**Speaker:** Eric Reiman, MD  
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**Presentation:** 1:35 – 2:05 PM  
**Q&A:** 2:05 – 2:10 PM

**Title:** “BIOMARKERS, GENETICS, AND THE PREDISPOSITION TO, PROTECTION FROM AND PREVENTION OF ALZHEIMER’S DISEASE”

**Abstract:** In this presentation, I will briefly consider progress in Alzheimer’s disease (AD) research, including AD-causing, susceptibility, resilience and resistance genes, promising brain imaging, cerebrospinal fluid (CSF), and blood-based biomarkers (BBBs), and some ongoing treatment and prevention trials. I will illustrate some of this progress using findings from our longitudinal study of cognitively unimpaired persons with two, one or now copies of the apolipoprotein E4 (APOE4) allele, the major AD susceptibility gene; studies that my colleagues and I have been conducting in Colombian Presenilin 1 E280A mutation carriers and non-carriers from the world’s largest autosomal dominant autosomal dominant AD (ADAD) kindred (including an ADAD mutation carrier with two copies of a rare APOE Christchurch variant who was protected from the onset of dementia for about three decades after her expected age at clinical onset), the largest genetic study of clinically and neuropathologically characterized AD cases and controls, ongoing efforts to clarify the role of emerging BBBS like plasma p-tau in the early detection, tracking and diagnosis of AD, and the multi-center prevention trials and programs that we have been conducting in the Alzheimer’s Prevention Initiative (API). I will suggest how BBBS could transform research, treatment discovery and development, and clinical care for AD and related diseases, and how biomarkers could help us find and support the approval, affordability and availability of effective AD prevention therapies within the next five years.