Potential effects of the APOE ϵ 2 allele and of family history of Alzheimer's disease on brain amyloid- β in normal elderly

Cirrito et al. (1) provided compelling data from investigations in PS1/APP double-transgenic mice that acute and chronic pharmacological manipulations of serotonin signaling were associated with significant reductions in brain interstitial fluid amyloid- β (A β) levels and plaque load, respectively. More importantly, they also reported that cognitively intact elderly individuals with a retrospectively obtained history of antidepressant treatment with serotonin reuptake inhibitor (SSRI) drugs, within the past 5 y, showed less brain amyloid load as quantified by PET-Pittsburgh Compound B (PIB) than controls without such a history. In addition, longer duration of SSRI treatment was associated with lower A β levels. The authors controlled for a number of factors that are known to influence brain amyloid independently of

SSRIs, including the APOE ϵ 4 allele. However, they did not comment on potential group differences either in the frequency of the APOE ϵ 2 allele, for which this group previously provided some evidence that it might be protective against age-related increases in mean cortical binding potential for PIB (2), or in family history of Alzheimer's disease, which has been reported (3) to associate with increased brain amyloid deposits, as measured by PIB in cognitively normal individuals.

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