Tentative Outline

Special Thematic Issue for The Natural Products Journal

Title of the Thematic Issue: "Ayurvedic medicinal therapeutic approaches for inflammatory and neurodegenerative disorders"

Guest Editor: *Prof. Mohammad Amjad Kamal*
Co-Guest Editors: *Dr. Sandeep Kumar Singh and Dr. Maria A. Tikhonova*

- **Scope of the Thematic Issue:**

Usually, in our elderly population, neurodegenerative disorders occur due to neuron death. Alzheimer's disease (AD) is an irreversible and progressive neurodegenerative disease. Dementia is the leading cause of AD, which affects about 30 million people worldwide. According to the World Alzheimer report 2018, a new case of dementia develops every three seconds worldwide. AD is a major disease with no effective ways to cure, reverse and slow down disease progression once symptoms start. Many researchers are used multi-target strategies for the treatment of AD such as β-amyloid peptide aggregation inhibitors, γ and β-secretase inhibitors & modulators, anti-amyloid immunotherapy, tau hyperphosphorylation inhibitors, tau aggregation inhibitors, microtubules stabilisation, anti-tau immunotherapy, AChE inhibitors, 5-HT6 antagonism, anti-diabetic/metabolic regulation therapies and Cdk5 inhibitors, but these approaches have limited success to cure the AD. Besides using the above medicinal treatment, Ayurveda contributes to several distinctive treatment modalities for treating AD without side effects. So this special issue will especially focus on receiving the article related to ayurvedic approaches for treating AD. In recent times, some phyto-drugs have been methodically tested *in-vivo* and *in-vitro* models of AD and also in clinical trials. *Ginkgo biloba*, *Curcuma longa, Withania somnifera, Angelica sinensis* extracts have been found to regulate APP metabolism towards the α-secretase pathway and even restrict the formation, extension and stabilisation of Aβ fibrils. These studies might be a significant lead for discovering appropriate medicines for AD. Therefore ayurvedic approaches for treating AD are a current and demanding aspect of research without any side effects. We invite researchers to contribute original research and review articles that will help to elucidate the therapeutic potential for inflammatory disorders and Alzheimer's disease using ayurvedic approaches based on antioxidant and neuroprotective potential of herbal compounds. We encourage the submission of all the studies dealing with herbal or ayurvedic approaches describing the role of respective herbs for neuroprotective and ant-oxidative properties in AD.

Keywords: Antioxidant; Ayurvedic; Anti-inflammatory; Disorders; Herbal compounds; Medicinal; Neuroprotective; Therapeutics.

Sub-topics:

- Polyphenolic compounds screening from different Ayurvedic herbs and their medicinal importance.
- Neuroprotective activity of herbal compounds against AD.
- Anti-oxidant properties of the herbal compounds in Parkinson's disease.
- Mechanism of actions of the herbal extract against amyloid-beta toxicity.
- Mechanism and action of the herbal extract against tau toxicity.
- Improved cognitive functions in different animal models by treating herbal extracts.
- Management of Huntington's disease by natural compounds.
- Anti-inflammatory potential of herbal compounds

Tentative titles of the articles:

- Drug Lavendula a neuroprotective herb with potent antioxidant and pharmacological effects
- Recent Advancements of Robot-Assisted Therapy and Virtual Reality for Motor Rehabilitation Based on movement-related Cortical Potential and Brain-Computer Interface: A Systematic Literature Review and Bibliographic Network Visualization Techniques
- Automatic Detention of Insomnia Sleep Disorder based on Machine Learning using ECG signal
- Mental Fatigue Detection based on Machine Learning on Wearable Smart Devices using ECG signal
- Neuroprotective activity of herbal compounds against oxidative stress-induced neurotoxicity in brain diseases
- Microneedles; A versatile drug delivery carrier for enhanced neuroprotective action for herbal compounds
- Nerolidol, a potent natural antioxidant with the multifactorial mechanism of neuroprotection: a review

Schedule:

- Thematic issue submission deadline: **30 November 2023**

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