Systems Analytics and Integration of Big Omics Data

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Message from the Guest Editor

Dear Colleagues,

The emergence and global utilization of high-throughput (HT) technologies, including deep sequencing technologies (genomics) and mass spectrometry (proteomics, metabolomics, lipidomics), has allowed geneticists, biologists, and biostatisticians to bridge the gap between genotype and phenotype on a scale that was not previously possible.

Analysis pipelines can be so large and complex that their processing is impractical using traditional data processing applications. Instead, challenges arise in collection: mining, sharing, transfer, visualization, archival, analysis and integration of big data. Even different types of compute structure may be required.

In this Special Issue, we will focus on integration strategies for systems level analysis of omics data, big data infrastructure, rigor and transparency in big data research, best practices for sharing omics data with public repositories, recent developments in pathway and network algorithm development, and integration of omics data with clinical and biomedical data.

Prof. Dr. Gary Hardiman
Guest Editor

Special Issue

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Message from the Editor-in-Chief

Genes are central to our understanding of biology, and modern advances such as genomics and genome editing have maintained genetics as a vibrant, diverse and fastmoving 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.

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