New targets for treating chronic pain and inflammation

Aims & Scope:

Inflammation is originated by tissue injury and triggers a cascade of biochemical reactions that prime the nervous system for pain perception. Moreover, long-term inflammatory condition supports adaptive changes in the nervous system that can cause an altered pain signal process. Indeed, different chronic (i.e. neuropathic) or inflammatory injuries to nervous system, can trigger structural and functional changes in the peripheral or central sensory circuits, resulting in specific patterns modifications responsible for behavioral dysfunctions (hyperalgesia and allodynia) and neurological comorbidities.

Current treatments for chronic pain which include anti-inflammatory drugs, opioids, and other drug classes such as antidepressants and anticonvulsants are quite unsatisfying. Thus, novel methodological approaches and new pharmacological targets to treat chronic pain states are needed. Not less, the identification of new targets, as well as, the development of novel approaches focusing on the optimization of side-effects of the classical drugs in inflammatory states would be desirable.

Keywords: Inflammation; biochemical reactions; chronic pain

Subtopics:

- Development of novel compounds and the evaluation of outcomes in both inflammation and pain conditions
- Further understanding of the molecular and cellular mechanisms which underlie chronic pain (inflammation, neuropathy, osteoarthritis, rheumatoid arthritis, inflammatory bowel diseases, diabetes, chemotherapy, post-surgery)
- Novel tools to treat chronic pain and possible associated neurological disorders (affective/cognitive behaviour)

Schedule: October, 2016