Special Issue

Genetics of Leukemia and Myelodysplastic Syndromes

Message from the Guest Editor

Myelodysplastic syndrome (MDS) is a clonal hematopoietic stem cell disorder characterized by morphological dysplastic changes in one or more of the major hematopoietic cell lines. MDS can present with varying degrees of single or multiple cytopenias including neutropenia, anemia and thrombocytopenia. The risks of MDS include infection, anemia, bleeding and transformation to acute myeloid leukemia (AML) in approximately 30% of cases. Among major mutational targets in MDS are the molecules involved in DNA methylation, chromatin modification, RNA splicing, transcription, signal transduction, cohesin regulation, and DNA repair. Interactions between mutations play an important role in disease progression. The World Health Organization (WHO) classification included karyotype in the case of del(5q) MDS and SF3B1 somatic mutations as a supplementary criterion for defining MDS with ring sideroblasts. Although most cases of myeloid neoplasms are sporadic, some cases are associated with germline mutations. The purpose of this Special issue is to overview the recent advances in genetics of MDS and AML by reviews or research articles.

Guest Editor

Dr. Ota Fuchs

Institute of Hematology and Blood Transfusion, U Nemocnice 1, 128 20 Prague 2, Czech Republic

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Genes
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
genes@mdpi.com

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Message from the Editor-in-Chief

Genes is central to our understanding of biology, and modern advances such as genomics and genome editing have maintained genetics as a vibrant, diverse and fast-moving 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. Why not consider *Genes* for your next genetics paper?

Editor-in-Chief

Prof. Dr. Selvarangan Ponnazhagan
Department of Pathology, The University of Alabama at Birmingham, 1825 University Blvd, SHEL 814, Birmingham, AL 35294-2182, USA

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