Tentative Outline

Special Issue for Current Topics in Medicinal Chemistry

Current advances in biochemistry, medical chemistry and drug development strategies for age-related neurodegenerative diseases.

Guest Editor: Sandro Argüelles

Aims & Scope:
Recent progresses in biochemistry and medical chemistry of aging may represent new developments in the search of novel biomarkers and/or provide new, complementary or alternative therapeutic targets that can be used to protect neurons from injury in many neurological disorders for which no cure is available, and possibly cost-effective, way of improving health in our ever growing aging population. The age profile of the industrialized countries is expected to increase dramatically in upcoming decades. The aging of the population brings significant challenges for their economies and welfare systems. This increase in population age leads to an increase in prevalence of age-related diseases (e.g. neurodegenerative diseases, heart disease, and osteoporosis) and the organization of health care requires a research focus on these chronic diseases. There is great interest by pharmaceutical/biotechnology industries to focus on drug development strategies for age-related neurodegenerative diseases through general shutdown/reprogramming of pathways that modulate lifespan (mTOR, Insulin/IGF-1, sirtuins), which also play key roles in cell survival, metabolism, senescence, stress response, DNA repair and several debilitating diseases.

Keywords: Aging, Neurodegenerative diseases, Drug development, Therapeutic interventions

Subtopics:
The subtopics to be covered within this issue are listed below:

- Progresses in medicinal chemistry aspects of neurodegeneration.
- New drugs/ treatment in age-related neurodegenerative diseases.
- Novel biomarkers of age-related neurodegenerative disease risk and diagnosis.
- Advances in the modulation of longevity pathways (mTOR, Insulin/IGF-1, Sirtuins).
- Advances in molecular mechanisms of age/ age-related neurodegenerative diseases.
- Novels strategies for development of therapeutic interventions for age-related neurodegenerative diseases.
- Genomic, transcriptomic, proteomic, and/or metabolomics changes in age related neurodegenerative diseases.

Schedule:

- Manuscript submission deadline: December 19, 2014
- First Round of Reviews: January 30, 2015
- Notification of Acceptance by the Guest Editor: April 25, 2015
- Final manuscripts due: May 25, 2015

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