
MIBE

GMS Medizinische Informatik, Biometrie und Epidemiologie

The German Scientific Journal of GMDS

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Call for Papers for a Special Issue Medical OMICS

Precision medicine depends on the detection of disease markers and their measurement. Within the various OMICS fields, such as genomics and metabolomics, such markers can be detected and measured. This special issue encompasses these OMICS fields and their data analytics and integration.

Changes in the expression of cellular molecules are hallmarks of diseases and can define them. Furthermore, such changes can give pointers to cellular treatments for the associated diseases. OMICS fields such as genomics and transcriptomics facilitate the measuring of sequence/structural changes in a genome and the changes in gene expression. The latter may be caused by underlying changes in the genome but may be traceable to epigenetics. OMICS ranges from genomics to phenomics and there is no clear layering such that the interplay of all molecules within a cell defines its phenome. In basic research, it is, therefore, important to measure from as many OMICS perspectives as possible to develop disease markers and understand the disease pathway. This feeds into patient stratification where a minimum of OMICS measurements should be applied for diagnosis. On both sides, due to OMICS measurements, large amounts of data are created. This calls for data analytics and integration tasks within the medical OMICS field. In this special issue, we would like to discuss different OMICS fields ranging from genomics to phenomics.

Topics of interest include, but are not limited to:

- OMICS
 - Genomics
 - Transcriptomics
 - Proteomics
 - Metabolomics
 - Phenomics
 - OMICS Data Analysis
 - OMICS Data Integration

- Medical Informatics
 - Workflow Management / Bioinformatics Analysis Pipelines
 - Bioinformatics Algorithms
 - Biological Databases
 - Computational Modeling and Data Integration
 - Functional Genomics and Proteomics
 - Gene Expression Array Analysis
 - Genome-Phenome Analysis
 - Machine Learning for Biomedical Data Analysis
 - Metabolic Pathway Analysis
 - Modelling of Molecular, Cellular, and Organ Pathways
 - Systems Biology

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We request original work that has not yet been published elsewhere and has not yet been submitted to other journals. The instructions for the preparation of manuscripts are available on <https://www.egms.de/static/en/journals/mibe/authors.htm>. There you will also find a link to manuscript submission. Please indicate "special issue Medical OMICS" when submitting. Submissions for this special issue are open until 30.04.2022.

The open-access journal MIBE offers publication opportunities beyond those offered by other journals. Free of charge - for readers and authors. For example, research data, software, videos, and other attachments can be added to a publication. Papers dealing with the solution of regional problems in the German-speaking area can be published as well as articles of international interest.

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