Special Issue

Advances in Study of Molecular and Cellular Mechanisms Underlying Pain and Itch

Message from the Guest Editors

Pain and itch are distinct peripheral sensory modalities. Whereas pain leads to withdrawal responses following noxious stimulation, itch (pruritus) leads to scratching. The treatment of pain and itch continues to be a major clinical challenge. Accumulating evidence emphasizes that neuroinflammation and oxidative insult drive the peripheral and central sensitization of nociceptive and itch circuitry, which governs multiple pain and itch perceptions after peripheral inflammation, nerve injury, chemotherapy and cancer. The specific molecular and cellular mechanisms underlying pain and itch development remain unclear and have attracted considerable attention.

The overall aim of this Special Issue is to share and discuss recent achievements to understand and/or augment the neuroinflammatory and neural circuits underlying the peripheral and central sensitization in pain and itch with different etiologies. Also, we aim to summarize the most recent insights into the pathogenesis of pain in females, to help inform clinical practice and to design new research addressing unanswered questions.

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You are invited to contribute a research article or a comprehensive review for consideration and publication in *Brain Sciences* (ISSN 2076-3425). *Brain Sciences* is an open access, peer-reviewed scientific journal that publishes original articles, critical reviews, research notes, and short communications on neuroscience. The scientific community and the general public can access the content free of charge as soon as it is published.

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