FWO-funded postdoctoral position in evolutionary genomics of sex chromosomes and sex-specific recombination in anurans

A postdoctoral position is available in the Ma Lab: Evolutionary Genomics of Sex (https://www.wmalab.com) in Research Group of Ecology, Evolution and Genetics the Biology Department at the **Vrije Universiteit Brussel** (Belgium). Our lab aims to understand how sex chromosomes and sex-determination systems originate and evolve, why they are highly labile in some lineages but extremely stable in others, and how recombination shapes these dynamics across the tree of life. The successful candidate will work on research topic on **evolution of sex chromosomes** and **extreme heterochiasmy** across anuran lineages, with emphasis on:

- assembling and analysing large, repeat-rich frog genomes
- performing comparative genomics across lineages with different sex-determining systems (XY, ZW, homomorphic vs. differentiated sex chromosomes)
- investigating the drivers of sex chromosome turnover, transposable elements and repeat landscapes
- analysing the evolution of sex-specific recombination rates and landscapes

The project will involve field sampling and basic molecular lab work, and will combine long-read genome assembly, comparative and population genomics, and the analysis of recombination patterns and structural variation. Depending on the candidate's interests and expertise, there will also be opportunities to integrate cytogenetics and/or evo-devo approaches.

What we expect from you:

- PhD in **evolutionary biology, genomics, bioinformatics** or a closely related field.
- Solid expertise in **evolutionary/population genomics** and **molecular evolution**, with a clear interest in **sex chromosomes/sex determination**, **recombination** (heterochiasmy), transposable element evolution, or genome evolution in non-model species.
- Proven experience analysing **high-throughput sequencing data**, ideally including genome assembly and/or comparative genomics (large or repeat-rich genomes are a plus).
- **Strong programming and data-analysis skills** (e.g. Python and/or R, Unix) and familiarity with reproducible workflows.
- **Highly motivated** to work on frog genomes to understand sex chromosome turnover and recombination landscapes, and to link genomic patterns to evolutionary mechanisms.
- Valid EU (or equivalent) **driving licence**, prior **fieldwork experience** is preferred.
- Willingness to contribute to ongoing projects, co-supervise MSc/BSc students and (optionally) take on a small amount of teaching.
- Compliance with the mobility rule: you have not lived or worked in Belgium for more than 12 months in the 36 months before the start of the fellowship.

Please submit the application via VUB link **by 10/03/2026**:

1. CV (including publication list)
2. Cover letter (your key qualifications, why you are interested in this position, and your research directions/career goals)
3. Copy of PhD diploma
4. Contact details for three referees (who will be contacted after shortlisting)

The position is expected to start on **01/06/2026** (with some flexibility for the right candidate).
Questions about the position, the lab or life in Brussels? Contact Prof. Wen-Juan Ma at wen-juan.ma@vub.be