TWO POST-DOC POSITIONS INSECT PHEROMONES AND COGNITION, PARIS, FRANCE
Each position is a full time, 2-year contract. Expected starting date:

from March 2015

ANR-funded project PHEROMOD:
Pheromones as general modulators of insect

behavior
   In addition to their well-documented function as communication signals, some pheromones have been recently shown to play a role as 'modulators' of cognitive phenomena, facilitating or inhibiting associative learning and memory both in vertebrates and invertebrates. The project aims at investigating the modulator effect of pheromones on experience-dependent behaviour of three insect species, the honeybee Apis mellifera, the ant Lasius niger and the moth Agrotis ipsilon, in order to determine the mechanisms that are either conserved across species or species-specific and associable with particular life-styles. We will study the mechanisms and adaptive value of pheromone modulation of learning by using a behavioural approach and by focusing on octopaminergic and dopaminergic circuits, which in many insects signal appetitive and aversive situations, respectively (pharmacological approach). As odour coding changes after appetitive learning in olfactory centres of the insect brain, we will analyse if pheromone exposure modifies per se the odour code in the first olfactory relay (antennal lobe) of the three species. A combination of pheromone/neutral odour exposure and in vivo calcium imaging recordings of antennal lobe activity will be used to this end. This research project will achieve a comprehensive knowledge on how pheromones influence learning performances in three paradigmatic insect taxa.   The successful applicants will have a PhD in behavioural biology, evolutionary biology or chemical ecology with a solid track record. Experience with insects, learning paradigms and/or neurophysiology (in vivo calcium imaging) is welcome. Candidates should be fluent in English.

Position 1):
focus on ants and honey bees. The post-doc will be based at the Laboratory of Experimental and Comparative Ethology, University of Paris 13 (
http://leec.univ-paris13.fr/new
), working with Prof. Patrizia d'Ettorre but will spend extended periods of time at the CNRS Research Center on Animal Cognition, University of Toulouse (
http://cognition.ups-tlse.fr/uneEn.html
), working with Prof. Martin Giurfa.

Position 2):
focus on the black cutworm moth. The post-doc will be based at the Department of Sensory Ecology (INRA Versailles) of the Institut d'Ecologie et des Sciences de l'Environnement de Paris (
http://www-physiologie-insecte.versailles.inra.fr
), working with Dr. Nina Deisig. Candidates should send, in one single PDF file: a) letter of interest, b) Curriculum Vitae with publication list; c) contact information (e-mail, phone) for two referees who can provide letters of recommendation.

DEADLINE for receiving applications: 15 January 2015
 Contact for position 1): Patrizia d'Ettorre,

dettorre@leec.univ-paris13.fr
 Contact for position 2): Nina Deisig,
nina.deisig@versailles.inra.fr

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 Contact for position 2): Nina Deisig,
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