



**Institute of Experimental Botany (IEB) | Centre of the Region Haná (CRH)**

Centre of Plant Structural and Functional Genomics, Šlechtitelů 31, Olomouc, Czech Republic

***Three years postdoctoral position in chromosome biology  
in Pecinka group***

**Project description**

We are team interested in understanding plant chromatin structure and functions (<https://olomouc.ueb.cas.cz/en/research-groups/pecinka-group>). **The proposed project aims at characterization of plant mitotic metaphase chromosome transcriptome and proteome using temperate zone model crop barley (*Hordeum vulgare*).** In order to prepare for mitosis, chromatin condenses and chromosomes acquire their iconic X-like shape. The composition and molecular processes inherent to mitotic chromatin remain enigmatic and the chromosomes are considered as generally transcriptionally silent. To challenge this dogma, we established protocols for genome-wide transcriptome analysis of barley mitotic chromosomes. This will allow exploring specific RNA populations of plant mitotic chromosomes and discover novel mitosis-specific genes and regulatory transcripts for the first time. Next, purified mitotic chromosomes will be used for proteomic analysis to identify and characterize barley chromosomal proteins. Therefore, this project has a strong potential to reveal novel factors involved in regulation of mitotic chromosome structure and functions vital for faithful transmission of genetic information.

**Requirements**

The candidate should hold Ph.D. (or be close to receive it) in genetics, molecular/cell biology, biochemistry, or similar field. Expertise in chromosome biology, bioinformatics, proteomics and/or microscopy is considered an advantage. Excellent communication and writing skills, independence in decision making, ability to work in a team and strong motivation are essential.

**Appointment**

The appointment will be on a temporary basis for a period of three years (initial appointment will be for a period of 12 months). This will be full-time appointment with 40 work hours per week, competitive salary and benefits depending on the work performance. The contract includes regular contributions to the social and health insurance system and 25 days of holidays. The researcher is expected to assist in training of undergraduate and PhD students.

**Job application**

Should be submitted by email to Dr. Ales Pecinka ([pecinka@ueb.cas.cz](mailto:pecinka@ueb.cas.cz)). The application must include CV, motivation letter and contact information to at least two referees combined in a single PDF file. The selection process will begin as soon as a sufficient number of applications is received. Expected starting date is October/November 2019.