA binding proteins of higher plants. Most plants possess two WHIRLY proteins located in various compartments in the cell. In Arabidopsis three WHIRLY encoding genes exist in the genome. Their roles in all diverse processes might be linked to their binding to DNA and RNA. In plastids, WHIRLY1 and 3 have been found to be major components of nucleoids. The WHIRLY proteins could bind to single-stranded DNA (ssDNA) and function as transcription factors to regulate defence gene expression and organelle DNA copy number. In addition, WHIRLIES were found to promote accurate repair of DNA double-strand breaks. Analysis of the crystal structure of potato and Arabidopsis Whirly proteins has provided insight into the DNA-binding mechanism of this family of proteins, their mode of action, and autoregulation. In fact, WHIRLY proteins form tetramers and 24-mer higher-order structures. Outstandingly, the plastid-nucleus located WHIRLY1 and mitochondria localized WHIRLY2 both play a significant role in the regulation of ABA signalling.

Methods that will be used: the biological model is Arabidopsis thaliana; the project employs a variety of techniques including protein overexpression and purification, mass spectrometry, in vitro ubiquitination system, transient expression assays, confocal microscopy.

Requirements: MSc degree in biological or related sciences; knowledge of molecular biology techniques (DNA/RNA/proteins), biochemistry, LC-MS/MS, and protein-DNA analysis methods.

We offer: Supportive and stimulating environment, 4-year funded position, doctoral scholarship will be awarded in accordance with the rules set out in the NCN regulations.

How to apply: Candidate should submit following documents via email:

- Letter of motivation
- CV including research achievements (publications, posters, awards, internships etc)
- Names and contact information of two academic referees
- Successful candidates will participate in the formal recruitment to the doctoral school.

Deadline: 30 April 2022

Contact details:

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