

Special Issue

Pathogenetic Mechanism of Hereditary Anemia

Message from the Guest Editors

Anemia affects 1.6 billion people worldwide, about 10% of these individuals are affected by rare anemias of which 80% are hereditary. In recent years, major progress in the understanding of the genetic basis and pathophysiology of hereditary anemias have been achieved. Nevertheless, the pathophysiology of most of the hereditary anemias is poorly understood and, in addition, the responsible gene has not yet been identified for all of them.

This Special Issue on “Molecular Genetics and Pathophysiology of Hereditary Anemias” will include a selection of original papers and reviews focused on genetics and genomics, as well as cellular and molecular mechanisms of red blood cell physiology and pathology. The special issue will focus on hereditary anemias, in particular red blood cell membrane structural defects, red blood cell membrane transport defects, defects of erythropoiesis, enzyme defects, anemias related to iron metabolism defects; diagnostic approaches, epigenetics, functional genomics, genome editing, generation of cellular and animal models for red blood cell diseases, gene expression profiling of erythroid cells, and description of new pathophysiological mechanisms.

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