

Special Issue on Molecular Basis of Redox Signaling

CALL FOR PAPERS

While oxidative stress produces cellular damage due to the unspecific oxidation of a myriad of biomolecules, redox signaling is mediated by reactive oxygen and nitrogen species (ROS and RNS, resp.) acting as second messengers. Current efforts continue to broaden our comprehension of redox signaling as a series of highly specific, controlled and dynamic events mediated by electron transfer reactions that modify acceptor biomolecules either reversibly or irreversibly. This selective oxidation of specific targets regulates signaling pathways controlling a number of cellular processes, from metabolism to cell growth, differentiation, and death. Impaired redox signaling has been linked to pathological conditions where cellular damage is caused or mediated by the modification of critical biomolecules, resulting in gain or loss of function. Because redox signaling is an intrinsic component of human metabolism, its disruption is thought to contribute to the onset and progression of a variety of disorders. Due to their severity and rapidly growing investigation, the study of metabolic and neurodegenerative diseases provide an excellent platform to uncover the molecular basis of redox signaling.

We invite authors to submit original research articles as well as review articles that will contribute to broaden the understanding of the biochemical, cellular, and molecular mechanisms regulated by redox signaling. We are particularly interested in articles covering the identification of relevant targets and mechanisms regulated by redox signaling that could be exploited for therapeutic development.

Potential topics include but are not limited to the following:

- Identification and characterization of molecular mediators of redox signaling
- Redox sensors
- Effect of oxidative modified molecules on energy metabolism
- Effect of posttranslational oxidative modifications on protein function
- Recent advances in antioxidant therapies

Authors can submit their manuscripts through the Manuscript Tracking System at <https://mts.hindawi.com/submit/journals/omcl/rspth/>.

Papers are published upon acceptance, regardless of the Special Issue publication date.

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