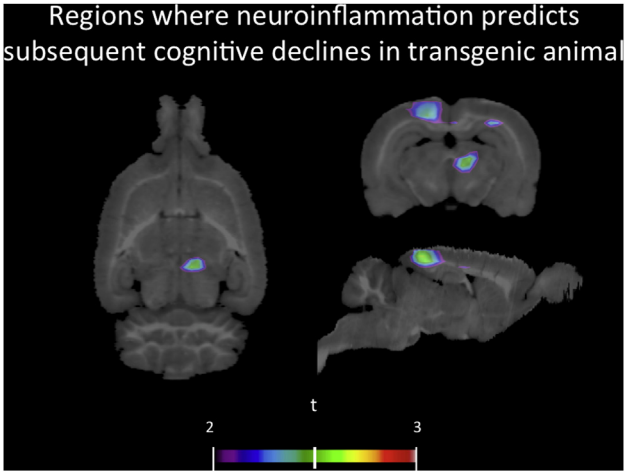
global cortical values, and t-statistical maps were generated to illustrate the regions of significance. **Results:** The association between baseline levels of cognition and inflammation was greater in the Tg than Wt rats in the right nucleus accumbens, whereas in the opposite was seen in the right inferior colliculus. The association between baseline levels of inflammation and change in cognition at follow-up, several regions including the left retrosplenial cortex, right hippocampus, and the right posterior commissure showed higher decrease in cognition of the Tg animals compared to the Wt (Figure 1). **Conclusions:** At baseline, there is no association between neuroinflammation and cognitive performance; however in more aged rats, baseline levels of PBR is able to predict cognitive decline. The results provide a framework that could potentially be applied in human studies focusing on the detrimental roles of neuroinflammation in AD.



IC-P-028 SLEEP QUALITY IN YOUNG AND MIDDLE AGE-PERIOD IS ASSOCIATED WITH CEREBRAL AMYLOID BURDEN IN COGNITIVELY NORMAL ELDERLY PEOPLE

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Background: Very little is known for the association between lifetime sleep experience and cerebral beta-amyloid protein (Aβ) deposition, which is the core pathological change related to Alzheimer's disease process. This study aimed to investigate the relationship of hours of sleep and sleep quality in young and middle age-period with cerebral Aβ burden in elderly individuals with normal cognition. **Methods:** One hundred and twenty-two cognitively normal old adults (age range: 60-87 years), who participated in the Korean Brain Aging Study for Early Diagnosis and Prediction of Alzheimer's Disease (KBASE), were included. All subjects underwent comprehensive clinical and neuropsychological assessment, ^{11}Clabelled Pittsburgh Compound B (PiB) positron emission tomography (PET). Through structured clinical interview for each participant, mean hours of sleep and sleep quality were assessed for the following age-periods: before 20 years, in their 20-30s, and 40-50s. Current sleep quality was also assessed by using the Pittsburgh Sleep Quality Index (PSQI). Global cerebral Aβ deposition was defined as mean cortical PiB retention of the cortical regions including the frontal, lateral temporal, lateral parietal and precuneus/posterior cingulate cortices. **Results:** The poorer sleep quality in all the three younger age-periods was associated with higher mean cortical PiB retention even after controlling for age, gender, apolipoprotein E e4 status, and Hamilton Depression Rating Scale score. In contrast, mean hours of sleep in any young or middle age-period or current sleep quality measured by the PSQI were not related to mean cortical PiB retention. **Conclusions:** These findings suggest that poorer sleep quality, but not hours of sleep, in young and middle age-period may contribute to increased cerebral amyloid burden in old age.

Table
Correlation between sleep variables and Pittsburgh Compound B (PiB) retention

	Unadjusted		Mutivariable Adjusted*	
	Correlation Coefficient	P Value	Partial Correlation Coefficient	P Value
<20y sleep quality	0.246	0.006	0.224	0.015
<20y sleep duration	-0.050	0.582	-0.030	0.748
20-39y sleep quality	0.175	0.055	0.174	0.060
20-39y sleep duration	-0.002	0.984	-0.013	0.889
40-59y sleep quality	0.203	0.025	0.198	0.032
40-59y sleep duration	-0.058	0.526	-0.085	0.360
Total PSQI	0.010	0.912	0.044	0.637

*Adjusted for age, gender, apolipoprotein E e4 status, and Hamilton Depression Rating Scale score

IC-P-029 POLYMORPHISM IN CYTOCHROME P450 GENE IS ASSOCIATED WITH ALZHEIMER'S PATHOLOGY

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Background: The cytochromes P450 (CYP) are known for their role in metabolizing several endogenous and exogenous substrates. In