

Recrutement prévu dans le cadre du contrat recherche H2020 CHRONIC

Job title	PhD position in the field of Wildlife Ecotoxicology
Ref	2021.09_Doct_H2020_Chronic
Point of vigilance	The applicants must not have resided or carried out their main activity (work, studies, etc.) in France for more than 12 months in the 3 years immediately before the recruitment date
Date de mise en ligne souhaitée	12 May 2021
Job type (PhD, Post-doc, Engineer)	PhD
Contract duration (months)	36 months
Salary	2689 € gross monthly as well as the mobility allowance of 426 € gross per month
Qualifications (Master degree, PhD...)	Master's degree or equivalent within environmental science, ecotoxicology, ecology, biology or corresponding.
Job hours (full time/ part time)	Full time (37h30 per week)
Employer	UBFC – Université Bourgogne Franche-Comté
Host Laboratory	Chrono-environment Department UMR 6249
URL Host Laboratory	https://chrono-environnement.univ-fcomte.fr/?lang=en
Address Host Laboratory	16 route de Gray 25030 Besançon cedex. France.
Job description	<p>UBFC University: Born on 1st April 2015, University Bourgogne Franche-Comté (UBFC) is a community of 7 universities and higher-education and research institutions from Bourgogne and Franche-Comté regions (eastern France). UBFC currently hosts more than 67,000 students and 8,800 staff in 51 research departments spread across 13 sites distributed in the Bourgogne Franche-Comté region (main places: Besançon and Dijon). The PhD position is located at the University of Franche-Comté (UFC) in Besançon funded in 1423. The key competences of UBFC have led to the emergence of three scientific lines of research recognised as themes of excellence at the international scale:</p> <ul style="list-style-type: none"> • Advanced materials, waves, intelligent systems, • Territories, environment, food, • Integrated personalised care. <p>Chrono-environment Department: is a mixed unit of research (UMR 6249) belonging to both CNRS and University of Franche-Comté created on January 1, 2008. Chrono-environment has 298 members, including 171 permanent staff, 62 doctoral students and 65 other contracts (postdoctoral students, fixed-term contracts, etc.). Our laboratory brings together all the necessary skills to respond to the challenges raised by the global emergency to manage resources and biodiversity in a sustainable manner, for a sustainable development of human populations. The coexistence in the laboratory of skills in life sciences, sciences of the universe, health sciences, physical and chemical sciences, human sciences, and mathematics, is to our knowledge unique at the national level.</p> <p>PhD position (3 year) in the field of Wildlife Ecotoxicology at University Bourgogne Franche-Comté, France: "Immune modulatory effects of chronic</p>



exposure of small mammals to trace metals, and implications for prevalence of zoonotic diseases”

The PhD position is part of the CHRONIC (“Chronic exposure scenarios driving environmental risks of chemicals”) project (grant No. 956009) – a Horizon 2020 Marie Skłodowska-Curie Actions (MSCA), Innovative Training Network (ITN). The lead supervisor is located at University Bourgogne Franche-Comté, Besançon, France with co-supervision by Wageningen University, The Netherlands.

The Department of Chrono-environnement, University Bourgogne Franche-Comté (UBFC), invites applications for a PhD fellowship at the Doctoral School Environments and Health (<https://www.ubfc.fr/en/formations/doctoral-studies/environments-health-eh-doctoral-school/>), part of the Graduate School TRANSBIO (<https://www.ubfc.fr/en/formations/transbio-graduate-school/>), starting 01.9.2021. Applications are requested from candidates seeking to pursue a PhD degree within wildlife ecotoxicology on the topic of “Immune modulatory effects of chronic exposure of small mammals to trace metals, and implication for prevalence of zoonotic diseases”.

Subject description: Chronic exposure to various persistent pollutants including organochlorine pesticides, PCBs and metals has been shown to affect both the innate and adaptive arms of the immune system. The hypothesis that reduced immune function in wildlife chronically exposed to pollutants might increase parasite loads has poorly been investigated. This project will investigate the effects of metal exposure on immune system function and the prevalence of pathogens (including *Borrelia spp.* the bacteria responsible for Lyme disease) in populations of wood mice *Apodemus sylvaticus* along a pollution gradient around a monitored former lead and zinc smelter in Northern France.

The project will:

- 1) Elucidate potential impacts of chronic exposure to metals on haematological parameters and blood cell populations, innate immunity, adaptive immunity and immunocompetence,
- 2) Study the individual and population prevalence of bacterial pathogens along the pollution gradient through RT-qPCR and/or metabarcoding approaches,
- 3) Establish mechanistic relationships between metal concentrations, immunity and immunocompetence, and pathogen prevalence.

The execution of the workplan for the project plans for the research to undertake periods of secondment for a total of 7 months at Wageningen University (The Netherlands), Green Transition (NGO, Denmark) and ARC Arnot Research & Consulting (Canada), where you will be trained in specific models and methods beneficial to you project.

