

Special Issue

In Sickness and in Health: Erythrocyte Responses to Stress and Aging

Message from the Guest Editors

Mature red blood cells are the most abundant host cell in our body. Aging is characterized by modifications in red cell shape, volume, composition, metabolism and several surface molecules, some of which generate senescence signals that trigger erythrophagocytosis. The etiological triggers of erythrocyte aging and removal from the circulation are still incompletely understood. This holds true not just in the context of physiological aging, but especially in response to pathologies that alter red cell capacity to carry and deliver oxygen. Beyond oxygen delivery, the utmost relevance of red blood cells to regulation of vascular tone, blood coagulation, response to hypoxia and immunomodulation, in addition to pitfalls of iatrogenic interventions that may harm and modulate them while making them available on demand, set new challenges in the field of transfusion medicine.

This Special Issue focuses on cellular and molecular pathways that work in red cells in response to normal aging and stressful conditions and the translation of those effects in systemic phenotypes of the clinical and sub-clinical spectra.

Guest Editors

Dr. Anastasios G. Kriebardis
Prof. Dr. Angelo D'Alessandro
Prof. Marianna H. Antonelou

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Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
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Prof. Dr. José L. Quiles
Department of Physiology, Institute of Nutrition and Food Technology
"Jose Mataix", Biomedical Research Center, University of Granada,
Avda. Conocimiento s/n, 18100 Armilla, Granada, Spain

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