

Mgr. MARTIN KOVAČIK, Ph.D.

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EDUCATION

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|--|--------------------|
| Palacký University Olomouc Molecular and Cell biology (PhD.) | 2018 – 2024 |
| University of Ostrava Experimental biology (MSc.) | 2016 – 2018 |
| University of Ostrava Experimental biology (BSc.) | 2013 – 2016 |

PROFESSIONAL POSITIONS

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| Charles University in Prague Bioinformatician, Plant Reproduction Evolution lab, Department of Botany | 2023 – present |
| Institute of Experimental Botany AS CR PhD. student, Centre of Plant Structural and Functional Genomics | 2018 – present |
| Life Science Research Centre, Ostrava MSc. student, Lab of molecular protozoology | 2016 - 2018 |

PROFESSIONAL HONORS, AWARDS AND FELLOWSHIPS

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| The Best Poster Award International CEPLAS-IPK Summer School 2024 Poster: Identification of imprinted genes in barley | 2024 |
| Absolute winner in the category Biology & Ecology Scientific competition for the dean's prize Talk: The transcriptome landscape of developing barley seeds | 2024 |
| 1st place in doctoral section of the category Biology & Ecology Scientific competition for the dean's prize Talk: The transcriptome landscape of developing barley seeds | 2024 |
| Short Term Scientific Mission European Cooperation in Science & Technology Action: Epigenetic mechanisms of Crop Adaptation to Climate Change | 2021 |

SELECTED ORAL PRESENTATIONS

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| Developing an atlas of gene expression during barley grain development 13 th International Barley Genetics Symposium, Riga, Latvia | 2022 |
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Transcriptome atlas of developing barley grain

2021

Seminar at the Cluster of Excellence on Plant Sciences, Dusseldorf, Germany

LANGUAGE SKILLS

English – advanced

Czech – native

PROFESSIONAL ACTIVITIES

Czech Plant Nucleus Workshop 2025

Member of the organizing committee

PROFESSIONAL SKILLS

Bioinformatics – advanced analyses of transcriptomic data, coding in UNIX Shell and R

Lab – molecular techniques, RNA isolation, RNA *in situ* hybridization

Supervision of BSc. student

Marie Červenková

Thesis: Analysis of gene expression in barely endosperm by RNA *in situ* hybridization

Supervision of MSc. student

BSc. Marie Červenková

Thesis: Genetic analysis of the role of *Lys3* in barley seed development

PUBLICATION ACTIVITY

Total publications (Web of Science): 8

Lifetime citations (Web of Science): 32, updated: 10/2024

H-index (Web of Science): 4

PUBLICATIONS

8. Nowicka, A., **Kovacik, M.**, Maksylewicz, A., Kopeć, P., Dubas, E., Krzewska, M., Springer, A., Hoffie, E., R., Daghma, D., S., Milec, Z., Pecinka, A., Kumlehn, J. & Žur, I. (2024). The transcriptional landscape of the developmental switch from regular pollen maturation towards microspore-derived plant regeneration in barley. **The Crop Journal**, 12(4), 1064-1080.
7. **Kovacik, M.**, Nowicka, A., Zwyrková, J., Strejčková, B., Vardanega, I., Esteban, E., Pasha, E., Kaduchová, K., Krautsova, M., Červenková, M., Šafář, J., Provart, N., J., Simon, R. & Pecinka, A. (2024). The transcriptome landscape of developing barley seeds. **The Plant Cell**, 36(7), 2512-2530.
6. Vladejić, J., **Kovacik, M.**, Zwyrková, J., Szurman-Zubrzycka, M., Doležel, J. & Pecinka, A. (2024). Zeocin-induced DNA damage response in barley and its dependence on ATR. **Scientific Reports**, 14, 1-16.
5. Pavlu, S., Nikumbh, S., **Kovacik, M.**, An, T., Lenhard, B., Simkova, H., & Navratilova, P. (2024). Core promoterome of barley embryo. **Computational and Structural Biotechnology Journal**, 23, 264-277.

4. Nowicka, A., Ferková, L., Said, M., **Kovacik, M.**, Zwyrtková, J., Baroux, C., & Pecinka, A. (2023). Non-Rabl chromosome organization in endoreduplicated nuclei of barley embryo and endosperm tissues. **Journal of Experimental Botany**, 74(8), 2527-2541.
3. Nowicka, A., Sahu, P., P., **Kovacik, M.**, Weight, D., Tokarz, B., Krugman, T. & Pecinka, A. (2021). Endopolyploidy Variation in Wild Barley Seeds across Environmental Gradients in Israel. **Genes**, 12(5), 711.
2. Nowicka, A., **Kovacik, M.**, Tokarz, B., Vrána, J., Zhang, Y., Weigt, D., ... & Pecinka, A. (2021). Dynamics of endoreduplication in developing barley seeds. **Journal of Experimental Botany**, 72(2), 268-282.
1. **Kovacik, M.**, Nowicka, A., & Pecinka, A. (2020). Isolation of high purity tissues from developing barley seeds. **JoVE (Journal of Visualized Experiments)**, (164), e61681.