

ERC-funded postdoctoral position in the evolutionary genomics of whole genome duplication

Start (negotiable): autumn/winter 2020

Duration: 2 years (with possibility for an extension)

Place: Department of Botany, Charles University, Prague, Czech Republic, EU

We seek a highly motivated, independent early career researcher interested in developing a research program within the context of an ERC-funded project focused on the evolutionary consequences of whole genome duplication (for details see below). The successful candidate will join the team of Ecological Genomics lead by Filip Kolář (<https://botany.natur.cuni.cz/ecolgen>). This project will involve close collaboration with other labs focused on ecological and evolutionary genomics of polyploidy, Levi Yant (University of Nottingham, UK) and Christian Parisod (University of Bern, Switzerland).

Requirements

- innovative thinking, enthusiasm for evolutionary biology
- keen interest in leading an independent research program and collaborating both within the group and internationally
- a strong background in structural, statistical, and/or population genetics/genomics
- PhD in evolutionary biology, genetics, bioinformatics, or related fields

We offer

- competitive monthly salary of 2,000 EUR (note that average gross salary in the Czech Republic was ~1,350 EUR monthly in 2019 and living expenses are generally lower in CZ than in western Europe)
- work in a young, dynamic and international environment, situated in an inspiring city centre
- co-supervision of a PhD student in the same project
- involvement in international collaboration including stays in collaborating labs

Optional - further possibilities for strengthening academic career

- take part in teaching relevant courses
- supervision of master project(s) in the Bioinformatics or Evolutionary Biology program
- participate in fieldwork in Europe or North America
- opportunity to develop independent research follow-up project
- support for seeking additional self-funded projects in national (e.g. Junior Researcher projects within The Czech Science Foundation) and international funding schemes (e.g. Marie Curie, EMBO fellowship)

Project details

Whole genome duplication (WGD, polyploidization) is a dramatic genome-wide mutation whose ubiquity across eukaryotes suggests an adaptive benefit, although the underlying mechanism remains unknown. The project will build on our research in *Arabidopsis arenosa* that demonstrated that WGD can increase the capacity of its natural populations to accumulate adaptive variation, but the candidate will extend well-beyond this system to additional species. General conclusions will be drawn taking advantage from replicated ploidy-variable plant species naturally facing multiple environmental challenges, which are partly already sampled and sequenced. Alongside the head-start with available preliminary data, the candidate is expected to be fully involved in the overall project design and lead the analytical part of the project. For overall info on the Starting ERC project see <https://botany.natur.cuni.cz/ecolgen/node/48>.



Pool of potential research topics/areas:

- challenging theory on polyploid adaptation towards environmental challenge with novel empirical data (genomic, experimental), possibly with further theory development
- design, maintenance and analysis of ecological genomic / quantitative genetic experiments focused on polyploid adaptation
- analysis of structural changes in a genome following in natural and experimentally induced WGD
- analysis of genomic landscape of introgression between ploidy levels and consequences for adaptation and speciation

Please send your CV, contact details for two referees and a half-page motivation letter as a single pdf file to Filip Kolář (filip.kolar@natur.cuni.cz). Review of the applications will begin on **May 25th 2020** and will continue until the position has been filled.