# Special Issue

# The Role of Red Blood Cell Hemodynamic Functionality in Health and Disease

**Message from the Guest Editors**

Red Blood Cells (RBCs) have special morphological and structural characteristics, expressed by their membrane and cytoskeleton composition and their interactions with hemoglobin and other cytosolic molecules, enabling their unique physiological functions. The primary role of RBC is the transport of respiratory gases. However, RBCs also have unique flow-affecting properties, which determine their hemodynamic functionality, namely, their potential to affect blood circulation and the vascular system. These include RBC deformability, the potential adherence to the blood vessel wall, self-aggregability, and fragility.

In the current Special Issue, we collect new investigations addressing the hemodynamic aspects of RBCs in different pathological states. In addition, we intend to discuss the correlation between biochemical/biophysical features of RBC and their hemodynamics. Moreover, a discussion of the influence of external factors (e.g., oxidative stress, glucose, and shear stress) on RBC hemodynamics would be welcome.

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The International Journal of Molecular Sciences (*IJMS*, ISSN 1422-0067) is an open access journal, which was established in 2000. The journal aims to provide a forum for scholarly research on a range of topics, including biochemistry, molecular and cell biology, molecular biophysics, molecular medicine, and all aspects of molecular research in chemistry. *IJMS* publishes both original research and review articles, and regularly publishes special issues to highlight advances at the cutting edge of research. We invite you to read recent articles published in *IJMS* and consider publishing your next paper with us.

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