

GECO GÉNOMIQUE COMPUTATIONNELLE ET EVOLUTIVE

EQUIPE BIOINFORMATIQUE, PHYLOGÉNIE ET GÉNOMIQUE EVOLUTIVE

MUGAL Carina

CHARGÉE DE RECHERCHE

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Courriel

I am an evolutionary geneticist particularly interested in understanding **the molecular mechanisms and evolutionary processes that shape genetic variation** within and among species. For this purpose, I use a multi-disciplinary approach spanning **empirical and theoretical work** within evolutionary genomics. On the empirical side, I primarily use birds and more specifically *Ficedula* flycatchers as a model organism, since birds show some interesting karyotype features, which make them an exciting model system in the field of genomics. On the theoretical side, I work on stochastic models solidly rooted in population genetics theory in order to improve our conceptual understanding of the genomic signatures generated by diverse evolutionary processes.

The research questions I address can be summarized into three main areas:

1) Causes and consequences of recombination rate regulation in birds

2) Speciation genomics in *Ficedula* flycatchers

3) A theoretical approach to the study of nonequilibrium dynamics in molecular evolution

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Short summary of my scientific background

Building on a background in mathematical sciences at the University of Graz, Austria, I completed my PhD studies in evolutionary genetics at the Department of Ecology and Genetics, Uppsala University, Sweden, in 2013. I then continued my post-doctoral research there, a period which coined my interest in birds as a study system. In 2017, I established as an independent researcher and focused on the study of closely related species, since closely related species form an excellent study system to investigate how different molecular mechanisms and population-level processes contribute to the build-up of genomic differences among species. I first continued my research at Uppsala University, and since 2022 I work as a CNRS researcher at the Laboratory of Biometry and Evolutionary Biology (LBBE), University of Lyon 1.