



GECO GÉNOMIQUE COMPUTATIONNELLE ET EVOLUTIVE

EQUIPE BIOINFORMATIQUE, PHYLOGÉNIE ET GÉNOMIQUE EVOLUTIVE

SEGUREL Laure

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Broad research interests : I am a CNRS researcher in population genetics, broadly interested in using genetic data to understand species evolution, more specifically to investigate how species adapt to their environment. During my PhD at the Musée de l'Homme with E Heyer and R Vitalis (UMR7206 - Paris), I worked in anthropological genetics, to decipher how various cultural features (matrimonial rules, language) shape the genetic diversity in Central Asia. I further worked on identifying selective pressures on various metabolic genes involved in adaptation to diet in herders and farmers from Central Asia. During my post-doc at UChicago with M Przeworski, I studied how recombination evolved between humans and chimpanzees, and across human populations, and I looked for signatures of balancing selection in humans and chimpanzees genomes. I also investigated what are the different determinants of neutral genetic diversity, as well as the factors influencing mutation rates. Since I got recruited at the CNRS in 2013 (UMR7206 - Paris), I continued working on human adaptation to changes in diet by studying lactase persistence using both modern and ancient DNA. In parallel, I am interested in understanding how humans and their associated microbes are co-evolving. Specifically, I developed a project in Cameroon to better understand how the human gut (and oral) microbiota evolved in response to changes in human diet, especially linked to the growing urbanisation and industrialisation of human populations. I am currently working at the LBBE (UMR5558 - Lyon) and developing projects on balancing selection (a mode of adaptation that maintains genetic diversity), to study its prevalence and underlying mechanisms both in primates and in birds, which have contrasted recombination landscapes and effective population sizes.