

## **MASTER 2 Neurosciences Fondamentales et Cliniques**

### **Internship proposal 2021-2022**

*(internship from January to end of May 2022)*

**Host laboratory:** Institut des Sciences Cognitives Marc Jeannerod

**Host team :** Laboratory of Social Neuroscience and Comparative Development

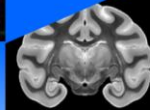
<http://www.isc.cnrs.fr/index.rvt?teamid=laboratory%5fof%5fsocial%5fneuroscience%5fand%5fcomparative%5fdevelopment&team=research>

**Internship supervisors :** 1. Pier Francesco Ferrari, Directeur de Recherche and Institute Director, [pierfrancesco.ferrari@isc.cnrs.fr](mailto:pierfrancesco.ferrari@isc.cnrs.fr); 2. Holly Rayson, Postdoctoral Researcher, [holly.rayson@isc.cnrs.fr](mailto:holly.rayson@isc.cnrs.fr)

**Project title :** Effects of Early Social Adversity on Behavioural and Brain Development in Rhesus Macaques

**Project summary :** The aim of this project is to longitudinally assess social, cognitive, and affective development and its underlying neural correlates in two groups of rhesus macaque monkeys differing in early social experience. This sample of monkeys is unique in Europe, and offers an exciting opportunity to investigate the effects of early social adversity on development in a well-controlled and novel way. We have collected behavioural (observational and structured behavioural tasks) and MRI (anatomical, diffusion, and resting-state functional) data at two time points covering approximately the period from pre-adolescence to adolescence, and this year we will complete data collection at our final time point corresponding to early adulthood. Interns on this project will be involved in the coding and analysis of behavioural data that is to be related to our neural measures, for example emotional and gaze responses to novel situations/conspecifics/objects.

Please send your proposal to [emiliano.macaluso@univ-lyon1.fr](mailto:emiliano.macaluso@univ-lyon1.fr) and [marion.richard@univ-lyon1.fr](mailto:marion.richard@univ-lyon1.fr) for publication on the Master of Neuroscience website.



**3-5 recent publications :** **1.** Festante, F.\*, Rayson, H.\*, Paukner, A., Kaburu, S. S., Toschi, G., Fox, N. A., & Ferrari, P. F. (2021). Oxytocin promotes prosocial behavior and related neural responses in infant macaques at-risk for compromised social development. *Developmental cognitive neuroscience*, 48, 100950. **2.** Simpson, E. A., Sclafani, V., Paukner, A., Kaburu, S. S., Suomi, S. J., & Ferrari, P. F. (2019). Handling newborn monkeys alters later exploratory, cognitive, and social behaviors. *Developmental Cognitive Neuroscience*, 35, 12-19. **3.** Nicolini, Y., Manini, B., De Stefani, E., Coudé, G., Cardone, D., Barbot, A., ... & Ferrari, P. F. (2019). Autonomic Responses to Emotional Stimuli in Children Affected by Facial Palsy: The Case of Moebius Syndrome. *Neural plasticity*. **4.** Rayson, H., Bonaiuto, J. J., Ferrari, P. F., & Murray, L. (2017). Early maternal mirroring predicts infant motor system activation during facial expression observation. *Scientific Reports*, 7(1), 1-11. **5.** Dettmer, A. M., Kaburu, S. S., Simpson, E. A., Paukner, A., Sclafani, V., Byers, K. L., ... & Ferrari, P. F. (2016). Neonatal face-to-face interactions promote later social behaviour in infant rhesus monkeys. *Nature Communications*, 7(1), 1-6.