Special Issue

Bioinformatics and Artificial Intelligence for Precision Medicine

Message from the Guest Editor

Along with the advance of next-generation sequencing (NGS) technology, large-scale, tissue-level, and single-cell omic datasets have been being generated to characterize the dysfunctional molecular mechanisms within cells and the microenvironments of complex diseases, like cancer, neuroscience, aging, Alzheimer's disease (AD), and inflammation However, it remains challenging to integrate and interpret the omic data for precision medicine. Precision medicine involves identifying computational models that take the omic data as the input and outputs a list of key targets, signaling pathways, and potentially effective medications. Thus, bioinformatics and artificial intelligence (AI) are critical and must be improved to mine the knowledge from large-scale omic datasets. Therefore, novel bioinformatics and AI models are urgently needed for integrating and interpreting the omic datasets to facilitate the development of precision medicine. Herein, we invite studies making use of bioinformatics and AI models to analyze the biomedical data to identify the key disease signaling targets, signaling pathways, and predict/reposition effective drugs or synergistic drug combinations.

Guest Editor

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Genes is central to our understanding of biology, and modern advances such as genomics and genome editing have maintained genetics as a vibrant, diverse and fast-moving field. There is a need for good quality, open access journals in this area, and the *Genes* team aims to provide expert manuscript handling, serious peer review, and rapid publication across the whole discipline of genetics. Starting in 2010, the journal is now well established and recognised. Why not consider *Genes* for your next genetics paper?

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