

Special Issue on

## Redox Posttranslational Modification: Tuning of Protein in Cellular Homeostasis and Disease

# CALL FOR PAPERS

Posttranslational modification (PTM) is a collective term for biochemical reactions on a protein after its translation. It can regulate all cellular events, such as gene expression, signal transduction, stability and conformation of protein, activity of protein and its localization, protein-protein interaction, and communication between cells and their intracellular and extracellular environment. Cumulative evidence shows that more than 5% of the human proteome consists of proteins engaged in enzymatic PTM, such as acetylation, phosphorylation, and ubiquitination; sumoylation occurs within the cell in response to stimuli very quickly and works as a molecular mechanism to transform cell signaling cascades. Redox-mediated PTMs including hydroxylation, nitrosylation, carbonylation, disulphide bridge formation, and sulphhydrylation contribute to developmental as well as multiple disease conditions. Reactions of free radicals with protein lead to oxidative modifications; these reactive species can directly attack protein residues or generate lipidic metabolites, resulting in reversible and irreversible PTMs. These modifications play a role in wide range of chronic diseases such as diabetes mellitus, obesity, metabolic syndrome, aging, cancer, osteoporosis, rheumatoid arthritis, cardiovascular diseases, and neurodegenerative disorders.

We invite investigators to contribute original research articles as well as review articles that will highlight the role of posttranslational modification in homeostasis and disease.

Potential topics include but are not limited to the following:

- ▶ Recent advances in understanding the posttranslational modification in health and disease
- ▶ Advances in the field of redox-mediated PTMs including hydroxylation, nitrosylation, carbonylation, disulphide bridge formation, and sulphhydrylation in developmental conditions and disease
- ▶ Molecular mechanisms of posttranslational modification induced by oxidative stress and aging
- ▶ Correlation of PTMs and signal transduction mechanism
- ▶ Role of miRNA in the posttranslational modification
- ▶ Development of posttranslational protein as druggable target in heart failure, autoimmune, and neurodegenerative disease

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

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

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