General information

Date of publication : 20/05/2022
Type of Contract : Tenure Track Position
Section : 30 - Continental surface and interfaces
Contract Period : 5 years
Expected date of employment : 01/12/2022
Remuneration : Gross annual salary of 54,600 euros to 57,800 euros depending on professional experience.
Financial Environment : 320,000 € for the project

scientific topic

Ecology

Establishment strategy

The proposed profile is positioned at the intersection of two of the 6 major societal challenges of the CNRS, namely Climate Change and Health & Environment. The proposed profile aims to strengthen the synergies between two disciplines of ecology, namely evolutionary ecology and functional ecology. This synergy is essential on the one hand to understand and quantify the functioning of our environments under multiple constraints (climatic and anthropic) and on the other hand to predict their evolutions.

Section(s) du CoNRS : 29 - 30

Strategy of the host laboratory/laboratories

EDB - LEFE at University of Toulouse Paul Sabatier: The recruitment would strengthen the will of these two units, one whose major theme is evolutionary ecology and the other functional ecology, to merge in the next two years. This development would place the new unit among the main European research structures in the field.;LMGE at University of Clermont-Auvergne: The recruitment would make it possible to improve the interaction of research carried out on the role of the microbial and viral loop in the functioning of lake ecosystems, but also to strengthen its original position at the interface of the environment and human health fields.;EDYSAN at University of Picardie Jules Verne : The recruitment would make it possible to consolidate research in functional and evolutionary ecology on temperate forest ecosystems under constraints linked to rapid climate change. This reinforcement would allow this unit to strengthen its innovative actions in supporting the paradigm shift relating to forest management in this context of global change

Summary of the scientific project

This profile is motivated by the need to develop deeper links between ecology and evolution. Although its importance has been reaffirmed since the beginning of the 2000s and we are witnessing a gradual rise in research explicitly combining the two perspectives, integrative approaches coupling ecological and evolutionary dynamics through analyzes of reciprocal retroactions remain rare compared to traditional research in one or the other field. Many (non-exhaustive) reasons can be invoked to affirm that it is now possible to strengthen the links between these two scientific communities. For example, the recognition that evolutionary processes can occur on time scales as short as ecological processes;the fact that all spatial scales are relevant in both disciplines;convergence on the use of a variety of analytical methods (eg, omics, imagery);parallels in the forces acting on various levels of biodiversity;and the holobiont concept linking microbial and larger organisms. Promoting an integrative approach appears particularly relevant in times of marked environmental change and loss of biodiversity on a planetary scale, which strongly affects multiple dimensions of both ecological and evolutionary dynamics, with repercussions on resilience, conservation and management of populations, communities and ecosystems.

Summary of the teaching project

Université Paul Sabatier Toulouse :;L2 and L3 BOPE, for general-theoretical lessons on ecological and evolutionary processes, and Master 1 and 2 BEE for more specialized lessons in community and ecosystem ecology, evolutionary biology, quantitative ecology.;Université Clermont- Auvergne: The recruited candidate will mainly work in the Masters in Environmental Management (FREMAC course) / Microbiology (microbiology for health and the environment course) / Bioinformatics in teaching units combining Ecology and Evolution. More specifically, he/she will be able to teach in the following teaching units: i) Adaptations of aquatic organisms to their environments, ii) Emergence and diffusion of pathogenic microorganisms, iii) Genomics of microbial communities and bioanalysis, iv) Integrative omics, v) Research in aquatic trophic ecology.;Université Jules Verne Picardie: Teaching in Master Agrosciences, Environment, Territory, Landscape, Forest and at the Doctoral School, in both cases for ecology (fundamental and applied), with exact content that can be adapted to the profile of the recruited person, and probably with some field coaching.

Scientific diffusion

The results of the research will be disseminated through publications in international journals. In addition, a communication towards various targets (media, decision-makers, general public, schoolchildren ...) will be realized. Specific tools will be developed such as websites, newsletters, meetings, international symposiums, summer schools and conferences.

Open science

The CNRS is developing a strong policy in favor of open science. Open science consists of making research results "as accessible as possible and closed as necessary". As such, the CNRS aims to make 100% of the texts of publications resulting from the work of its units accessible, in particular through deposit in HAL. The data produced must also be made available and reusable, except for specific restrictions. In addition, the guiding principles of individual evaluation have been revised in accordance with the DORA declaration, to be more qualitative and to take into account all facets of the researcher's profession.

science and society

The relationship between science and society is now recognized as a full dimension of scientific activity. The project will develop this dimension in synergy with all the partners. The resulting research work will contribute to informing public.

Indicators

The expected results are high-level publications, defense of the funded thesis, defense of the HDR degree and obtaining research contracts. The follow-up will be done annually by the INEE-CNRS.

Keywords

Evolution;functional ecology;ecosystems;climate change;anthropogenic pressures