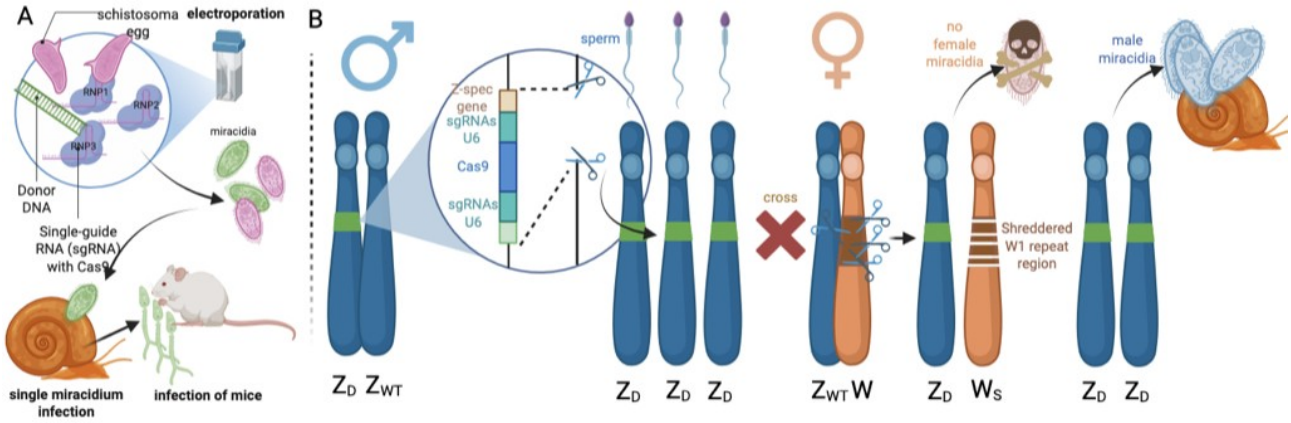
Postdoctoral Position – ANR-Funded

Gene Drive Project for *Schistosoma mansoni* Eradication by Gene Drive

Location: IHPE, Perpignan, France (with prolonged mission at George Washington University [GWU], USA). **Supervision:** Pr Christoph Grunau (IHPE) and Pr Paul Brindley (GWU), in collaboration with Marina Mourao, Fiocruz Belo Horizonte (field work), Keje Boesrma, Free University Amsterdam (philosophy), and Bart Haegeman, LOMIC Banyuls (modeling)



Project Overview: We are seeking a motivated postdoctoral researcher to join an ANR-funded project aimed at developing a **gene drive approach to eradicate *Schistosoma mansoni*** in focal areas. *Schistosoma mansoni* is one of several species of parasitic flatworm responsible for **schistosomiasis**, a neglected tropical disease affecting over **250 million people worldwide**, primarily in sub-Saharan Africa and Brazil. The disease causes chronic morbidity, including liver, intestinal and bladder damage, and contributes significantly to poverty and reduced productivity in endemic regions. This innovative project combines **CRISPR/Cas9 gene editing, functional genomics, and ecological modeling** to create sustainable solutions for controlling and eliminating this devastating parasite.

Key Responsibilities:

- Design and implement **CRISPR/Cas9-based gene drives** targeting *S. mansoni*.
- Conduct **wet-lab experiments** (e.g., ChIP-Seq, ATAC-Seq) to study chromatin accessibility in schistosomes and identify genomic safe harbours for gene insertions.
- Collaborate with international partners for **field studies, bioinformatics analysis, and ethical/philosophical considerations** of gene drive applications.
- Work closely with modeling teams to assess the **ecological and epidemiological impacts** of gene drive interventions.

Qualifications:

- PhD in **molecular biology, genetics, parasitology, or a related field**.
- **Experience or strong interest** in:
    - CRISPR/Cas9 technology and genome editing.
    - ChIP-Seq, ATAC-Seq, or other high-throughput sequencing techniques.
    - Working with *Schistosoma* or other eukaryotic, particularly metazoan, parasites.
    - Wet-lab and bioinformatics skills (e.g., NGS data analysis).
- Ability to work in an **interdisciplinary and international environment**.
- Excellent communication skills and fluency in English.

Why Join Us?

- Contribute to a **cutting-edge project** with potential global health impact.
- Access to **state-of-the-art facilities** and a dynamic research network.
- Opportunity for **prolonged research stays** at George Washington University and collaborations with leading institutions in France, Brazil and the Netherlands.

Application: Interested candidates should submit a **CV, cover letter, and contact details for two references** to christoph.grunau@univ-perp.fr and pbrindley@email.gwu.edu . Review of applications will begin immediately and continue until the position is filled.

Start Date: Flexible (early 2026) **Duration:** 3 years

Questions? Contact Christoph Grunau at christoph.grunau@univ-perp.fr and Paul Brindley at pbrindley@email.gwu.edu.