



## Advances in Molecular Cytogenetics Volume II

Guest Editor:

### Dr. Igor Lebedev

Research Institute of Medical  
Genetics, Tomsk National  
Research Medical Center of the  
Russian Academy of Sciences,  
Tomsk, Russia

Deadline for manuscript  
submissions:

**closed (31 January 2024)**

### Message from the Guest Editor

Dear Colleagues,

Since its origin many decades ago, classical cytogenetics has been a crucial tool in the life sciences. During this time, technical advancements have been made and applied in both research and diagnostics. In medicine, the obtained results are universally well-known and appreciated.

Cellular biology improved our knowledge on the nucleus, nucleolus, chromosomes, and chromatin, and the advent of molecular cytogenetics confirmed the necessity of continuing these efforts to deepen our knowledge of the molecular bases of genetic diseases.

The aim of this Special Issue is to describe the state of the art of cytogenetics and cytogenomics, as well as identify their future evolutions.

The main topics that will be covered are:

- The role of conventional cytogenetics in the cytogenomic era;
- Metaphase and/or interphase FISH in the cytogenomic era;
- The role of chromosomal microarrays in prenatal and postnatal diagnoses of structural abnormalities;
- Detection and clinical interpretation of copy number variants;
- Next-generation sequencing in cytogenetics;
- Optical genome mapping in cytogenetics;
- Three-dimensional genomics and chromosomal disorders;





an Open Access Journal by MDPI

## Editor-in-Chief

### Prof. Dr. Felipe Fregni

1. Neuromodulation Center and  
Center for Clinical Research  
Learning, Spaulding  
Rehabilitation Hospital and  
Massachusetts General Hospital,  
Harvard Medical School, Boston,  
MA 02114, USA  
2. Department of Epidemiology,  
Harvard T.H. Chan School of  
Public Health, Boston, MA 02115,  
USA

## Message from the Editor-in-Chief

*Biomedicines* (ISSN 2227-9059) is an open access journal devoted to all aspects of research on human health and disease, the discovery and characterization of new therapeutic targets, therapeutic strategies, and research of naturally driven biomedicines, pharmaceuticals, and biopharmaceutical products. Topics include pathogenesis mechanisms of diseases, translational medical research, biomaterial in biomedical research, natural bioactive molecules, biologics, vaccines, gene therapies, cell-based therapies, targeted specific antibodies, recombinant therapeutic proteins, nanobiotechnology driven products, targeted therapy, bioimaging, biosensors, biomarkers, and biosimilars. The journal is open for publication of studies conducted at the basic science and preclinical research levels. We invite you to consider submitting your work to *Biomedicines*, be it original research, review articles, or developing Special Issues of current key topics.

## Author Benefits

**Open Access:** free for readers, with article processing charges (APC) paid by authors or their institutions.

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

**Journal Rank:** JCR - Q1 (Pharmacology and Pharmacy) / CiteScore - Q2 (*Medicine (miscellaneous)*)

## Contact Us

*Biomedicines* Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
[www.mdpi.com](http://www.mdpi.com)

[mdpi.com/journal/biomedicines](https://mdpi.com/journal/biomedicines)  
[biomedicines@mdpi.com](mailto:biomedicines@mdpi.com)  
X@Biomed\_MDPI