

JOB OFFER

Postdoctoral researcher - RNA-Directed Antibody *in vitro* Design



Founded in 1964, Inserm is a public scientific and technological institute dedicated to biomedical research and human health. It is involved in the entire range of activities from laboratory research to the patient care. Inserm brings together 15,000 researchers, engineers, technicians and administrative staff, all with one shared objective: improve health by advancing knowledge of living organisms and diseases and developing innovative treatments.

A new project, **ReNAissance** led by Bruno Pitard, has been selected by an international jury as a high-risk health research program with the potential to generate strategic conceptual and technological breakthroughs in the coming decades. The goal of **ReNAissance** is to advance medical research by developing a breakthrough therapeutic approach for treating infectious diseases through *in vivo* mRNA expression encoding therapeutic antibodies.

The Pitard laboratory, in the Immunology and New Concepts in Immunotherapy (INCIT) department of Inserm and CNRS (Nantes University, France) is seeking an innovative and highly motivated postdoctoral researcher to (1) design optimized mRNA molecules and establish cellular assays to demonstrate *in vitro* proof of concept for new RNA therapeutic leads and (2) characterize *in vitro* RNA expression and study disease-relevant biology to help prioritize candidates for *in vivo* studies in animal models.

KEY RESPONSABILITIES



- **Lead mRNA element engineering efforts** to optimize novel mRNA structure designs for RNA therapeutics achieving unprecedented levels of expression and stability
- **Design and execute all-based assays in human and rodent cell lines** to characterize the efficacy and safety of novel RNA therapeutic leads.
- **Develop cell based** neutralizing antibody assays against various viral targets
- **Design RNA formulation** using adjunct regulatory elements to modulate antibody secretion
- **Investigate mechanism of action of lead candidates** and establish biologically relevant endpoints for mRNA antibody selection and infectious disease applications
- Prepare figures and authors manuscripts for submission to high-impact journals

BASIC QUALIFICATIONS



- **Ph.D in Molecular Biology, Biochemistry, Molecular Cell Biology or related field with 2-4 years of experience, demonstrated by a strong track record of peer-reviewed publications and project achievements**
- Extensive experience in *in vitro* cell culture, as well as cellular based assays and analysis techniques (eg flow cytometry, confocal microscopy imaging, PCR, ELISA, western blotting, sequencing...)

PREFERRED QUALIFICATIONS



- Ability to work independently, collaborate across disciplines and lead interdisciplinary activities to guide the selection of new mRNA formats and chemistries and deliver project milestones
- Prior experience in RNA structure design and RNA expression



APPLICATION PROCESS



Candidates should submit a motivation letter, a Curriculum Vitae (including publication list) and contact details of three professional references (including the PhD advisor) to bruno.pitard@univ-nantes.fr



The position is based in Nantes, France, near the Atlantic Ocean.

Learn more: <https://www.levoyageanantes.fr/>

The successful candidate will work at the Health Research Institute 2 (IRS2) within the New Concepts in Immunotherapy (INCIT) department: <https://incit.fr/>



Start date: June 1, 2025

Contract type: Fixed-term (12 months, renewable)