MASTER 2 Neurosciences Fondamentales et Cliniques
UCB Lyon 1, Lyon, France

Internship proposal 2020-2021
(internship from January to end of May 2021)

Host laboratory:
Centre de Recherche en Neurosciences de Lyon
CH Le Vinatier, Bât. 462 Neurocampus
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Host team :
NEUROPOP

Internship supervisors :
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Project title :
Human chemical communication of emotions

Project summary :
There is increasing evidence that human social communication can occur not only via the well-documented audio-visual sensory channels but also through the olfactory pathway via biological odors produced by the body. Although this area of research remains underexplored to date, several studies have shown that negative emotions can be communicated to others via chemosignals contained in body odors. The transmission of positive emotions has received little interest so far, despite their significant benefits for individuals. The aim of this project is to investigate the possibility that positive emotions can be conveyed by body odors, and to test whether perfumed cosmetics (that are widely used in ecological contexts) are able to modulate this chemical communication. During this internship, the applicant will take part in an experiment comprising 2 phases: 1) an emotion induction procedure to create positive and neutral emotional states in odor donors, and 2) an investigation of the behavioral and neural responses (fMRI) of receivers exposed to the body odors collected in the first phase (with perfume added, or alone).

3-5 recent publications :
Chen, D., and Haviland-Jones, J. (2000). Human olfactory communication of emotion. Percept Motor Skills 91, 771–81.

de Groot, J.H.B., and Smeets, M.A.M. (2017). Human fear chemosignaling: evidence from a meta-analysis. Chem Senses 42, 663–73.

Mujica-Parodi, L.R., Strey, H.H., Frederick, B., Savoy, R., Cox, D., Botanov, Y., Tolkunov, D., Rubin, D., Weber, J. (2009). Chemosensory cues to conspecific emotional stress activate amygdala in humans. PLoS One 4, e6415.

Smeets, M.A.M., et al. (2020). Chemical fingerprints of emotional body odor. Metabolites 10, 84.

Please send your proposal to emiliano.macaluso@univ-lyon1.fr and marion.richard@univ-lyon1.fr for publication on the website.