

Scientists discover new Alzheimer's gene

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A new study by Dr. Steven Potkin reports that a gene called TOMM40 appears twice as often in people with Alzheimer's disease than in those without it. Photo by Daniel A. Anderson / University Communications

(PhysOrg.com) -- A UC Irvine study has found that a gene called TOMM40 appears twice as often in people with Alzheimer's disease than in those without it. Alzheimer's, for which there is no cure, is the leading cause of elderly dementia.

Having the harmful form of TOMM40 significantly increases one's susceptibility when other risk factors - such as having a gene called ApoE-4 - are present, the new study reports. People who have ApoE-4 are three to eight times more likely to develop Alzheimer's.

"The TOMM40 gene influences the ease with which molecules can get in and out of mitochondria, the energy production center and [stress](#) mediator of cells. TOMM40 also processes materials that form amyloid

plaque, a hallmark of Alzheimer's," said Dr. Steven Potkin, lead author of the study and UCI [psychiatry](#) & human behavior professor.

"With aging, the number and function of mitochondria decrease, accompanied by a parallel increased risk of developing Alzheimer's," he said. "This study points to the use of mitochondrial-based therapies for treating the disease."

The study will be published Aug. 7 in the journal *PLoS One*.

Supporting the UCI discovery is research presented recently at the International Conference on Alzheimer's Disease in Austria. Duke University scientists found that patients with TOMM40 developed Alzheimer's an average of seven years earlier than those without the gene.

Source: University of California - Irvine

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