1. Record Nr. UNINA9910137234603321

Titolo	Never-resting microglia : physiological roles in the healthy brain and pathological implications
Pubbl/distr/stampa	[Place of publication not identified], : Frontiers Media SA, 2015
Descrizione fisica	1 online resource (172 pages)
Collana	Frontiers Research Topics, , 1664-8714
Soggetti	Neuroscience Human Anatomy & Physiology Health & Biological Sciences
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di bibliografia	Includes bibliographical references.
Sommario/riassunto	Microglia are largely known as the major orchestrators of the brain inflammatory response. As such, they have been traditionally studied in various contexts of disease, where their activation has been assumed to induce a wide range of detrimental effects. In the last few years, a series of discoveries have challenged the current view of microglia, showing their active and positive contribution to normal brain function. This Research Topic will review the novel physiological roles of microglia in the developing, mature and aging brain, under non-pathological conditions. In particular, this Research Topic will discuss the cellular and molecular mechanisms by which microglia contribute to the formation, pruning and plasticity of synapses; the maintenance of the blood brain barrier; the regulation of adult neurogenesis and hippocampal learning; and neuronal survival, among other important roles. Because these novel findings defy our understanding of microglial function in health as much as in disease, this Research Topic will also summarize the current view of microglial nomenclature, phenotypes, origin and differentiation, sex differences, and contribution to various brain pathologies. Additionally, novel imaging approaches and molecular tools to study microglia in their non-activated state will be discussed. In conclusion, this Research Topic

seeks to emphasize how the current research in neuroscience is challenged by never-resting microglia.