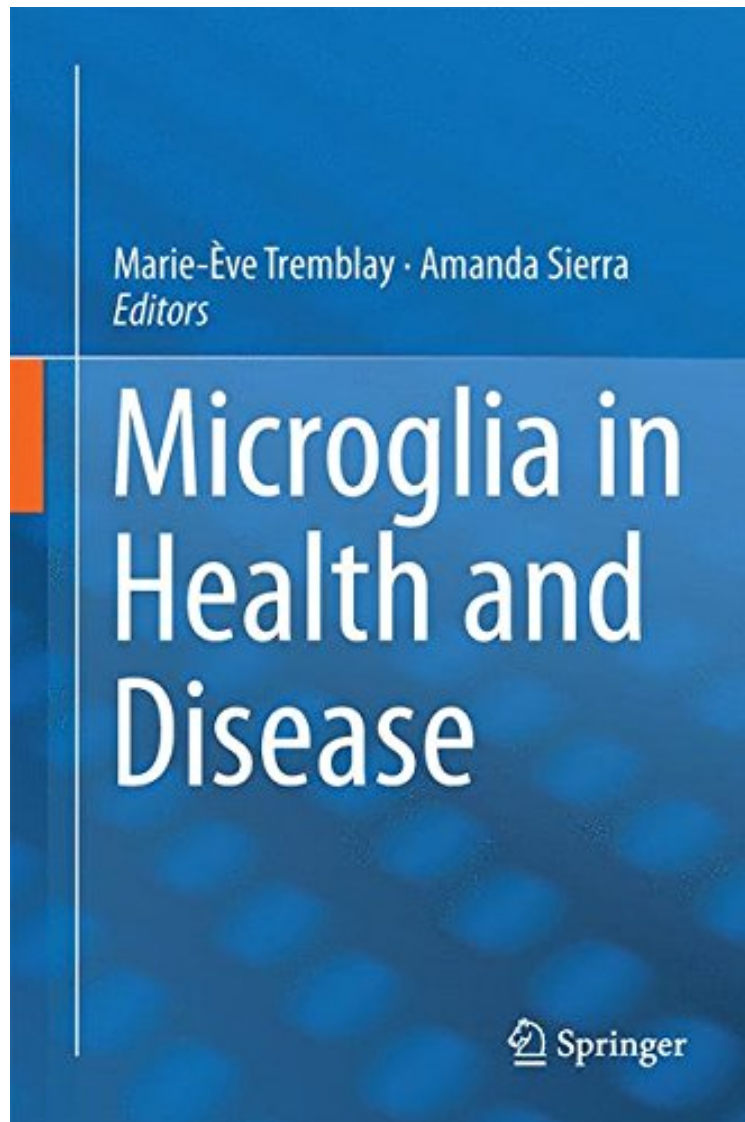


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These past few years have witnessed a revolution in our understanding of microglia, especially since their roles in the healthy central nervous system (CNS) have started to unravel. These cells were shown to actively maintain health, in concert with neurons and other types of CNS cells, providing further insight into their involvement with diseases.

Edited by two pioneers in the field, Marie-ve Tremblay and Amanda Sierra, *Microglia in health and disease* aims to share with the broader scientific community some of the recent discoveries in microglia research, from a broad perspective, with a collection of 19 chapters from 52 specialists working in 11 countries across 5 continents. To set microglia on the stage, the book begins by explaining briefly who they are, what they do in the healthy and diseased CNS, and how they can be studied. The first section describes in more details their physiological roles in the maturation, function, and plasticity of the CNS, across development, adolescence, adulthood, neuropathic pain, addiction, and aging. The second section focuses on their implication in pathological conditions impairing the quality of life: neurodevelopmental and neuropsychiatric disorders, AIDS, and multiple sclerosis; and in leading causes of death: ischemia and stroke, neurodegenerative diseases, as well as trauma and injury.

From the Back Cover These past few years have witnessed a revolution in our understanding of microglia, especially since their roles in the healthy central nervous system (CNS) have started to unravel. These cells were shown to actively maintain health, in concert with neurons and other types of CNS cells, providing further insight into their involvement with diseases. Edited by two pioneers in the field, Marie-ve Tremblay and Amanda Sierra, *Microglia in health and disease* aims to share with the broader scientific community some of the recent discoveries in microglia research, from a broad perspective, with a collection of 19 chapters from 52 specialists working in 11 countries across 5 continents. To set microglia on the stage, the book begins by explaining briefly what they are, what they do in the healthy and diseased CNS, and how they can be studied. The first section describes in more details their physiological roles in the maturation, function, and plasticity of the CNS, across development, adolescence, adulthood, neuropathic pain, addiction, and aging. The second section focuses on their implication in pathological conditions impairing the quality of life: neurodevelopmental and neuropsychiatric disorders, AIDS, and multiple sclerosis; and in leading causes of death: ischemia and stroke, neurodegenerative diseases, as well as trauma and injury.

About the Author

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3. Microglial Physiology Jyoti J. Watters and Jennifer M. Pocock
4. Lessons from in vivo Imaging Dimitrios Davalos and Martin Fuhrmann
5. Roles in Immune Responses Richa Hanamsagar, Sandra M. Cardona, Tammy Kielian, and Astrid E. Cardona
6. Neuroprotection Versus Neurotoxicity Knut Biber and Michelle L. Block

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7. Developmental Neuronal Elimination Jose L. Marin-Teva, Julio Navascues, Ana Sierra, and Michel Mallat
8. Developmental Angiogenesis, Myelination and Astroglialogenesis G. Jean Harry and Lorena Pont-Lezica
9. Developing and Mature Synapses Marie-Eve Tremblay, Rosa C. Paolicelli, Beth Stevens, Hiroaki Wake, and Alain Bessis
10. Adult Neurogenesis, Learning and Memory Amanda Sierra and Marie-Eve Tremblay
11. Neuropathic Pain Jessica K. Alexander, Simon Beggs, and Michael W. Salter
12. Drug Addiction Xiaohui Wang, Thomas A. Cochran, Mark R. Hutchinson, Hang Yin, and Linda R. Watkins
13. Aging Rommy von Bernhardi, Betsi Flores, and Hiroshi Nakanishi

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14. Neurodevelopmental and Neuropsychiatric Disorders Akira Monji, Izumi Maezawa, Yoshito Mizoguchi, Takahiro A. Kato, and Lee-Way Jin
15. Human Immunodeficiency Virus Daniel F. Marker, Shao-Ming Lu, and Harris A. Gelbard
16. Multiple Sclerosis Yoshifumi Sonobe and Akio Suzumura

LEADING CAUSES OF DEATH

17. Ischemia and Stroke Raffaella Cipriani, Maria Domerq, and Carlos Matute
18. Neurodegenerative Diseases Diego Gomez-Nicola and Hugh Perry
19. Spinal Cord and Brain Trauma Samuel David and Phillip G. Popovich "