



Department of Biological Sciences
Seminar Announcement

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Alzheimer's Disease: From Disease to Molecules

Alzheimer's Disease is a progressive neurodegenerative disorder and the most common form of dementia in adults. The hallmarks of Alzheimer's disease neuropathology are senile plaques and neurofibrillary tangles. Although Alzheimer's disease is most commonly associated with late age, about 10% of cases do present as an early onset autosomal dominant inheritable disease known as familial Alzheimer's disease. In familial Alzheimer's disease, mutations have been found at least in three genes, including the amyloid precursor gene, the presenilin 1 gene, and the presenilin 2 gene. Remarkably, mutations in any one of these genes result in nearly 100% penetrance in causing Alzheimer's disease. Taking advantage of the ubiquitous expression of familial Alzheimer's disease mutations as a way to study aberrant familial Alzheimer's disease-mediated signaling, we investigated the possible role of several signaling pathways (e.g. Akt/GSK3 β) associated with familial Alzheimer's disease mutants of amyloid precursor protein (Swedish₇₅₁) as well as presenilin using human familial Alzheimer's disease expressing cell lines and transgenics. We found that familial Alzheimer's disease mutants transduced aberrant signal(s), which could serve as potential mediators underlying Alzheimer's disease pathogenesis. Implication of the signaling pathways in the disease pathogenesis and in drug discovery will be discussed.

Date: 15 Oct 2003, Wed

Time: 4 pm

Venue: LT 20

Host: A/P Gong Zhiyuan

All are welcome