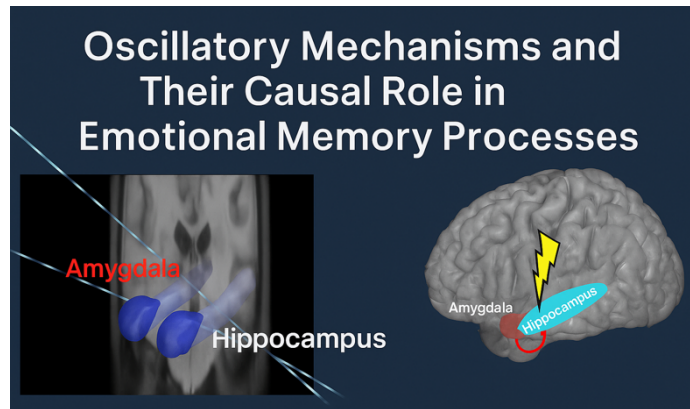




Universidad Autónoma
de Madrid

**PhD candidate
(FPI fellowship)**



We are looking for a highly motivated PhD candidate to join the **NEUROEMEM** research project, funded under the Spanish National Plan PID2024-155278NA-I00. The project investigates the neural oscillatory mechanisms underlying emotional memory and their causal role in shaping memory processes.

Main research objectives:

- Determine cortico-subcortical oscillatory responses associated with aversive memory encoding using **optically pumped magnetometers (OPM-MEG, CTB-UPM)**.
- Assess behavioral effects of **temporal interference (TI)-based hippocampus stimulation** on emotional and neutral memories.
- Uncover the neural mechanisms (amygdala–hippocampus interactions) underlying the encoding of **emotional and semantic aspects** of aversive vs. neutral events.


Requirements:


- Bachelor's or Master's degree in Psychology, Neuroscience, Cognitive Science, Biomedical Engineering, or a related field.
- Minimum GPA equivalent to **7.5/10** in the Spanish grading system.
- Strong interest in cognitive neuroscience and experimental research.
- Good command of written and spoken English.
- Basic programming skills (Python, matlab, R, ...)
- Ability to work both independently and as part of a collaborative research team.

Application documents:

- Curriculum Vitae (CV)
- Copy of academic transcripts (to verify GPA)
- One letter of recommendation

Application process (UAM call opening soon):

 Please send all required documents in a single PDF file to manuela.costa@uam.es with the subject line: *PhD Application – NEUROEMEM*.

 The selected candidate will be based at **the Autónoma University of Madrid**, Psychology Department, working under the supervision of **Dr. Manuela Costa**

Latest selected publications in this area:

- Costa, Manuela, et al. "Human hippocampal reactivation of amygdala encoding-related gamma patterns during aversive memory retrieval." *Nature Communications* 16.1 (2025): 6820.
- Costa, Manuela, et al. "Aversive memory formation in humans involves an amygdala-hippocampus phase code." *Nature Communications* 13.1 (2022): 6403.