



## Postdoctoral Fellowship in Ecophysiology and Thermal Ecology

*Paris Institute of Ecology and Environmental Sciences, Sorbonne Université*



### Description

A postdoctoral / research assistant position at Sorbonne Université, Paris is offered to **investigate physiological patterns of pace-of-life and senescence acceleration with global warming. The research will involve studies in natural populations of a reproductively bimodal lizard species across France.** The postdoc will work in close collaboration with Jean-François Le Galliard and Sandrine Meylan. The project is part of a five-years long ANR-funded research program to better understand tipping points in climate-induced life history plasticity in ectotherms. This program involves 6 partner institutions, 8 permanent researchers, 2 post-doctoral fellows and 2 PhD students. It will combine observational, experimental and analytical techniques to provide a holistic understanding of pace-of-life acceleration with global warming with targeted studies of demographic senescence and biological ageing.

In ectotherms, warming can influence plastic life history traits with an acceleration of early life production at the expense of longevity and senescence, which may be due to physiological trade-offs involving warming-induced oxidative stress and telomere shortening. Yet, to date, causal mechanisms and ecological consequences of this pace-of-life acceleration are poorly characterized. The aim of this post-doctoral project is thus to highlight patterns and mechanisms of pace-of-life and senescence acceleration with global warming across natural populations of ectotherms. We will focus on a bimodal reproductive species of lizard (*Zootoca vivipara*), which offers a unique context to analyze how evolutionary transition between oviparity and viviparity can shape pace-of-life acceleration. Using population surveys across climatic gradients within the spatial range of these two reproductive modes in France, the

candidate will combine sampling methods in the field and detailed assessments of senescence at cellular and tissue levels in the laboratory, including markers of ageing, stress and energetic condition.

Main activities will include (1) designing optimal surveys and analytical methods during two successive field seasons in 2025 and 2026, (2) conducting and supervising fieldwork across two mountain ranges in France to sample lizards from natural populations with contrasted viviparous and oviparous reproductive mode and across a range of current climate conditions, (2) conducting laboratory analyses on tissue samples (ageing markers, oxidative stress, DNA damages), and (3) analyzing data and writing publications. The candidate will also be encouraged to join other initiatives performed by collaborators of this research program, including some laboratory experiments where environmental conditions will be manipulated, the development of new analytical methods or the supervision of students' projects.



The successful candidate will be recruited by Sorbonne Université at Paris Institute of Ecology and Environmental Sciences (iEES Paris, <https://ieesparis.ufr918.upmc.fr/?lang=en>) for a **2 years long period starting ideally from February-March 2025**. He/she will be supervised by CNRS Senior Researcher Jean-François Le Galliard and Sorbonne Université Professor Sandrine Meylan. iEES Paris is one of the most prestigious environmental sciences laboratory from France with a range of ecological and biodiversity research from genes to

ecosystems. It is hosted in a vibrant campus equipped with state-of-the art laboratory and located in a historic and cosmopolitan district of Paris. Our research program also involves the CEREEP-Ecotron IleDeFrance research center (Saint-Pierre-lès-Nemours), the ISYEB laboratory at National History Museum (Paris), the CEBC laboratory (Chizé) and the CRBE research center (Toulouse). The post-doctoral fellow is thus expected to work in an interdisciplinary and lively research environment and will contribute to a national collaborative program.



### **Requirements**

Candidates should meet the following requirements (1) have a PhD in ecophysiology, ecology or a related field of biology; (2) hold a passion for studying wild animals in their natural environment and demonstrated experience with fieldwork and handling of wild animals; (3) have a good background in ecophysiology and experience with lab work; (4) a successful publication record and (5) be creative and independent. A full driver's license is needed and ability to work with a group of colleagues and students is highly desirable. Candidates are



welcome to come with their own ideas provided they are feasible during the time frame of the project.

### **Terms and salary**

The position is available for a period of two years starting preferably in February-March 2025. The indicative gross monthly salary will be around €2,900 per month but will depend on employment status (post-doc, research assistant) and experience. Review of applications will begin as soon as candidates are applying and continue until the position is filled with a closing date for applications of December 20. The initial appointment is for 24 months with potential renewal contingent on additional funding from the laboratory or the candidate.

### **How to proceed**

Applications should be sent to [galliard@biologie.ens.fr](mailto:galliard@biologie.ens.fr) and [sandrine.meylan@sorbonne-universite.fr](mailto:sandrine.meylan@sorbonne-universite.fr). Applications should include a single file with a detailed curriculum vitae including a full list of publications, a cover letter with a brief description of skills, research interests and motivation, and contact details or recommendation letters from 1 to 3 referees. Sorbonne University is an equal opportunity/affirmative action employer committed to excellence through diversity. Women and minorities are encouraged to apply.