



Post-doctoral fellow position

Novel therapeutic strategies against HBV infection

 **Starting date:** June 2025  **City:** Lyon, France  **Education:** PhD

Laboratory

Department: Hepatitis Viruses and Liver Pathogenesis (HeLiP).
Unit: UCBL1, INSERM UMR 1350 - Pathobiology and Therapy of Liver Diseases (PaThLiv)
Institute: The Lyon Hepatology Institute, IHU EVEREST

About the team: **The HeLiP team provides an environment of scientific excellence, training, and innovation at the cornerstone of the multidisciplinary Lyon Hepatology Institute.** Our main objective is to gain a better understanding of the molecular mechanisms involved in the establishment and maintenance of chronic infection by the hepatitis B virus (HBV) and hepatitis delta virus (HDV). This knowledge is fundamental for the development of new direct-acting antivirals, immuno-modulatory agents and their combinations in order to eradicate infection and prevent associated pathologies (cirrhosis and hepatocellular carcinoma).

Address: 151 Cours Albert Thomas, 69424 Lyon Cedex 03.

Directors: Dr. Barbara Testoni and Prof. Fabien Zoulim

Job description

Main mission: **We are looking for a highly motivated and dynamic postdoctoral fellow who will lead an exciting project investigating the protein-protein and protein-DNA interactions involved in HBV covalently closed circular (ccc)DNA formation and regulation in the cell nucleus.**

Project Overview and Objectives

Chronic HBV infection relies on the persistence of cccDNA in infected hepatocytes. Current available therapies are unable to either eliminate or inactivate, thus obliging patients to lifelong treatments to avoid viral rebound and severe liver complications. Based on previous work of the team, the postdoctoral fellow will investigate

- the interaction of identified viral and host proteins in order to determine the interaction domains required for cccDNA formation and transcriptional activity
- design interference strategies based on the physical/functional inhibition between the proteins and/or with cccDNA as new antiviral strategies

These experiments will be conducted with the use of *in vitro* and *ex vivo* infection models, as well as by the analysis of patient samples using state-of-the-art technologies.

What we offer

- a cutting-edge research environment at the new Lyon Hepatology Institute
- the opportunity to work on a high-impact project with translational potential
- training in advanced techniques and access to state-of-the-art facilities
- an international, inclusive working environment committed to fostering diversity and parity
- a dynamic “early career scientists” network supporting scientific growth and career development



- Main tasks:**
- Carry out experimental research work efficiently and independently, using ad hoc biochemical, molecular and cellular biology techniques
 - Manage the equipment and set up or use the methods required to complete the research project.
 - Analyse the results obtained, report on them, propose new experiments and present these results at internal team meetings and meetings with collaborators, departmental meetings and at international conferences.
 - Participate in the smooth running of the laboratory with all the other members of the team, in particular by being responsible for the maintenance of certain equipment or the upkeep of a room dedicated to research work
 - Supervise technical staff and students

- Specific requirements:**
- Aptitude to working in BSL2/3 confined environments
 - HBV vaccination
 - Mastering of English language sufficient to working in an international environment

- Scientific background:**
- In-depth knowledge of protein biochemistry and molecular biology in general
 - Specific knowledge of transcription and epigenetics would be appreciated
 - Computer skills and computer analysis tools
 - High command of scientific English (spoken and written)
 - Basic knowledge of statistical tools for biological data analysis
 - Knowledge of health and safety regulations.

- Scientific techniques:**
- Mastering of basic biochemistry techniques (production of recombinant proteins, GST-pull down and other protein-protein interaction-related techniques)
 - Experience in cell culture and basic molecular biology techniques
 - Ability to use the basic IT tools needed to analyse and present experimental results (Word, Excel, PowerPoint, basic statistical analysis software, etc.)

- Personal skills:**
- Capacity of autonomously develop a research project
 - Organization, rigor and critical thinking
 - Interpersonal and teamwork skills
 - Aptitude to scientific dissemination in front of international audience

How to apply

- Available positions:**
- The postdoctoral fellow position is available for a duration of three years.

- Application deadline:**
- Please send your CV (including education, work experience, and academic references) before **March 15th 2025**.

- Contact:**
- Dr. Barbara Testoni (barbara.testoni@inserm.fr)
 - Catherine Oudin (catherine.oudin@chu-lyon.fr)