iEES Paris

Institute of Ecology and Environmental Sciences - Paris
Institut d'Ecologie et des Sciences de l'Environnement de Paris

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Post-doc position in chemical ecology at Sorbonne University

Mission

A post-doc position is available in the Chemoreception and adaptation team (https://ieesparis.ufr918.upmc.fr/spip.php?article240). Our group is mainly interested in dissecting the mechanisms of olfactory reception in insects and in understanding their evolution in a changing environment. In moths, reproductive success largely depends on mate recognition through the detection of species-specific bouquets of air-borne chemicals called pheromones. The diversification of pheromone signals has likely played a key role in the extensive radiation observed in moths as it seems to be one of the main mechanisms responsible for the evolution of reproductive isolation. Recently we have identified genes underlying pheromone reception in pest moths of the genus *Spodoptera*, but gene families involved in pheromone production remain poorly studied. Studying the evolution of these genes is crucial to understand how pheromone communication can evolve and participate in reproductive isolation.

Activity

The candidate will use standard molecular biology and bioinformatics analyses in order to identify genes potentially involved in pheromone production, and characterize their expression patterns (using RT-qPCR) in 4 species of the genus *Spodoptera*. The candidate will also use biochemistry approaches (yeast transformation, GS-MS analyses) to determine the substrate specificity of candidate enzymes that may be responsible for the evolution of pheromone blends.

Skills

We are seeking a highly motivated candidate holding a PhD in Life Sciences, and with a strong interest for evolutionary biology. Experience in biochemistry and in molecular biology is mandatory, and a background in bioinformatics would be a plus. The candidate should have strong communication and organization skills, and be fluent in English.

Context

The post-doc position is available in the sensory ecology department of the Institute of Ecology and Environmental Sciences of Paris. This department involves 10 researchers from Sorbonne University (Paris) and Inra (Versailles), and uses a unique combination of know-how, including bioinformatics, functional genomics, molecular genetics, biochemistry, physico-chemistry, neuroanatomy, imaging, electrophysiology, ethology and modeling, developing approaches from genes to fields, from neurons to biophysical models, from individuals to populations. The lab will provide all the bench equipment and facilities required for the project, which is funded by an ANR grant.

Contact

The formal selection process will start early 2019. The contract should start before spring 2019. The term of this post is 24 months. CV and motivation letter should be send to nicolas.montagne@upmc.fr and thomas.chertemps@upmc.fr