

Alzheimer's disease research gains momentum

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Research conducted by Menzies Research Institute Tasmania, an institute of the University of Tasmania, is shedding new light on the biology of Alzheimer's disease, in particular a protein in the brain that is indirectly responsible for causing Alzheimer's disease.

Dementia is on the rise in Australia. There will be 75,000 [baby boomers](#) with dementia by 2020 and dementia will be the third largest source of health and residential care costs by 2030.

Approximately 278,700 Australians were living with dementia in 2012. Without a [medical breakthrough](#), the number of people with dementia in Australia is expected to be around 942,620 by 2050.

Tasmania had over 7,000 people with dementia in 2012; this is projected

to increase to 20,650 people by 2050.

A [brain protein](#) known as the [amyloid precursor protein](#) (APP) has previously been considered to be mostly bad, in the sense that APP is indirectly responsible for causing Alzheimer's disease.

Specifically, APP breaks down in the brain to produce a protein called Abeta, which is the direct cause of the disease. However, Menzies researchers have recently discovered that APP has a positive function.

Senior member of Menzies, Professor David Small, said the study discovered that APP is responsible for the growth of new neurons ([nerve cells](#)) in the brain.

"In addition to its role in causing Alzheimer's disease, APP may also be part of a solution to the disease," Professor Small said.

"We may be able to use APP to encourage the brain to replace damaged neurons.

"Dissecting out the yin and yang of APP's actions may be a key to the treatment of Alzheimer's disease as well as a number of other similar diseases.

Our recent findings already present us with several avenues for developing new treatment strategies," he said.

The study was recently published in the prestigious journal, *Journal of Biological Chemistry*.

Provided by University of Tasmania

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