## Topic #1: Mechanisms and Intervention for Neurodegenerative Diseases

- Objective:
  - The aim of the call is to enable translational, collaborative research projects that will address important questions relating to human neurodegenerative diseases to develop new diagnostic and/or preventative strategies, to stimulate new therapeutic interventions and to provide better patient care and international collaboration

- Background:
  - According to a National Development Council report on population projections, by 2025, Taiwan will become a super-aged society where at least 20 percent of the population are 65 or older. And it is expected that a rise in the number of people with neurodegenerative diseases, particularly forms of dementia, will place enormous strain on medical and other services in the coming decades. For most neurodegenerative diseases, there is little or no treatment; at best, treatments are symptomatic in nature and do not prevent or slow the progression of disease. Thus, a new approach is needed to solve these adverse health outcomes and to extend the international collaboration in these issues.

- Research Priority:
  - The purpose of this grant is to offer innovative strategies for prevention, (early) diagnosis, care, and intervention for neurodegenerative diseases, through elucidating causal association in disease pathogenesis to developing therapeutic interventions, to prevent or slow the progress of the disease, and to foster international collaboration.
  - Research proposals with potential international collaboration should be stated and cover at least one of the following areas:
    - Research on the pathogenesis and etiology of neurodegenerative diseases. This may include the development of innovative technologies for prevention, diagnosis or therapy of disease. The relevance of the research to disease must be clearly indicated.
    - Research on improving patient outcomes, such as those that employ concepts of convergent neuroscience research, crossing levels of analysis from genomics and imaging to behavior and implementation, effective care/intervention model, etc. A cost-effectiveness analysis of proposed intervention measures should be included.
  - The scope of this call should include at least 3 interrelated and integrated component projects to link a major pathway or target for the investigated outcomes.
  - The potential or possible international collaboration should be stated and illustrated.