CHRONIC project

While conducting your individual research project, you will be joined into a network of 13 PhD Fellows (ESRs) at academic institutions across Europe all aiming at developing tools and approaches to identify nonstandard modes of toxicity for long-term, low-dose chemical exposure and their interactions with other environmental stressors. All CHRONIC partners have extensive experience in education and training and a high state-of-the-art scientific and technical expertise and infrastructure. The programme will therefore lay the basis for an integrated approach to environmental risk assessment.

CHRONIC includes training-by-research, joint training courses, covering technical, scientific, ethical, and transferable skills. Fellows will also engage actively in communication to scientific and public communities. Being part of CHRONIC offer you an excellent opportunity to work within a strong, interdisciplinary and intersectoral network including leading Universities and research institutions across Europe as well as industry, consultancy, governmental and non-governmental institutions in Europe and Canada. COVID-19 pandemic allowing you will be able to undertake research placement at partner institution involved in the CHRONIC project from across Europe, as well as attending project training events and international conferences.



Supervisor(s)	Dr Renaud Scheifler: renaud.scheifler@univ-fcomte.fr +33 (0) 381 665 740
Candidate profile	<p>You must hold a master's degree or equivalent within environmental science, ecotoxicology, ecology, biology or corresponding. Fluency in English (working language) is a requirement. Having the "EU Function B: designing procedures and projects" would be very appreciated (see DIRECTIVE 2010/63/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 22 September 2010 on the protection of animals used for scientific purposes: Education and training framework on https://ec.europa.eu/environment/chemicals/lab_animals/interpretation_en.htm). Experience in aspects of environmental science, analytical chemistry, environmental data science and ecotoxicology especially with vertebrates will be especially valued. However, excellent students with specific skills in other areas of quantitative and biological research (e.g. mathematics/statistic, molecular biology, medical biology, computer science) wishing to apply their skills in the field of environmental chemical management and ecotoxicology are also invited to apply.</p> <p>You are required to be enterprising and to possess good communication skills and to be a visible, involved participant in the department's daily activities, in addition to being willing to engage in disciplinary and interdisciplinary collaboration across the department and in the CHRONIC network.</p>
Eligibility	<p>Students with basic eligibility for third-cycle studies are those who have completed a second-cycle degree of at least 240 ECTS credits, of which at least 60 credits are from second-cycle courses (see Assessment below). The EU ITN projects aim to attract candidates worldwide. Thus, there are certain eligibility criteria that candidates must fulfil. First, the applicants must not have resided or carried out their main activity (work, studies, etc.) in France for more than 12 months in the 3 years immediately before the recruitment date. Short stays, such as holidays, are not taken into account. Secondly, the applicants for the MSCA fellowship must have no PhD and less than 4 years of full-time equivalent research experience from the award of the degree that entitles them to undertake a doctorate (either in the country in which the degree was obtained or in the country in which the applicant is to be recruited).</p> <p>These eligibility requirements are non-negotiable and ineligible applicants will not be considered.</p> <p>Assessment: In the assessment regarding employment consideration will be given to:</p> <ul style="list-style-type: none"> • Relevant Master's degree or equivalent • Any additional academic requirements stated in the job advertisement. <p>In the assessment regarding enrollment consideration will also be given to the following criteria:</p> <ul style="list-style-type: none"> • Educational skills and any further professional qualifications, • Grades at Master's programme or equivalent, • Quality and relevance of the project description, • Your project description: here you describe in which direction you would like to work and how your qualifications fit into the project (between a half and a full page). • Quality and relevance of the methodical and theoretical choices, • Consistency and coherence between the problem and the choice of method and theory, • If the PhD project seem realistic and feasible, • Ability to complete the PhD project, • Relevance of the project to the profile of the Doctoral School.
Keywords	Ecology – Ecotoxicology
Application deadline	12 June 2021



Starting Job	01 September 2021
Application <i>Depending on the type of position</i>	<p>You must apply for the position online (renaud.scheifler@univ-fcomte.fr). Only applications in English are accepted.</p> <p>Applications must include:</p> <ol style="list-style-type: none"> 1. Cover letter 2. CV 3. Documentation of education including grades from Master's programme or equivalent 4. Project Description (0.5-1 page) 5. Letters of recommendation 6. If applicable: Documentation for any research experience, work experience or publications. <p>Please submit your application no later than 12 June 2021.</p> <p>Material received after this date will not be taken into consideration.</p> <p>UBFC wishes to reflect the diversity of society and welcomes applications from all qualified candidates regardless of gender and personal background</p> <p>The successful candidate will be enrolled at UBFC and registered in the Doctoral School Environments and Health</p> <p>After the deadline for applications, the supervisor will shortlist applicants for assessment with assistance from the recruitment committee. Shortly after the application deadline, all applicants will be notified whether or not their application has been selected for assessment.</p> <p>The shortlisted applicants will be informed about the composition of the assessment committee, and each applicant will be given the opportunity to comment on the composition of the committee and – later on – their assessment.</p> <p>Once the recruitment process is completed, all applicants will be informed of the outcome of their application.</p>