

Fall 2006 SEMINAR SERIES

F21C Bioprocessing & Biosensing Center

• DIVISION OF FOOD SYSTEMS & BIOENGINEERING •

PRESENTER: **Dr. James C. Lee**
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University of Missouri - Columbia

TITLE: **Role of membrane biophysics and mechanics in Alzheimer disease**

ABSTRACT:

Alzheimer's Disease (AD) will claim 13.2 million Americans by 2050 if no preventive treatments are found. The increasing number of AD victims puts a heavy economic and emotional burden on society, and AD has become an urgent national health and research priority. Intensive research efforts have been targeted to understand different aspects involved in the pathogenesis of AD. Although cytoskeletal reorganization in neuronal cells including astrocytes and neurons has been linked to increased oxidative stress (OS) and neurotoxic amyloid- β peptide ($A\beta_{42}$) production in AD brains, information regarding the role of alterations in cell mechanics in AD is still limited. In this seminar, I will present the goal of our research group to address the possible role of membrane biophysics and mechanics in oxidative stress, mitochondrial dysfunction, cerebral vascular dysfunction, inflammation, and amyloid precursor protein (APP) processing to produce $A\beta$ in AD.

DATE • TIME • LOCATION:

Tuesday, September 26, 4:00pm
Ag Eng Bldg 105 • Refreshments