

Special Issue

Erythrocytes in Human Life— Functions Beyond Oxygen Transport

Message from the Guest Editors

This Special Issue explores the expanding knowledge of erythrocytes, extending beyond their traditional role in oxygen transportation. Using cutting-edge omics technologies, biochemical and biophysical analyses, and advanced microscopy techniques, researchers have unveiled mechanisms of the complex contributions of erythrocytes to immune regulation, redox homeostasis, metabolic control, and intercellular communication. These modern approaches have deepened our understanding of the active, systemic role of erythrocytes in physiological processes (such as aging and exercise, in addition to others) and pathological conditions, including cardiovascular, malignant, infectious, autoimmune, and metabolic diseases, paving the way for novel diagnostic tools and therapeutic strategies.

By integrating basic research and clinical perspectives, this Special Issue aims to provide a comprehensive overview of erythrocyte biology, highlighting their systemic importance in human health and disease, as well as their biomedical applications.

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A major strength of biological science is the diversity of approaches that biological scientists apply to their research problems. *Biology* reflects this diversity and brings together studies employing the varied experimental and theoretical approaches that are fueling biological discovery. *Biology*, the journal, is a fully peer-reviewed publication with a rapid and economical route to open access publication and is listed on PubMed. All articles are peer-reviewed and the editorial focus is on determining that the work is scientifically sound rather than trying to predict its future impact.

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