

Understanding the molecular mechanisms underlying Alzheimer's disease

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The accumulation of amyloid- β ($A\beta$) in the brains of Alzheimer's disease (AD) patients is known to be associated with memory loss and neuronal degeneration, but the mechanism of $A\beta$ pathogenesis is not fully understood.

In this issue of the *Journal of Clinical Investigation*, researchers led by Yong-Keun Jung at Seoul National University demonstrate that $A\beta$ binds to a [cellular protein](#) known as FC γ RIIb.

Greater levels of FC γ RIIb were detected in the brains of AD patients. Binding of $A\beta$ to FC γ RIIb activated cell stress and death pathways. In a mouse model of AD, depletion of FC γ RIIb ameliorated memory impairment.

This study demonstrates that FC γ RIIb plays a critical role in AD pathogenesis.

More information: Fc γ RIIb mediates amyloid- β neurotoxicity and memory impairment in Alzheimer's disease, *J Clin Invest*.

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