Tentative Outline (Proposal)

Special/Thematic Issue for the journal Protein & Peptide Letters

Title of the Thematic Issue: Discovery, Identification and Validation of Protein Biomarkers for Diagnosis and Therapeutic Intervention in Progressive and Age-Related Neurological Diseases

Name of Guest Editor: Dr. Shyamasri Biswas

- **Scope of the Thematic Issue:**

Age-related and progressive neurodegenerative diseases such as Dementia, Alzheimer's disease (AD), Parkinson's disease (PD) and Amyotrophic Lateral Sclerosis (ALS) are knowns as overly complex health disorders. These diseases are driven by intersecting pathophysiology that are often trapped in vicious cycles of degeneration and cognitive decline, especially in the case of AD and PD. Further, in the case of ALS, progression of the disease happens fast and the patients die within 5-6 years of the initial diagnosis of the disease. There is no known cure yet for these devastating diseases. The usual diagnostic route of these diseases is based on postmortem examination that involves identifying pathology that is specific to the disease in the brain. However, in such cases, accurate diagnosis of the specific disease is limited because clinical disease presentations are often complex and do not easily allow to discriminate patient's cognitive, behavioral, and functional impairment profiles. An early identification along with therapeutic intervention of these diseases is considered pivotal to slow the progression of neurodegeneration and extend healthy life span [1].

In recent years, discovery of biomarkers including protein and peptide biomarkers for detection and potential drug target identification has been shown as a promising route to battle against neurological diseases. The aim of this thematic issue is to address the grand challenges in agerelated and progressive neurological diseases and discuss the potential medical pathway within the realm of studies on protein/peptide biomarkers for identification and intervention including novel drug targets.

Keywords: protein biomarkers, neurodegeneration, Alzheimer's disease, Parkinson's disease, amyotrophic lateral sclerosis, early diagnosis, drug target discovery.

Sub-topics:

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

- Instrumentations, methods, and processes to discover protein/peptide biomarkers in neurological disorders.

- Pathophysiology of protein/peptide biomarkers in neurological diseases

- Neuro-proteomics and biology based discovery of protein biomarkers for neurological diseases

- Discovery of protein biomarkers by genomic approaches for neurological diseases

- Protein biomarkers in drug development for age-related, progressive neurological diseases

- Proteogenomics, genetics, gene editing, genome screening and molecular biology and molecular mechanisms of neurodegenerative diseases.

- Bio-analysis and characterization of protein biomarkers

- Clinical aspects and case studies/trials involving protein/peptide biomarkers to combat neurological diseases.

- Streamlining protein/peptide biomarker validation program for neurological diseases.

- Regulatory perspectives of protein biomarkers and drug targets in neurological diseases.

Schedule:

✧ Complete Thematic issue submission deadline: 30th July 2023.

Contacts:

Guest Editor's Name: Dr. Shyamasri Biswas
Affiliation: USA Prime Biotech LLC, Gainesville, United States
Email: shyabiswas@gmail.com

Co-Guest Editor's Name: Dr. Kim Van Vliet
Affiliation: University of Florida, Gainesville, United States
Email: kimvanvliet2@gmail.com