Mediators of Inflammation

Hindawi

Special Issue on

Sphingolipid System in Switching Tumour Cell's Fate and Inflammatory Responses: When Cancer Meets Immune Cells

CALL FOR PAPERS

Sphingolipids are a class of bioactive lipids with a polar head group and two nonpolar tails which are major constituents of biological membranes of eukaryotic cells. Lipid microdomains and sphingolipids as well as their synthesis/assembly/metabolic pathways have been demonstrated since many years to play key roles in a number of cell programs. For instance, ceramide, sphingosine 1 phosphate, acid and neutral sphingomyelinase, ceramidase, and sphingosine kinase are important regulators of cell fate, including the pathogenesis and response to treatment of different types of cancer. A large body of evidence also demonstrated that sphingolipid system regulates cellular processes that are important in immunity, inflammation, and inflammatory disorders.

During cancer progression immune system deeply affects tumour progression. In addition to the cancer cells and their surrounding stroma an inflammatory microenvironment containing innate and adaptive immune cells is an important component of tumours. These diverse immune cells infiltrate tumour mass and engage in a dynamic cross-talk with cancer cells by means of direct contact or autocrine and paracrine factors. Microenvironmental dynamics dictate the balance between survival and death of cancer cells and their knowledge is thus extremely important in the design of new therapeutics to fight against these incurable diseases.

We invite authors to contribute with original research at molecular, cellular, and tissue levels, including *in vitro*/animal/human studies that will help to better understand the role of sphingolipid system in the regulation of immune response. In particular, this special issue is devoted to defining the impact of sphingolipid system in the cross-talk between microenvironment and tumour cells and how this aspect may affect cancer progression. Reviews that summarise recent findings in both basic and clinical research and discuss current outcome are also welcome.

Potential topics include but are not limited to the following:

- Analysis of the role of the sphingolipid system in immune cell regulation (activation/inhibition, polarisation, secretion, cytotoxicity, etc.)
- Identification of chemokine/cytokine and immune cells factors contributing to cancer cell regulation by sphingolipids
- Studies of sphingolipid system and neoplastic cell dynamics reprogramming tumour microenvironment.
- Preclinical investigations in cell, tissue, and animal models on potential new therapeutic approaches in cancer (drug repurposing, combination therapies, immunotherapies, nonpharmacological interventions, etc.) based on the modulation of the sphingolipid system
- Clinical evidence of the immunomodulatory role of sphingolipid-based approaches against human cancer

Authors can submit their manuscripts through the Manuscript Tracking System at http://mts.hindawi.com/submit/journals/mi/sss/.

Lead Guest Editor
Cristiana Perrotta, Università degli Studi di Milano, Milano, Italy
cristiana.perrotta@unimi.it

Guest Editors
Davide Cervia, Università degli Studi della Tuscia, Viterbo, Italy
d.cervia@unitus.it

Clara De Palma, University Hospital "Luigi Sacco"-ASST Fatebenefratelli Sacco, Milano, Italy
depalma.clara@hsacco.it

Manuscript Due
Friday, 7 April 2017

First Round of Reviews
Friday, 30 June 2017

Publication Date
Friday, 25 August 2017