Tentative Outline

Special/Thematic Issue for the Journal Current Cancer Drug Targets

Novel Strategies to Target Cell Death Signaling in Cancer

Guest Editor: Dr. Yutian Zou Co-Guest Editor: Dr. Xinpei Deng

Scope of the Thematic Issue:

Depending on the triggering mechanism, cell death occurs in two ways. Accident cell death (ACD) is a biological process that is out of control, whereas programmed cell death (PCD) includes elaborate regulations and involves various mechanisms. Cancer development and progression are also greatly affected by PCD. It has been extensively studied as a human disease in terms of PCD-related therapies and mechanisms, and the findings can be applied to other conditions as well. Several key types of PCD have been identified based on distinct cell death signaling pathways, consisting of apoptosis, necroptosis, ferroptosis, pyroptosis, netotic cell death, entotic cell death, lysosome-dependent cell death, parthanatos, autophagy-dependent cell death, oxeiptosis, alkaliptosis and disulfidptosis in recent decades. PCD contribute to various pathological processes in cancer individually or in combination.

PCD has been shown to play a fundamental role in the development and metastasis of malignant tumors fordecades. Malignant tumor cells cannot develop further without overcoming various forms of cell death.

Considering this, targeting PCD is a viable approach for developing novel therapeutic strategies (includingpharmaceutical discovery and stem cell-based therapy) for cancer treatment.

Keywords: Programmed Cell Death, Cancer, Signaling, apoptosis, autophagy, necroptosis, pyroptosis, ferroptosis

Sub-topics:

- Targeting PCD with drugs, compounds, and stem cell-based therapies;
- Regulatory mechanisms of drugs, compounds, and stem cell-based therapy in targeting PCD;
- The novel modes of distinct phytochemicals in the pathological processes involving PCD, such as relevantmolecular targets and pathways, metabolisms and pharmacodynamics, and assessment with bioinformatics;
- Novel findings based on public databases of key factors associated with PCD;
- Molecular mechanisms of signaling in PCD;
- Novel delivery systems for chemicals targeting PCD;
- Drug resistance related to PCD in cancer;
- PCD-related side effects of targeted therapies;
- New diagnostic and therapeutic strategies targeting PCD;
- Discovery of new types or mechanisms of PCD in cancer.

Schedule:

♦ Thematic issue submission deadline: 15th September 2023.

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