

Curriculum vitae

Iva Pitelkova

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Education

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| 2011–2025 | Doctor in Philosophy (Ph.D.) in Biochemistry at the Department of Biochemistry and Microbiology, University of Chemistry and Technology in Prague, Czech Republic.
PhD thesis: Proteomics aspects of abiotic stresses in plants. |
| 2005–2011 | Master of Science in Biochemistry. UCT in Prague, Czech Republic.
MSc thesis: Proteins responsible for enhanced low temperature tolerance in barley. |

Professional experience

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| 2023 – Present | Senior Engineer at the Proteomics and Metabolomics Core Facility, the Faculty of Health Sciences, UiT – The Arctic University of Norway, Tromsø. |
| 2019 – 2023 | Senior Engineer at the Department of Botany, The Arctic University Museum, UiT – The Arctic University of Norway, Tromsø. |
| 2016 – 2019 | Head Engineer at the Department of Botany, The Arctic University Museum, UiT – The Arctic University of Norway, Tromsø. |
| 2013 – 2015 | Staff Engineer and Research Assistant several short term contracts at the Department of Arctic Biology, The University Centre in Svalbard, Longyearbyen, Norway. |

Technical skills

Method development Biomolecules extractions (aDNA, proteins, small molecules, lipids), untargeted metabolomics, targeted metabolomics and proteomics workflows (MRM). Metabarcoding and multiplex PCR. Sequencing libraries preparations.

Data analysis Compound Discoverer, Skyline, R, OpenMS.

Operating and maintaining LC–MS/MS systems (low resolution TQ-XS - Waters, high resolution ID-X - ThermoFisher), pipetting robot OT-2 - Opentrons, sequencer MiniSeq - Illumina.

Courses

7th OpenMS User Meeting Max Planck-Institute for Molecular Genetics in Berlin, Duration: 8 hours, The use of OpenMS proteomic tools under KNIME software for high-throughput data analysis. Processing of peptide mass spectra, protein identification and final statistics using R environment under the KNIME platform. 2014

Arctic Marine Molecular Ecology The University Centre in Svalbard, Department of Arctic Biology Duration: 1 month The course presented molecular genetics tools for studies of marine biodiversity with practical training in studying the production of luciferase in Dinoflagellates during the polar night. 2013

"Mass Spectrometry" and "Structure, dynamics and function of biological membranes" Duration: 3 months Courses for PhD students organised by Charles University in Prague, Faculty of Mathematics and Physics. 2011

Other

Languages Fluent spoken and written Czech and English, very good in written and spoken Norwegian, beginner French

Teaching Laboratory methods to master and doctoral students.

- Lammers Y, Taberlet P, Coissac E, Elliott LD, Merkel MF, **Pitelkova I**, PhyloAlps Consortium, PhyloNorway Consortium, Alsos IG. Multiplexing PCR allows the identification of within-species genetic diversity in ancient eDNA. *Mol Ecol Resour.* 2024;24(3):e13926. doi:10.1111/1755-0998.13926
- Dilli PR, Heintzman PD, Lammers Y, Yoccoz NG, Lorberau KE, **Pitelkova I**, Goslar T, Murguzur FJA, Salonen JS, Helmens KF, Bakke J, Edwards ME, Alm T, Bråthen KA, Brown AG, Alsos IG. Sedimentary ancient DNA shows terrestrial plant richness continuously increased over the Holocene in northern Fennoscandia. *Sci Adv.* 2021;7(31):eabf9557. doi:10.1126/sciadv.abf9557
- Alsos IG, Lavergne S, Merkel MKF, Boleda M, Lammers Y, Alberti A, Pouchon C, Denoeud F, **Pitelkova I**, Puşcaş M, Roquet C, Hurdu B-I, Thuiller W, Zimmermann NE, Hollingsworth PM, Coissac E. The treasure vault can be opened: Large-scale genome skimming works well using herbarium and silica gel dried material. *Plants.* 2020;9(4):432. doi:10.3390/plants9040432
- Vítámvás P, Urban MO, Škodáček Z, Kosová K, **Pitelkova I**, Vítámvás J, Renaut J, Prášil IT. Quantitative analysis of proteome extracted from barley crowns grown under different drought conditions. *Front Plant Sci.* 2015;6:479. doi:10.3389/fpls.2015.00479
- Kosová K, Vítámvás P, **Hlavackova I**, Urban MO, Vlasáková E, Prášil IT. Responses of two barley cultivars differing in their salt tolerance to moderate and high salinities and subsequent recovery. *Biol Plant.* 2015;59(1):106–114. doi:10.1007/s10535-014-0465-y
- Müller E, **Hlavackova I**, Svoen ME, Alsos IG, Eidesen PB. Characterization of 14 microsatellite markers for *Silene acaulis* (Caryophyllaceae). *Appl Plant Sci.* 2015;3(9):1500036. doi:10.3732/apps.1500036
- **Hlavackova I**, Vítámvás P, Šantrůček J, Kosová K, Zelenková S, Prášil IT, Ovesná J, Hynek R, Kodíček M. Proteins involved in distinct phases of cold hardening process in frost-resistant winter barley (*Hordeum vulgare* L.) cv Luxor. *Int J Mol Sci.* 2013;14(4):8000–8024. doi:10.3390/ijms14048000