

4<sup>th</sup> International Conference on

# Geriatrics & Gerontological Nursing

October 3-4, 2016 | London, UK

## EMBRACING NEW TECHNOLOGY IN THE ASSESSMENT OF DEPRESSION AND SLEEP IN THE ELDERLY

**Colin Shapiro\***

\*University of Toronto, Canada

Depression and sleep disorders are prevalent yet widely under-recognized in the elderly. Depression results in poor quality of life and increases the risk of suicide. Untreated sleep disorders lead to early-onset dementia and worsen outcome in medical illness. Further, untreated sleep disorders substantially increase the risk of developing new onset depression, promotes recurrence of remitted depression and gives rise to treatment-resistant depression. Notably, the elderly have a disproportionately high rate of suicide and poor sleep is a risk factor for suicide, even in the absence of depression. Primary care physicians have a poor track record of detecting depression in the elderly, in part due to the different presentation and symptomatology in younger versus older individuals with depression. Similarly, despite the higher prevalence in older adults, sleep disorders are inadequately identified in primary care. This unmet medical need underscores the requirement for new technology employing biological markers to detect depression and sleep disorders in older adults. An innovative diagnostic technology has recently been unveiled. The benefits of this technology include: The ability to simultaneously screen for depression and sleep disorders; the convenience of in-home diagnostic testing; cloud-based computerized algorithms to ensure quick dissemination of test results; the ability to any number of individuals simultaneously, thereby avoiding long wait-lists; and the low cost of testing with this technology is paramount given the lack of medical insurance and fixed income of seniors. This technology represents a promising development to improve the detection of depression and sleep disorders in the elderly.

## THE CROSSROADS BETWEEN PROMOTION OF HEALTHY AGING AND PREVENTION OF AGE-RELATED NEURODEGENERATION TO AVOID THE CATASTROPHIC CLIFF OF NEURONAL FAILURE

**Giulio Maria Pasinetti\***

\*Mount Sinai School of Medicine, USA

Psychological stress triggers mood disorders such as depression and anxiety, which are highly detrimental to general health in the aged. Therefore, it is essential to understand how to promote neuroresilience in order to support healthy aging. Despite the therapeutic promise of natural products, their development of clinical applications is severely hampered by our limited understanding regarding the identity of specific bioactive compounds, their bioactivity, and their mechanisms of action. This presentation is designed to discuss strategies to safely promote healthy aging while discussing novel mechanistic evidence associated with stress-induced cognitive and psychological impairment, which are still unmet medical issues related to the aging population. My presentation objectives are: 1) To understand mechanistically the role of polyphenolic drugs in promoting cognitive and psychological resilience in the aged. 2) To inform the development of novel polyphenolic drugs to alleviate the means of stress-induced depression, which is a risk factor for age-related neurodegenerative disorders. 3) To provide more information about the molecular mechanisms underlying genetic and behavioral association in preventing cognitive impairment using optogenetic approaches. 4) To provide new evidence to better understand the interactions between gastrointestinal microbiome and bioavailability of novel bioactive natural drugs in the prevention of age-related neurodegeneration. Collectively, in my presentation, I will critically discuss the current complex mosaic of evidence, which puts the investigation of novel therapeutic approaches at the cross-roads between promotion of healthy aging and prevention of age-related psychological impairment and the promotion of resilience to avoid the catastrophic cliff of neuronal failure.