Title of the Thematic Issue: Modulation of oxidative stress: targets and therapies
Guest Editor’s Name: Prof. Luciano Saso

Scope of the Thematic Issue (Brief introduction / abstract explaining the Thematic Issue):

Oxidative stress (OS) emerges when an imbalance exists between reactive oxygen species (ROS) and antioxidant reserve called antioxidants that causes changes in the structure and function of proteins, lipids and DNA in the cell. Oxidative stress plays a central role in the pathophysiology of many different chronic or degenerative disorders (e.g. cardiovascular and neurodegenerative conditions and cancer). Many signaling pathways associated with disease progression may also regulate ROS metabolism. Therefore, modulation of OS related pathways constitutes a remarkable strategy in the treatment of many several diseases including antineoplastic treatments. Thus, the aim of many ongoing studies on the relationship between oxidative stress and diseases is to elucidate the mechanisms and role of oxidative stress in the onset and development of the disease. In particular, the goal of this studies is to find new treatment strategies for chronic diseases, aging and cancer by reducing oxidative stress through modulation of target gene expressions. Antioxidant protection of our organism consists of its non-enzymatic (ferritin, metallothioneins, antioxidant vitamins, glutathione, sulfhydryl groups of proteins, reducing blood components: bilirubin, creatinine, urea and flavonoids, polyphenols, resveratrol, lycopene, α-lipoic acid, etc.) and several enzymes (superoxide dismutase, glutathione peroxidase, catalase) modulated by the fundamental Transcription factor NRF2.

Keywords: Antioxidants, Oxidative stress, Antineoplastic, Reactive oxygen species, disorders, Antineoplastic

Sub-topics:
The sub-topics to be covered within the issue should be provided:

- Natural or synthetic small molecules as REDOX-targeted therapeutics
- Non-radical scavenging mechanisms targeting oxidative stress
- NRF2/Keap1 pathway-targeted therapeutics
- Preclinical designing and development of small molecules targeting redox regulation for their therapeutic potentials
- Biomarkers for assessing redox imbalance and antioxidant status.

Schedule:

- Deadline to submit the finalized proposal of Thematic issue: 3 months after subjected approval of preliminary proposal
- Complete Thematic issue submission deadline: 24-May-22 (which will include the list of contributors)

Details of Guest Editor:

Guest Editor Name: Prof. Luciano Saso
Affiliation: Department of Physiology and Pharmacology “Vittorio Ersipamer”, Sapienza University of Rome, Italy
Email: luciano.saso@uniroma1.it
Co-Guest Editor Name: Prof. Jelena Kotur-Stevuljević,
Affiliation: Department of Medical Biochemistry, University of Belgrade, Serbia.

Co-Guest Editor Name: Dr. Pelin Telkoparan-Akillilar
Affiliation: Department of Medical Biology, Yuksek Ihtisas University Medical School, Turkey.