

## Tentative Outline

### Special Thematic Issue for the journal Current Topics in Medicinal Chemistry

#### Title of the Thematic Issue: TAPPING THE CRITICAL ASPECTS OF THE TUMOR MICROENVIRONMENT FOR CANCER THERAPEUTICS

Guest Editor: Imran Khan

- **Scope of the Thematic Issue:**

Cancer pathogenesis is a complex process, which involves the association of genetic, epigenetic, and molecular aspects. Targeted therapies pave the platform for the current research strategies against cancer. It is essential to consider that these novel targeted therapies are based on a detailed understanding of tumor biology. These therapies encompass the use of drugs or small inhibitory molecules targeting numerous facets of carcinogenesis. Inhibitory molecules target specific molecular components of cancer cells actively involved in cancer cell growth and differentiation. The Food and Drug Administration (FDA) agency has approved several targeted therapies for numerous cancer types and several others under clinical trials. Despite the undue efforts of researchers, it is almost inevitable to stop progression, relapse, resistance, and low survival in innumerable cases. It is undeniable that the battle against cancer can be won only by a combined effort of biologists, chemists, and clinical oncologists to design novel, chimeric, and innovative therapeutic approaches to fight cancer. Considering the recent progress in immunotherapies, it has gained attention amongst clinicians around the world. The understanding of tumor microenvironment and immune response was just the beginning. Current understanding of TME have explained the importance of tumor infiltrating immune cells importantly, tumor associated macrophages (TAM) which can play crucial role in immune-suppression and drug resistance mechanisms. Implementing tumor-infiltrating lymphocytes and PDL-1 inhibitor-based therapies have shown promising results. Therefore, we welcome reviews focusing on two critical aspects of cancer research; 1) Role of tumor microenvironment in cancer progression, drug resistance and immune evasion mechanisms. 2) Innovative targeted therapies, including immunotherapies, small molecule inhibitors, nanomedicine and combinatorial approaches to overcome therapeutic limitations.

**Keywords:** Tumor Microenvironment, Immunotherapies, Targeted therapies, Therapeutic resistance, and Nanomedicine

#### Sub-topics:

The sub-topics to be covered within the issue should be provided:

- Resistance mechanisms in the tumor microenvironment
- Targeted immunotherapies
- Small molecule inhibitors targeting molecular players in carcinogenesis
- Advances in nanomedicine

#### Schedule:

- ✧ Thematic issue submission deadline: 30 August 2022

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