

## Final report NENS Exchange Grants

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**Project title:** Neuroanatomical of early life stress: a qualitative and quantitative analysis of Microglia activation in selected brain regions I. the C57BL/6 mice

I am Chiara Musillo, a second-year PhD student enrolled in the Behavioral Neuroscience PhD programme of Sapienza University of Rome, Italy. I was selected for the NENS Exchange Grants in October 2020. This grant allowed me to spend three months at the University of Zurich, performing immunohistochemical analysis on murine brains that I have previously collected in my home lab. Indeed, my PhD project is aimed at identifying common shared mechanisms underlying different types of prenatal stressors that might lead to an increased vulnerability to psychopathology later in life. At the University of Zurich, under the kind supervision of Dr. Irmgard Amrein, I had the opportunity to add further and precious data to my project, investigating the role of brain inflammation in mediating the long-term effects of different prenatal stressors. I have learned the bases of stereology and immunohistochemistry that were new techniques for me. In particular, I have performed a stereological counting and a morphological analysis of Iba1-positive cells to study the role of microglia in the hippocampus of murine models of prenatal stress (see Figure 1).

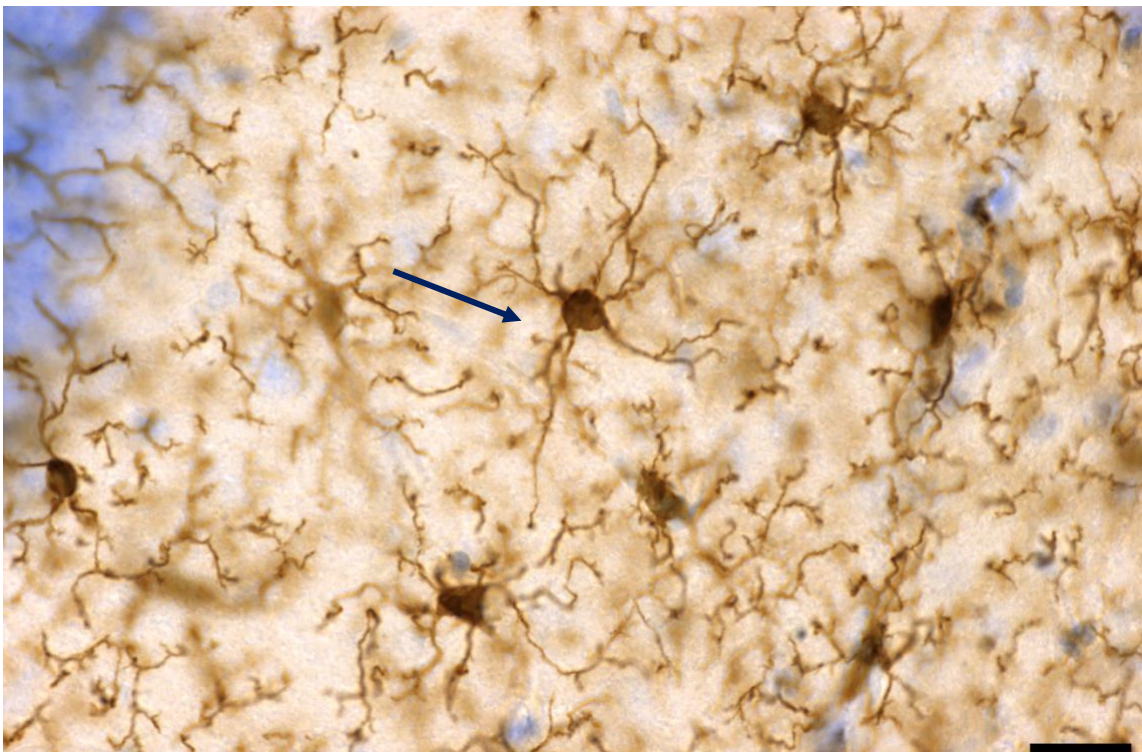


Figure 1. Immunohistochemistry Iba1 allowed analysis of microglial number and morphology (the blue arrow indicates a ramified cell characterized by multiple long processes). Scale bar is 20  $\mu\text{m}$ .

I am highly grateful to the NENS Exchange Grant that gave me a unique opportunity to learn new techniques, enriching my range of skills and the power of analysis of my PhD project. Moreover, I had the chance to work in an amazing international group (see Figure 2), attending the weekly lab meetings and working in a highly stimulating environment. I also had the chance to expand my research network, making new contacts with possible future collaborations. I strongly recommend to all my colleagues to apply to the NENS Exchange Grant, which is an excellent grant supporting young researchers that want to travel and work some months abroad.



Figure 2. Amazing supervisors and co-workers (from left: Sonia Matos, Jovana Malikovic, Irmgard Amrein, Lutz Slomianka and me).

Yours sincerely,  
Chiara Musillo