

Special Issue on
**Applications of Bioinformatics and Systems Biology in
Precision Medicine and Immunooncology**

CALL FOR PAPERS

Next-Generation Sequencing (NGS) technology, often seen as the foundation of precision medicine, has been successfully applied in oncology diagnostics and immunotherapy. With advances in gene diagnostics and immunotherapy, there may be a chance to control the development of cancers and alleviate the suffering of patients undergoing chemotherapy.

To promote the translation of precision medicine from bench to bedside and from application of genetic testing to personalized medicine, new analysis methods for NGS and genetic data need to be developed. For example, the NGS panel is quite different from whole genome sequencing (WGS), focusing on fewer genes or regions but requiring greater precision and efficiency. For complex diseases, such as cancers, the driver genes are usually a cluster of genes in a regulatory network. Graph theories, such as shortest path analysis and random walk algorithms, will help dissect genome-wide interactions into key modules or paths whose dysfunction are associated with disease progression.

We invite investigators to contribute research as well as review articles on applications of bioinformatics and systems biology in precision medicine and immunooncology.

Potential topics include but are not limited to the following:

- ▶ Disease gene identification
- ▶ Biomarker discovery
- ▶ NGS panel development
- ▶ Liquid biopsy
- ▶ Immunotherapy
- ▶ Antibody drug development
- ▶ Patient-derived xenograft (PDX) models
- ▶ Cell-free tumor DNA
- ▶ Single-cell sequencing
- ▶ Microsatellite instability (MSI)

Authors can submit their manuscripts through the Manuscript Tracking System at <https://mts.hindawi.com/submit/journals/bmri/bioinformatics/bsbp/>.

Papers are published upon acceptance, regardless of the Special Issue publication date.

Special Issue Editor in Chief

Yudong Cai, Shanghai University,
Shanghai, China
cai_yud@126.com

Guest Editors

Tao Huang, Chinese Academy of
Sciences, Shanghai, China
tohuangtao@126.com

Jialiang Yang, Mount Sinai Medical
Center, New York, USA
jialiang.yang@mssm.edu

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