Understanding the molecular mechanisms underlying Alzheimer's disease

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The accumulation of amyloid-? (A?) 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? 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? binds to a cellular protein known as FC?RIIb.

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

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

More information: Fc?RIIb mediates amyloid-? neurotoxicity and memory impairment in Alzheimer's disease, *J Clin Invest*. doi:10.1172/JCI66827

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