Understanding the molecular mechanisms underlying Alzheimer's disease

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The accumulation of amyloid-β (Aβ) in the brains of Alzheimer's disease (AD) patients is known to be associated with memory loss and neuronal degeneration, but the mechanism of Aβ 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 Aβ binds to a cellular protein known as FCγRIIb.

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

This study demonstrates that FCγRIIb plays a critical role in AD pathogenesis.


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