

Job Title	Post-doc in Microbiology
Job Discipline	Microbiology
Speciality areas	Science de la vie Microbiologie, Human virology, molecular biology
Contract type	Post-doctoral contract
Department/Office	Département Ressources Biologiques et Environnement Unité MASAE/Laboratoire Santé Environnement et Microbiologie
Duty station	Centre Atlantique, Nantes
Opening date for applications : Starting date on the job :	As soon as possible
Reference (HRD)	

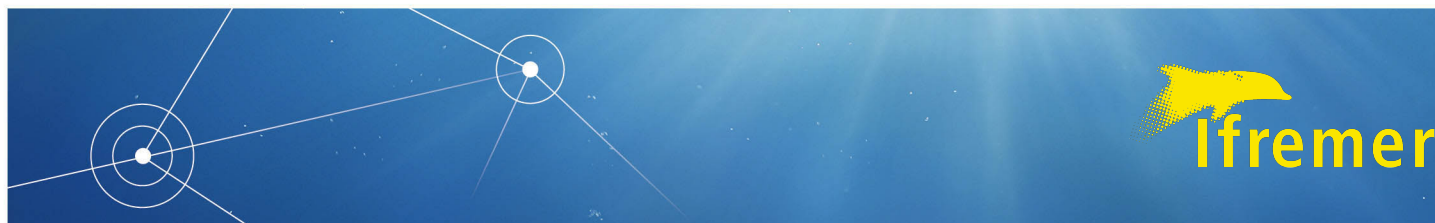
The Institute and the recruiting department

French Research Institute for Exploitation of the Sea, Ifremer, through its research work and expert advice, contributes to knowledge of the oceans and their resources, to monitoring of marine and coastal environments and to the sustainable development of marine activities. To these ends, Ifremer conceives and operates tools for observation, experimentation and monitoring, and manage the oceanographic databases. Created in 1984, Ifremer is a French public institute of an industrial and commercial nature. It is supervised jointly by the Ministry of Higher Education and Research and the Ministry of the Environment, Energy and Marine Affairs. Ifremer undertakes research missions, offers expert advice and acts as a funding agency. Ifremer performs targeted applied research to address the questions posed by society (climate change effects, marine biodiversity, pollution prevention, seafood quality etc.). Results include scientific knowledge, technological innovations, and systems for ocean observation and exploration. Partnerships may be public, private or a combination of the two.

- **Presentation of the department, research unit or laboratory**

The objectives of the Microbiology Food Health and Environment (MASAE) unit are to study the diversity and evolution of micro-organisms of anthropogenic or marine origins present in the coastal environment and in foods of marine origin, to understand their effects on the microbiological quality/safety of products derived from them.

The Laboratory Health Environment and Microbiology (LSEM) develops research activities related to pathogenic microorganisms for Humans (mainly viruses and bacteria) in the land-sea continuum and shellfish, to understand the mechanisms of transfer, persistence, or emergence within the coastal environment. The research carried out at LSEM, located at the interface of human health and the microbiological quality of the shoreline, is based on reference activities (the LSEM is the National Reference Laboratory (NRL) for the microbiology of shellfish), and knowledge of the microbiological quality of the coastline (the LSEM coordinates the REMI, a network dedicated to microbiological monitoring of shellfish and health studies).



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- Introducing the job description, indicating the work position in the organizational chart

Placed under the hierarchical responsibility of the LSEM manager, she/he will be in charge of the research project part of the OBEPINE consortium ' study of genomic diversity of hepatitis E virus and norovirus in human sewage and slaughter sewage' set up in collaboration with Nancy university (LCPME).

General areas of responsibility

The project aims at developing methods and contributing first data on the circulation and diversity of hepatitis E virus (HEV) and norovirus (NoV) in human and porcine populations, using waste waters. It will serve as a proof of concept for the Obepine+ project on the epidemiology of HEV and NoV or other zoonotic viruses arising from farm animals. At Ifremer, it will focus on developments regarding NoV, under the supervision of Marion Desdouits and Soizick Le Guyader, in collaboration with our partners from the LCPME at Nancy, who will focus on HEV.

Principal activities

- to develop efficient methods to concentrate viruses and extract/purify viral nucleic acids, from large volumes of turbid wastewaters.
- optimize targeted metagenomics approaches to characterize the genotypes of NoV present in wastewaters. This will require the selection of primer sets to amplify the NoV typing regions, and develop a sensitive method avoiding the formation of chimeras, and preferably quantitative, using artificial samples of known composition, based on previous work of the team. This approach will then be validated using RNA extracted from urban and slaughter house wastewaters, and PCR products sequenced using two NGS platforms, Illumina and Oxford Nanopore technologies. These data will allow to document the diversity of human and porcine strains of NoV circulating in two French regions.

Collaborative work environment

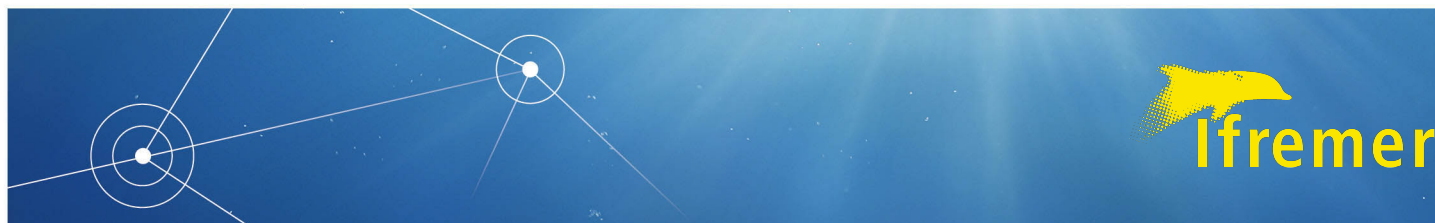
- Internal collaborative relationship : the laboratory (LSEM), MASAE unit and other microbiologists of the department and institute.
- External collaborative relationship : members of the LCPME team and other partners of the Obepine network.

Required education and experience

- PhD in microbiology, preferably with experience on working with human viruses

Required knowledge, skills and characteristics

- Knowledge, skills and abilities
- Knowledge in virology,
- Experience in molecular biology and next-generation sequencing techniques



- Bioinformatics and statistical analyses,
- Writing, project management, and exploitation (publications & congresses)
- Fluency in English (oral and written),

- Personal human qualities

- Scientific rigour, autonomy, dynamism, curiosity,
- Sense of responsibility,
- Sense of relationship, communication and pedagogy,
- Capacity to work within a research group

Specific working conditions

Full time

Sourcing solutions

How to apply for this position

Deadline for applications : 2023/08/08

Go to this offer in one click (HRD) :

All applications are processed exclusively via our website. Informal enquiries may be made to Soizick Le Guyader (soizick.le.guyader@ifremer.fr).

Interested candidates can apply by clicking the “Apply” button. If you are unable to apply online please contact us at grh@ifremer.fr

Our job offers on the website /Ifremer careers /[Jobs and Internships](#), or [Offres d'emploi/stage](#) (French version)

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