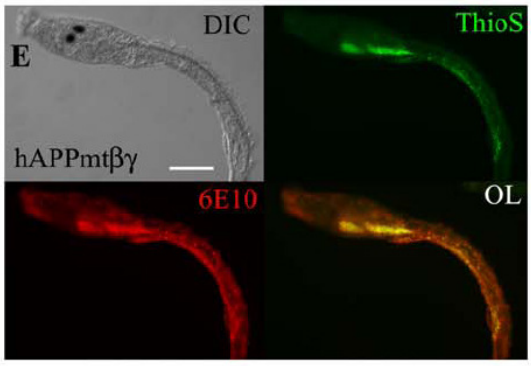
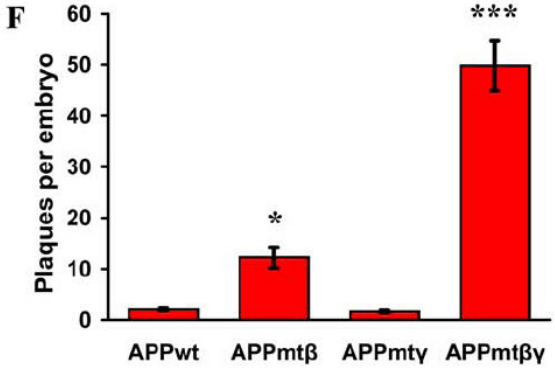
DC セミナー （ISK セミナー）

講師：　Robert W. Zeller 博士
（San Diego State University）
とき：　９月１３日　15 時 30 分
ところ：　総合研究棟２階，会議室３

題目：
Ascidians: A rapid model for studying Alzheimer's Disease

Alzheimer's disease (AD) is the most common neurological disorder affecting an estimated 27 million people worldwide.　This progressive disease is characterized by early memory loss, followed by a gradual decline in cognitive functioning and ultimately death.　To date there is no cure for AD with currently prescribed drugs solely providing symptomatic treatment. A number of animal models have been developed to study this disease and here we present the ascidian as a rapid model for the study of AD. We show that the ascidian is the only known invertebrate that contains orthologues of the genes required for the processing of the amyloid precursor protein (APP). When APP is processed along the amyloidogenic pathway aβ plaques, a hallmark of AD, are produced. Using transgenic animals, we demonstrate that ascidians can properly process human APP and produce plaques within 24 hours of development. We also show that transgenic larvae expressing any of several APP variants produce increased numbers of plaques, again within 24 hours. The presence of plaques is also associated with defects in several simple larval behaviors. Importantly, we show that plaque load, as well as the behavioral defects, can be alleviated with the administration of an anti-amyloid drug. The seminar will explain the ascidian AD model system and will document our efforts in further developing ascidians as a rapid model for studying AD.





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