

Proposal

Journal Name: Current Bioinformatics

Special Issue Title: Computational Biology with Graph-based Artificial Intelligence

Abstract/ Proposal:

Recently, many studies have focused on using graph-based models to describe biological systems. Biological molecules, including DNA, miRNAs, lncRNAs, proteins and other small molecules form very complicated network, which is the basis of all biology process at cellular system level. Machine learning, which is also known as the artificial intelligence, has recently achieved a new stage. Many studies have tried to combine the artificial intelligence techs with the biological systems model to explore the mechanism of life.

Scope of Proposed Topic (50 words):

Protein-Protein interaction network
lncRNA-miRNA-Protein network
lncRNAs/miRNAs/Proteins-diseases associations
Drug-Target associations/interactions
Drug repurposing / combination prediction with systems biology
Network based pharmaceutical studies
Network based disease markers
Essential proteins/miRNAs/lncRNAs identification with systems biology
Gene ontology similarity network
Genetic interaction network
Gene expression network

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