Tentative Outline

Special Issue for Current Topics in Medicinal Chemistry
Targeting Cancer Metabolism as a Novel Anticancer Strategy
Guest Editor: Dr. Horrick Sharma

Aims & Scope:
Cancer metabolism is an emerging area of research that offers an opportunity to target specific metabolic vulnerabilities of cancer cells. Cancer cells undergo oncogene-mediated metabolic reprogramming in order to meet their energy demands. Cancer cells adapt to their microenvironment and rewire their metabolism to rely heavily on anaerobic glycolysis, a phenomenon known as the 'Warburg effect'. In addition, cancer cells get addicted to glutamine and also upregulate fatty acid synthesis to support their survival and rapid proliferation. Recently, there has been a resurgence of interest in targeting carbohydrate, amino acid, and fatty acid metabolic pathways for treatment of cancer and overcoming drug resistance in chemotherapy. Other emerging concepts include targeting mitochondrial metabolism for the treatment of cancer. The overarching theme of this issue is to highlight the current application, advances, and emerging concepts in the field of cancer metabolism and discuss the prospects of metabolic inhibitors as next generation cancer therapeutics. The issue will also emphasize medicinal chemistry efforts aimed at developing small molecule inhibitors targeting aberrant cancer metabolism.

Keywords: Cancer metabolism, Metabolic inhibitors, Glutaminolysis, Warburg effect, Glycolysis, Oncogene, Lipid metabolism, Mitochondria, Chemotherapy, Drug resistance.

Subtopics:
• The subtopics to be covered within this issue are listed below:
• Recent advances in the development of inhibitors of cancer metabolism that include, but are not limited to,
  • Lactate dehydrogenase inhibitors
  • Glucose transporters inhibitors
  • Monocarboxylate transporter inhibitors
  • Hexokinase inhibitors
  • Glucose-6-phosphate dehydrogenase inhibitors
  • Isocitrate dehydrogenase inhibitors
  • Glutaminase inhibitors
  • Epigenetics and cancer metabolism
  • Role of oncogenes in cancer metabolism
  • Role of mitochondrial metabolism in cancer
  • Metabolic pathways associated with cancer resistance
  • Targeting metabolism as a strategy for the treatment of pancreatic, prostate, bladder, kidney, breast, and other cancers.

Deadlines:
Manuscript Submission Deadline: August 15, 2017
Peer Review Due: September 15, 2017
Revision due Date: October 15, 2017
Announcement of Acceptance by Guest Editor: November 1, 2017
Final Manuscript Due: December 2017

Contact Information:
Guest Editor: Dr. Horrick Sharma
Affiliations: Southwestern Oklahoma State University
Email: horrick.sharma@swosu.edu
Any queries should be addressed to ctmc@benthamscience.org.