

Special Issue on
Purinergic Regulation of Immune System: Implication in Infectious Disease

CALL FOR PAPERS

Infectious diseases are caused by microorganisms such as viruses, bacteria, fungi, or parasites and can spread between individuals. Hosts can fight infections using their immune system or other systems such as purinergic system. Under physiological conditions, adenosine triphosphate (ATP) is present at low levels in the extracellular milieu, being massively released by stressed or dying cells. Once outside the cells, ATP and related nucleotides/nucleoside generated by ectonucleotidases mediate a high evolutionary conserved signaling system: the purinergic signaling, which is involved in a variety of pathological conditions, including infectious disease. Extracellular ATP has been considered an endogenous adjuvant that can initiate inflammation by acting as a danger signal through the activation of purinergic type 2 receptors-P2 receptors (P2Y G-protein coupled receptors and P2X ligand-gated ion channels). Among the P2 receptors, the P2X7 receptor is the most extensively studied from an immunological perspective, being involved in both innate and adaptive immune responses. In infectious diseases, P2X7 receptor can have different and contrasting effects, being an angel or a demon depending on its level of activation, cell studied, type of pathogen, and severity of infection.

This special issue aims to present and discuss advances in our understanding of the role of the purinergic system in infectious diseases and inflammation, with emphasis on purinergic signaling and innovative therapies, which have a major impact on society.

We solicit high quality, original research articles as well as review articles focused on innovative research about new findings on the involvement of the purinergic system on host immunity during infectious disease, as well as the innovative mechanisms for the development of an inflammatory process in infectious disease.

Potential topics include but are not limited to the following:

- ▶ Purinergic system in regulation of adaptive and innate immune responses during infectious diseases
- ▶ Purinergic system-mediated regulation of inflammatory processes
- ▶ Purinergic signaling in inflammation and infectious disease
- ▶ Innovative therapies involving purinergic system against infectious diseases and inflammation

Authors can submit their manuscripts through the Manuscript Tracking System at <https://mts.hindawi.com/submit/journals/jir/isid/>.

Papers are published upon acceptance, regardless of the Special Issue publication date.

Lead Guest Editor

Margarete D. Bagatini, Universidade Federal da Fronteira Sul, Chapecó, Brazil
margaretebagatini@yahoo.com.br

Guest Editors

Gaurav Gupta, University of Manitoba, Winnipeg, Canada
gaurav.gupta@umanitoba.ca

Andréia M. Cardoso, Federal University of Fronteira Sul, Chapecó, Brazil
deiaa.mc@gmail.com

Submission Deadline

Friday, 16 November 2018

Publication Date

April 2019