Oxidative Stress in Neurodegenerative Diseases: Amyloid, Extracellular Vesicles and Biomarkers

Message from the Guest Editors

This Special Issue will cover some emerging role of oxidative stress on neurodegenerative diseases including Alzheimer’s and Parkinson’s diseases. It will focus on the role of redox chemistry on the amyloidogenic pathway, on tau hyperphosphorylation and on their propagation by extracellular vesicles. Finally, recent research on biomarkers based on oxidative markers and antioxidant strategies will be discussed.

Topics include, but are not limited to:

- Reactive oxygen species: chemical basis, ROS production in brain, link with neurodegenerative diseases;
- Amyloid peptides and their roles in diseases (Alzheimer’s disease, Parkinson’s disease, mild cognitive impairment, etc.): detection, interactions with other molecules, oxidation, metal coordination, ROS production;
- Tau phosphorylation and extracellular vesicles;
- Biomarkers of oxidative stress in Alzheimer’s disease: AGE, lipid and protein oxidation;
- Antioxidant strategies.