



Multileveled Molecular Mechanisms Related to Oxidative Stress in Retinitis Pigmentosa II

Guest Editors:

Prof. Dr. Antonina Sidoti

Università degli Studi di Messina,
98122 Messina ME, Italy; Istituto
Euro-Mediterraneo di Scienza e
Tecnologia (I.E.ME.S.T.), 90139
Palermo, Italy

asidoti@unime.it

Dr. Luigi Donato

Università degli Studi di Messina,
Messina, Italy; Istituto Euro-
Mediterraneo di Scienza e
Tecnologia (I.E.ME.S.T.), Palermo,
Italy

ldonato@unime.it

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Message from the Guest Editors

Generally, photoreceptor cell survival is ensured by retinal pigment epithelium (RPE), which provides many vital functions, such as phagocytosis of photoreceptor outer segments, metabolite transport, photoreceptor excitability, regulation of the visual cycle, secretion of growth factors, and oxidative stress protection. Among the main causes of RP, the RPE disruption induced by oxidative stress represents the most complex and still not sufficiently explored. RPE degeneration alters cell cycle, vesicular trafficking, cell migration, endoplasmic reticulum stress, chaperones activity, small GTPase signaling, retinoic acid cycle, microvascular integrity, chromosome stability, circadian rhythms, fatty acid metabolism, synapses integrity, and retinal cell rescue. This research topic will discuss the most recent preclinical and clinical evidence highlighting the central role of oxidative stress in the onset and progression of RP, analyzing the extraordinary complexity of the multileveled molecular mechanisms and the current strategies adopted to protect the retina.





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Editor-in-Chief

Prof. Dr. Stanley Omaye

Department of Agriculture,
Nutrition and Veterinary
Sciences, University of Nevada,
1664 North Virginia Street, Reno,
NV 89557, USA

Message from the Editor-in-Chief

It has been recognized in medical sciences that in order to prevent adverse effects of “oxidative stress” a balance exists between prooxidants and antioxidants in living systems. Imbalances are found in a variety of diseases and chronic health situations. Our journal *Antioxidants* serves as an authoritative source of information on current topics of research in the area of oxidative stress and antioxidant defense systems. The future is bright for antioxidant research and since 2012, *Antioxidants* has become a key forum for researchers to bring their findings to the forefront.

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Contact Us

Antioxidants
MDPI, St. Alban-Anlage 66
4052 Basel, Switzerland

Tel: +41 61 683 77 34
Fax: +41 61 302 89 18
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