Titre de l'annonce	Investigating a cognitive model of Idiopathic Environmental Intolerance
Ville	Paris
Pays	France
Texte de l'offre	Three positions available in Paris for the study of Idiopathic Environmental Intolerance

The research project

Symptoms that patients attribute to environmental factors that are generally considered harmless according to available biomedical knowledge are labeled as "idiopathic environmental intolerance" (IEI). People suffering from IEI single out several agents from the environment, including chemical substances and electromagnetic fields, which they blame for a wide range of chronic and unspecific symptoms such as diffuse pain, fatigue, dizziness, dyspnea, or palpitations. IEI is an emerging health issue and specific diagnostic tools as well as evidence-based treatment programs are still lacking.

In the last years, several studies suggested that cognitive processes importantly contribute to IEI. In this research project funded by the French Fondation pour la Recherche Médicale and the Agence Nationale de Sécurité Sanitaire, we will investigate the relevance of a cognitive model based on the assumption that symptoms of IEI result from impairments in interoceptive awareness and causal attributions rather than on physiological dysfunctions. The project will combine behavioral experiments, computational modeling of behavior and beliefs, and the development and testing of a dedicated treatment program with Cognitive Behavioral Therapy (CBT).

Three positions available

Two PhD students and one post-doc fellow will be recruited in April 2022 for 3 years. Ideal candidates are highly motivated for research, are good team players with an open mind for interdisciplinary research involving

medical and psychological sciences and computational approaches, and are able to speak and write English fluently. Three complementary profiles are proposed:

- One candidate with a good knowledge of scientific methods and statistics for behavioral experiments in cognitive science, psycho(patho)logy, or a related field. Experience with psychometric testing of patients, data analysis, and programming in Matlab or similar software is advantageous. The candidate's main tasks will be to program, run and analyze behavioral experiments with patients suffering from IEI, involving interoceptive tasks and tests of cognitive biases.

- One candidate with previous experience in data analysis, programming in Matlab or Python, and experience in developing computational models of psychopathological conditions (computational psychology/psychiatry) and in the model-based analysis of behavioral data, using methods such as Bayesian inference, reinforcement learning, and deep learning. The candidate's main missions will be to build, simulate, fit and test computational models of human behavior for patients with IEI.

- One candidate needs to be a fluently French speaking CBT-trained psychologist with great clinical experience and a strong interest in innovative CBT programs. Experience in qualitative analysis is a plus. The candidate's main missions will be to build, run and test a CBT treatment program with patients suffering from IEI. A high level of proactive involvement will be expected from all candidates, who will be expected to be physically present for the term of the project. The postdoc position moreover offers the opportunity to train in soft skills, crucial for becoming a PI, since the candidate is expected to contribute to manage the core-team, including the two PhD candidates, together with the supervising team.

The supervising team
An international team of medical and scientific experts with complementary skills will supervise this interdisciplinary project. The main medical and scientific

supervisor is Prof. Cédric Lemogne, assisted by Dr. Victor Pitron (both psychiatrists, MD, PhD, Hôtel-Dieu, Paris). Dr. Liane Schmidt and Dr. Leonie Koban (both PI researchers at the Control-Interoception-Attention team at the Paris Brain Institute, Pitié-Salpêtrière hospital, Paris) will provide additional scientific supervision for computational modelling. Prof. Damien Léger, and Dr. Lynda Bensefa-Colas (both Occupational and Environmental physicians, MD, PhD, Hôtel-Dieu, Paris) will provide additional medical supervision about IEI. Three senior European researchers will offer monthly supervision: Prof. Omer Van den Bergh (Leuven) and Prof. Michael Witthöft (Mainz) for the work on the behavioral testing and the treatment program, Prof. Giovanni Pezzulo (Rome) for the work on computational modelling.

The work environment

The research team will be based at the VIFASOM lab of the Hôtel-Dieu, a leading hospital in the heart of ancient neighborhoods of Paris, where patients will come for testing and treatment. The lab currently houses 4 PI and >20 PhD students and engineers working on various fields of cognitive science. This will offer the opportunity for fruitful discussions and collaborations and a stimulating workplace. Nearby, the Paris Brain Institute (Pitié-Salpêtrière hospital, Paris) also offers many opportunities for exciting scientific training and conferences in cognitive science. The PhD students will have courses and scientific supervision at the Doctoral School ED3C of Paris (Brain, Cognition, and Behavior). All supervisors endorse values of equity and diversity, and are committed to ensuring a safe, welcoming, and inclusive workplace. Everyone is therefore strongly encouraged to apply.

Application : CV, motivational an recommendation letters should be sent to Dr Victor Pitron : victor.pitron@aphp.fr

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Information contact	Main supervisor : Pr Cédric Lemogne contact : Dr Victor Pitron victor.pitron@aphp.fr