Magdalena Bohutínská

* [redacted]
Nationality: [redacted]

Education:

2017 – until now: Doctoral study at Charles University, specialization Botany (thesis: How predictable is genome evolution? Insights from parallel adaptations across Brassicaceae, supervisor: Dr. Filip Kolář)
2015 – 2017: Master study at Charles University, (thesis: Molecular evolution of meiosis in diploids and tetraploids of Arabidopsis arenosa, supervisors: Dr. Roswitha Schmickl, Dr. Kirsten Bomblies)
2013 – 2015: Bachelor study at Charles University, (thesis: Autopolyploids: particularly hopeful monsters, supervisor Dr. Roswitha Schmickl)

Employment:

2017 – until now: Researcher at Charles University, Department of Botany
2017 – until now: Researcher at Czech Academy of Sciences, Institute of Botany
2014 – 2016: Biology teaching assistant at the Arcibiskupské gymnázium in Prague

Internships:

2019: UC Davis, USA, **Graham Coop** lab (6-weeks stay focused on application of theoretical concepts and methods on detecting convergence from genomic data)
2018: Stockholm University, Sweden, **Tanja Slotte** lab (1-month stay focused on statistical population genomics of Arabidopsis)
2016: JIC Norwich, UK, **Kirsten Bomblies** lab (3-months stay focused on meiosis protein evolution)
2015: JIC Norwich, UK, **Levi Yant** lab (1-month stay focused on population genomics of Arabidopsis)

Workshops:

2021: Predicting Evolution, EMBO Workshop, 14 – 15 June
2018: Workshop on Population and Speciation Genomics, Český Krumlov, 21 January – 3 February
2016: Genomics Workshop, Ferrara, 16 – 18 December

SCI publications:

In total, I (co)-authored **9** peer-reviewed ISI Core collection papers, **3** as the first autor.
Google Scholar: scholar.google.com/citations?user=kSnTudAAAAAJ&hl=en
Total. N of citations: 84, H-index: 4 (GoogleScholar)

Bohutínská, M., Vlček, J., Yair, S., Leanen, B., Konečná, V., Fracassetti, M., … Kolář, F. (2021). Genomic basis of parallel adaptation varies with divergence in Arabidopsis and its relatives. *Proceedings of the National Academy of Sciences of the United States of America*. doi.org/10.1073/pnas.2022713118

Bohutínská, M., Alston, M., Monnahan, P., Mandáková, T., Bray, S., Paajanen, P., … Yant, L. (2021). Novelty and convergence in adaptation to whole genome duplication. *Molecular Biology and Evolution*. https://doi.org/10.1093/molbev/msab096

Bohutínská, M., Handrick, V., Yant, L., Schmickl, R., Kolář, F., Bomblies, K., & Paajanen, P. (2021). *De-novo* mutation and rapid protein (co-)evolution during meiotic adaptation in *Arabidopsis arenosa*. *Molecular Biology and Evolution*. https://doi.org/10.1093/molbev/msab001

Marburger, S., Monnahan, P., Seear, P. J., Martin, S. H., Koch, J., Paajanen, P., **Bohutínská, M.**,… Yant, L. (2019). Interspecific introgression mediates adaptation to whole genome duplication. *Nature Communications*, *10*(1). https://doi.org/10.1038/s41467-019-13159-5

Monnahan, P., Kolář, F., Baduel, P., Sailer, C., Koch, J., Horvath, R., Laenen B., Schmickl R., Paajanen P., Šrámková G., **Bohutínská M.,**… Yant, L. (2019). Pervasive population genomic consequences of genome duplication in Arabidopsis arenosa. *Nature Ecology and Evolution*, *3*(3). https://doi.org/10.1038/s41559-019-0807-4

Wos, G., **Bohutínská, M.**, Nosková, J., Mandáková, T., & Kolář, F. (2021). Parallelism in gene expression between foothill and alpine ecotypes in *Arabidopsis arenosa*. *The Plant Journal*, tpj.15105. https://doi.org/10.1111/tpj.15105

Knotek, A., Konečná, V., Wos, G., Požárová, D., Šrámková, G., **Bohutínská, M.**, … Kolář, F. (2020). Parallel Alpine Differentiation in Arabidopsis arenosa. *Frontiers in Plant Science*, *11*, 1949. https://doi.org/10.3389/fpls.2020.561526

Wos, G., Mořkovská, J., **Bohutínská, M.**, Šrámková, G., Knotek, A., Lučanová, M., … Kolář, F. (2019). Role of ploidy in colonization of alpine habitats in natural populations of Arabidopsis arenosa. *Annals of Botany*, *124*(2), 255–268. https://doi.org/10.1093/aob/mcz070

Holcová, K., Holcová, M. (2016) Calcareous nannoplankton in the Upper Jurassic marine deposits of the Bohemian Massif: new data concerning the Boreal–Tethyan communication corridor. *Geological Quarterly*, *60*(3), 624-636. https://doi:10.7306/gq.1282

Presentation at international conferences:

2021: Evolution 2021 Virtual [oral presentation]
2019: evolVienna meeting, Vienna, Austria. [invited oral presentation]
2018: II Joint Congress on Evolutionary Biology, Montpellier, France. [poster presentation]
2017: Plant Genome Evolution conference, Sitges, Spain. [poster presentation]
2016: The International Conference on Polyploidy, Hybridization and Biodiversity, Rovinj, Croatia [selected oral presentation].

Self-acquired funding (as a PI):

2019 – 2021: Charles University Student Grant Agency. Genetic basis and architecture of parallel alpine adaptation in Arabidopsis. 33000 EUR. 3-year project.
2019: Mobility fund of Charles University. 1200 EUR. One-time award.
2016 – 2018: Charles University Student Grant Agency. Triggers and consequences of adaptation in meiosis of diploid-polyploid Arabidopsis. 30000 EUR. 3-year project.
2015: Mobility fund of Charles University. 400 EUR. One-time award.

Teaching and supervision:

2021: PhD course on Population genomics, SLU Uppsala (co-leader of lecture & practicals on Genome evolution, genomic basis of adaptive evolution and inference of selection)
2020 – until now: Supervision of a bachelor student A. Poštulková (thesis: What factors underlie gene reuse in adaptation?)
2019 – until now: Genomics of speciation and adaptation (leader of a 4-hours practical on Genomics of adaptation, assistant of a 4-hours practical on QTL)

Popularization activities:

2015, 2018: Co-author of two popular scientific publications for Biology Olympiad (2018: ISBN 978-80-213-2868-6, 2015: ISBN 978-80-213-2565-4)
2013 – until now: Organization of biological camps for high school students “Běstvina”.
2013 – 2018: Member of the team of authors of Biology Olympiad and of Botanical contest.

Awards:

2017: Dean’s Award for the best Master thesis at Faculty of Science, Charles University
2012, 2013: Silver Medal at the International Biology Olympiad in Singapore and in Switzerland

Reviewing experience: BMC Biology