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Centre
International
de Recherche
en Infectiologie



**Hepatotropic and
Emerging Agent
Laboratory**

PhD position open at CIRI, Lyon, France

“Understanding host-pathogen interaction processes that control Orthonairovirus transmission”

The team HEAL – Hepatotropic and Emerging Agent Laboratory - at CIRI is welcoming applications from enthusiastic and independent PhD candidates to start research projects on the cellular and molecular aspects of “Orthonairovirus: molecular determinants of transmission”. Orthonairovirus are emerging, tick-borne viruses such as the Crimean-Congo Hemorrhagic Fever Virus. In humans, CCHFV causes a hemorrhagic disease with a 30% mortality rate and is classified as a BSL-4 virus. In animals (including cattle, a natural host of the virus) infection is asymptomatic. We have identified host factors from bovine and human with differential activity against CCHFV. The aim of the PhD candidate will be to understand how CCHFV is affected by these host factors and unraveled the molecular basis explaining the difference observed between the bovine and human orthologs. Using different approaches (such as cellular biology, molecular biology, microscopy, cytometry, western blot, RT-qPCR) identified host factor candidates will be analyzed for their role during CCHFV (and other Orthonairoviruses) cell entry, replication/transcription/translation and assembly/secretion of the viral cycle.

Environment: The host team is part of the CIRI - International Center for Infectiology Research (<https://ciri.ens-lyon.fr>), in Lyon, France. The laboratory provides state-of-the-art facilities for cellular and molecular biology, biochemistry and top-level research virology with levels 3 and 4 laboratories and animal housing. It is located on the Campus Charles Mérieux, a research environment endowed with strong basic biology sciences and a particular dedication to research on infectious diseases. The lab has cofounded the LabEx (Laboratory of Excellence) Ecofect (<http://ecofect.universite-lyon.fr/>) on Eco-evolutionary dynamics of infectious diseases. The host lab has a particular interest in translating its basic science discoveries in translational research in immunotherapy.

Candidates: The applicants are expected to have a strong background in molecular and cellular biology. The ideal candidates should be highly motivated, curious, and enthusiastic to work in a highly collaborating team. Prior experience in molecular virology and international training will constitute an advantage. Proven ability to identify research objectives and meet agreed deadlines, self-motivation, flexibility, and assistance to other ongoing research work is essential. Excellent written and communication skills in English are required.

Application: Candidates are invited to contact **Vincent LEGROS** (vincent.legros@ens-lyon.fr) for further details. Please send an application with the following:

- Cover letter
- Concise summary of previous activities
- Curriculum vitae including contact details for 2-3 referees

Date of publication: 30th October 2025 **Deadline for application:** 31st January 2026

Recent publications related to the position:

- Gautam *et al.* 2024. The PACS-2 protein and trafficking motifs in CCHFV Gn and Gc cytoplasmic domains govern CCHFV assembly. *Emerging Microbes and Infections*
- Ritter *et al.* 2024. The low-density lipoprotein receptor and apolipoprotein E associated with CCHFV particles mediate CCHFV entry into cells. *Nature Communications*
- Freitas *et al.* 2022. Crimean-Congo hemorrhagic fever: a growing threat to Europe. *Comptes Rendus Biologies*
- Freitas *et al.* 2020. The interplays between Crimean-Congo hemorrhagic fever virus (CCHFV) M segment-encoded accessory proteins and structural proteins promote virus assembly and infectivity. *PLoS Pathog*

