# Special Issue

# Integration of Omics Data with Machine Learning and Literature Mining: An Accurate and Fast Approach in Drug Repurposing and Comprehensive Systems Biology

## Message from the Guest Editors

The development and widespread use of next-generation sequencing (NGS) technologies founded the era of big data in biology and medicine. In particular, it led to an accumulation of datasets that opened up a vast number of possible applications for data-driven methodologies. However, NGS-based studies usually utilized small sample sizes, and thus many research results gave low reproducibility rates in followed studies. Hence, the meta-analysis of available data from several studies was soon identified as the appropriate technique to obtain adequate sample sizes and optimal strength for the detection of genetic associations.

Also, data-driven NGS research areas have tailored data mining technologies such as machine learning. A machine learning model can incorporate prior knowledge from different omics data. Subsequently, the models can identify hidden knowledge, patterns, and relationships in an enormous amount of NGS information.

The combination of machine learning and meta-analysis in the analysis of multiple NGS experiments simultaneously may open up a new avenue to use publicly available data to better uncover key molecular factors and underlying mechanisms in omics studies.

## Guest Editors

Dr. Esmaeil Ebrahimie

Prof. Dr. Matthias Kohl

Dr. James Perkins

## Deadline for manuscript submissions

closed (15 January 2023)

# Cells

# About the Journal

### Message from the Editorial Board

*Cells* has become a solid international scientific journal that is now indexed on SCIE and in other databases. We have successfully introduced a special issues format so that these issues serve as mini-forums in specific areas of cell science. *Cells* encourages researchers to suggest new special issues, serve as special issues editors, and volunteer to be reviewers. Our main focus will remain on cell anatomy and physiology, the structure and function of organelles, cell adhesion and motility, and the regulation of intracellular signaling, growth, differentiation, and aging. We are open to both original research papers and reviews.

### Editors-in-Chief

Dr. Alexander E. Kalyuzhny
Dental Basic Sciences, University of Minnesota, 308 Harvard St. SE, Minneapolis, MN 55455, USA

Prof. Dr. Cord Brakebusch
Biotech Research & Innovation Centre, The University of Copenhagen, Copenhagen, Denmark

### Author Benefits

**High Visibility:**
indexed within Scopus, SCIE (Web of Science), PubMed, MEDLINE, PMC, CAPlus / SciFinder, and other databases.

**Journal Rank:**
JCR - Q2 (Cell Biology) / CiteScore - Q1 (General Biochemistry, Genetics and Molecular Biology)

**Rapid Publication:**
manuscripts are peer-reviewed and a first decision is provided to authors approximately 16 days after submission; acceptance to publication is undertaken in 2.7 days (median values for papers published in this journal in the first half of 2025).