

Tentative Outline

Special/Thematic Issue for the journal "Current Cancer Drug Targets"

Title of the Thematic Issue: Molecular Biomarkers for Cancer Control - Part-2

Guest Editor: Huashan Shi

Co-Guest Editors: Ting Yu, Xuyu Gu

• **Scope of the Thematic Issue:**

In recent years, many studies have found metabolic remodeling or abnormal alterations in tumor cells compared to normal tissue cells. In addition to the genetic mutation or deletion, the development of tumors is closely related to the metabolic transformation of tumor cells. Cancer metabolism and behavior are regulated by cell-intrinsic factors and metabolites in the tumour microenvironment (TME). The TME refers to the immediate niche surrounding the tumor, consisting of various types of cells in the metabolic environment. Stromal cells and immune cells regulate tumor growth by secreting signaling molecules and extracellular matrix (ECM) components.

The high metabolic activity of cancer cells, dysregulated blood flow, and increased inflammation lead to the characterization of the TME by dysregulated physiological properties. Since metabolites are the main determinants of cancer, the regulation of cancer progression by regulating the production of local metabolites will be a new means of cancer therapy. Metabolic reprogramming is one of the characteristics of tumors and an important potential target for tumor therapy. Early studies have focused on the metabolic regulation of the tumor cells themselves. However, more and more studies have found that the TME and general environment have an important influence on tumor cells and tumor metabolism. These findings are important for understanding tumor behavior and finding more precise and effective treatments.

Keywords: Cancer biomarker, Genomics and Epigenomics, Tumour microenvironment, Bioinformatics, Tumor metabolism, Extracellular matrix, Immunotherapy

Sub-topics:

- Novel biomarkers differentiating cancer heterogeneity that require many informed decisions from treatment to care with the help of genomic or epigenomic sequencing. Please note that studies proposing novel biomarkers must include molecular validation;
- Identification of biomarkers, signature panels, pathways, or networks stratifying or rewiring cancer stemness for diagnostic and therapeutic purposes;
- Augmentation of multiscale molecular biomarkers and assessment of their complementary advantages using computational or experimental approaches;
- Characterization of the primary mechanisms of biomarkers that drive cancer heterogeneity and malignancy;
- Novel computational or experimental techniques for identifying and capturing diverse types of cancer biomarkers based on their molecular features;
- Clinical translation or efforts bridging the gap between our incremental knowledge on cancer biomarkers and the influence of these diversified biomarkers on clinical practice;
- Novel diagnostic molecules to improve the early detection rate for cancer;
- Novel prognostic molecules to stratify cancer patients into different risk;
- Novel biomarker to predict chemotherapy response of cancer patients;
- Identification of Regulatory Biomarkers in Tumor Immunity and Tumor Metabolism;
- The crosstalk of Tumor metabolism and Tumor immunity;
- Cell metabolism in immune cells and implication in anti-tumor immunity;
- Immunometabolic regulation in the TME provides new ideas for immunotherapy.

Schedule:

- ✧ Thematic issue submission deadline: 31-Dec-23

Contacts:

Guest Editor Name: Huashan Shi
Affiliation: Sichuan University, China
Email: shihuashan@scu.edu.cn

Co-Guest Editors:

Name: Xuyu Gu
Affiliation: Southeast University, China
Email: guxuyu@seu.edu.cn

Name: Ting Yu
Affiliation: Sichuan University, China
Email: yuting_scu@126.com