



Pr Sonia GAREL

Collège de France

**Group leader of
Brain development and plasticity team**

**At Institut de Biologie
of l'École Normale Supérieure**

Microglia in early brain wiring: from circuit assembly to structural integrity

Microglia, the main resident immune cells of the brain, have emerged as important modulators of the wiring and functioning of neuronal circuits throughout life. Consistently, microglial dysfunction has been linked to the etiology of almost all brain disorders, from neurodevelopmental to neurodegenerative diseases. Thus, grasping how and when microglia shape circuits is important for both neurobiologists and clinicians.

Our goal is to explore the contribution of microglia to early brain development, when these cells constitute the main glial population. Here, we will summarize published and unpublished work highlighting emerging roles of microglia in the construction of the developing brain, including a novel role in the maintenance of tissue integrity during embryonic morphogenesis. We will discuss the implications for neurodevelopmental disorders and, more broadly, the interest of using normal development to decrypt the kaleidoscope of microglial activities throughout life, in health and disease

[Collège de France](#)

[Institut de Biologie de l'École Normale Supérieure](#)

