

We announce the organization of the INDEPTH Training School on Plant Nuclear Proteomics and cordially invite you to participate.



Flow cytometry & Proteomics facilities at IEB and UPOL

The training school will take place in the laboratories of the Centre of the region Haná for Biotechnological and Agricultural Research, which are situated either in the Institute of Experimental Botany (IEB), AS CR, or Faculty of Science, Palacký University (UPOL), both on Slechtitelu street, Olomouc, Czech Republic, **during July 8-12, 2019**. The venue is accessible by public bus transport from the city center and main railway station.

Objectives: Since its introduction in the 1990s, mass spectrometry-based proteomics has evolved to a reliable tool, which helps to answer many biological questions related to the function of proteins. Similarly, flow cytometry has become very useful for the isolation of plant cell nuclei. Hence the recently developed combination of these techniques allows efficient investigations of plant nuclear proteins. The school is designed for doctoral students and researchers who need to understand and employ the techniques of isolating plant nuclei, removing DNA, nuclear protein recovery plus digestion and peptide-based protein identification using tandem mass spectrometry (MS/MS).

The program will include the following topics covered by lectures and laboratory experiments:

- 1) Plant sample preparation and flow cytometry of cell nuclei
- 2) Digestion of the nuclei by a nuclease
- 3) Protein recovery and proteolytic digestion
- 4) Peptide desalting
- 5) Reversed-phase liquid chromatography of peptides
- 6) Tandem mass spectrometry (ESI-MS/MS and MALDI-MS/MS)
- 7) MS/MS data processing & bioinformatics

All experiments will be conducted under the guidance of specialists in the field with a big attention to the final processing and interpretation of results.

Audience: Everyone from the partner countries of the INDEPTH COST-Action is welcomed to apply.

The number of attendees is limited to 16 and thus candidates will be selected based on their motivation letter and CV.

Registration:

To register upload your **CV** (1 page) and a **motivation letter** (1 page) at the registration site (under construction), which will explain how the knowledge acquired in this training school could contribute to your scientific project.

Trainers for practical courses and lectures:

1) For flow cytometry

Information available at <https://olomouc.ueb.cas.cz/research-groups/pecinka-group>

- **Petr CAPAL**, Centre of Plant Structural & Functional Genomics, Institute of Experimental Botany, AS CR
- **Hana JERABKOVA**, Centre of Plant Structural & Functional Genomics, Institute of Experimental Botany, AS CR
- **Anna NOWICKA**, Centre of Plant Structural & Functional Genomics, Institute of Experimental Botany, AS CR
- and others

2) For sample digestion and peptide-based proteomic analyses

Information available at <http://proteomics.cr-hana.upol.cz>

- **Marek SEBELA**, Department of Protein Biochemistry, Centre of the region Hana for Biotechnological and Agricultural Research
- **Rene LENOBEL**, Department of Protein Biochemistry, Centre of the region Hana for Biotechnological and Agricultural Research
- **Ivo CHAMRAD**, Department of Protein Biochemistry, Centre of the region Hana for Biotechnological and Agricultural Research
- **Zdenek PERUTKA**, Department of Protein Biochemistry, Centre of the region Hana for Biotechnological and Agricultural Research

Accommodation, catering and travelling fees will be supported by the INDEPTH COST-Action. More information will be available in June 2019.