

Tentative Outline

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

Title of the Thematic Issue: Network integration of multi-omics data to screen novel cancer prognostic biomarkers and drug targets

Guest Editor: Dr. Feng Gao

Co-Guest Editor: Dr. Wei Wang

• **Scope of the Thematic Issue:**

Cancer is a heterogeneous disease that involves multiple levels of abnormalities including DNA, RNA, protein, and metabolite. Biological omics, including transcriptomics, genomics, epigenomics, proteomics, and metabolomics, have systematically illustrated carcinogenesis at different biological levels, which has promoted the transformation of cancer research paradigm from single-parameter model to multi-parameter systematical model. The rapid development of various omics technologies has accelerated the practice of precision medicine and ultimately helped personalize treatment. Network-based approaches were exploited to detect, reconstruct and study interactions among sub-network modules; to assess functional correlation among multi-omics entities; to integrate and fuse networks to create a comprehensive view of disease. The aim of this thematic issue is to depict the latest development in the methodology, advances, and clinically relevant applications of integration multi-omics in cancer research, and especially emphasizes the network-based integration of multi-omics data for screening novel cancer prognostic biomarkers and drug targets.

Keywords: Cancer, Multi-omics, Network analysis, Network integration, Prediction; Prognosis, Biomarker, Drug targets

Sub-topics:

- Novel multi-omics network integration methods
- Screening new targeted therapy response prediction targets
- New immunotherapy response prediction targets
- Cancer signaling and prognosis biomarkers

Tentative titles of the articles:

- Network integration of multi-omics data: Focus on new multi-omics integration methodology
- Network integration of multi-omics data: Focus on prognostic biomarker
- Network integration of multi-omics data: Focus on novel drug targets
- Network integration of multi-omics data: Focus on novel targeted therapy and immunotherapy response prediction
- Network integration of multi-omics data: Focus on novel PD-1/PD-L1 response biomarker

Schedule:

- ✧ Thematic issue submission deadline: March 2024

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