

RISE Talks Series

Who?

[Eric Parker](#), Drug Discovery

What?

Getting to First BACE: The Development of BACE Inhibitors for the Treatment of Alzheimer's Disease

When?

12:00-1:00 on Wednesday, April 4

Where?

Hall of Sciences, Room 326

Alzheimer's disease (AD) is the leading cause of dementia and the sixth leading cause of death in the developed world. The brains of individuals suffering from AD have two invariant neuropathological characteristics, namely extracellular amyloid plaques composed primarily of the amyloid- β ($A\beta$) peptides and intracellular neurofibrillary tangles composed primarily of hyperphosphorylated forms of the microtubule-associated protein tau. In addition, human genetic and biomarker evidence strongly implicate the $A\beta$ peptides in the etiology of AD. The $A\beta$ peptides are produced by cleavage of the amyloid precursor protein by two membrane-bound proteases known as BACE1 (β -secretase) and γ -secretase. Therefore, inhibitors of both of these enzymes have been developed as potential treatments for AD. This seminar will describe the biology of BACE1, the drug discovery and development efforts that led to the first BACE1 inhibitors to be tested in humans for the treatment of AD, recent results from clinical trials of BACE1 inhibitors in human AD patients and the future of therapeutic approaches for the treatment of AD.

Bio:

Eric Parker has over 27 years of drug discovery and early development experience at BMS, Schering-Plough, Merck and, most recently, as a consultant for several biotechnology companies and venture firms. During his career, Eric has led programs in the areas of neurodegenerative disease, psychiatric disease, metabolic disease and supportive cancer care. Eric is the author of >100 scientific articles, lectures extensively and has served on several external advisory boards.