MASTER 2 Fundamental and Clinical Neurosciences

Internship proposal 2026-2027

(internship from January to June 2027)

Host laboratory: *Institut des Sciences Cognitives Marc Jeannerod, CNRS, 67 Boulevard Pinel, Bron.*

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

Internship supervisors : *Pier Francesco Ferrari, DR1, pff@isc.cnrs.fr*

Project title : Amygdala modulation of fear during social support in nonhuman primates

Project summary : In this project we will investigate how social support modulates behavioral and physiological responses to environmental threats in rhesus macaques. A **central hypothesis** of this project is that the presence and active support of a conspecific dampens the perceived fear of potential threats (Social Buffer Effect), thereby empowering individuals to display behaviors that directly confront and challenge those threats. We posit that this effect is mediated by a neurophysiological mechanism involving the anterior cingulate cortex and the basolateral amygdala, which signal the valence of a threatening stimuli differently based on the presence/absence of a partner.
We will perform wireless recordings from the amygdala and ACC in two pairs of rhesus macaques during the delivery of a potential threat (Intruder test). In the different conditions we will assess the neural responses while monkeys are either alone or paired with a familiar conspecific.

3-5 recent publications :

1. Baldi J, Disarbois E, Mendez AC, Cappellaro G, Annicchiarico G, Bimbi M, Coudé G, Duhamel J-R, Ferrari PF (2025). Frontal cortex encodes action goals and social context in freely moving and socially interacting macaques. bioRxiv, doi.org/10.1101/2025.10.21.683128.
2. Ferrari PF, Baldi J, (2024). Primate research goes wireless. *Current Biology*. 34(11):R536-R539. doi: 10.1016/j.cub.2024.04.046.