



18-month Research Position on Aquatic Microbial Ecotoxicology *(IIRSTEA Lyon-Villeurbanne, France)*

Structural and functional study of microbial periphyton to assess the ecotoxicological risks and the ecological effects of discharges from drug-production plants.

A 18-month Research Position is available from 3 April 2017 in the Research Group on Microbial Ecology in Anthropized Hydrosystems (EMHA) of the Research Unit "Freshwater Systems, Ecology and Pollution" (UR MALY, IIRSTEA, Lyon-Villeurbanne, France) in collaboration with the "Alpine Research Centre for Trophic Systems and Watershed Ecosystems" (UMR CARTELE, INRA, Thonon-les-Bains, France).

The objectives of this project, which is supported by SANOFI, are to evaluate the sensitivity of periphytic microbial communities to the effluents from a drug production facility and to assess the relevance of phylogenetic approaches to the development of innovative bioindicators based on the molecular analysis of those microbial assemblages.

Accordingly, the recruited researcher will develop original microbial ecotoxicological approaches to evaluate the effects of effluents from a drug-production plant on periphytic communities by combining *in situ* samplings (in the effluent-receiving river) and outdoor microcosms experiments (directly connected to the effluent). Functional and structural effects will be assessed using pollution-induced community tolerance (PICT) study, based on functional measurements, and diversity analysis of periphytic bacteria and diatoms (by sequence analysis of 16S rRNA and rbcL genes).

The research will require fieldwork followed by complementary laboratory and data analyses. The recruited researcher will receive technical and logistic supports from the team members. **He/she will be mainly responsible for:**

- preparing, organizing and coordinating the experiments and the sampling campaigns;
- managing PICT experiments in the laboratory;
- managing DNA preparation processes prior to sequencing (which will be subcontracted) and analyzing sequencing data;
- carrying out statistical analyses to evaluate the effects of effluents on microbial communities;
- writing scientific publications and reports and presenting the results in congresses.

Position Application

This position is under the supervision of Dr. [Stéphane Pesce](#), Leader of the Research Group on Microbial Ecology in Anthropized Hydrosystems with a co-supervision by Dr. [Agnès Bouchez](#), Senior Scientist at INRA, UMR CARTELE.

Applicants must have a PhD at the interface between microbial ecology and ecotoxicology. Candidates with strong expertise in molecular biology, bioinformatics, biostatistics or a combination will be preferred.

Application should include: (i) a cover letter with a brief description of past research accomplishments and future research goals and (ii) a Curriculum Vitae including three professional references.

Gross Salary: 2200-2400 €/Month (depending on previous experiences)

Review of applications will begin on **February 10, 2017** and applications will continue to be accepted until the position is filled. Applications and informal queries should be addressed to Stéphane Pesce: stephane.pesce@irstea.fr