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[\[NeuroScience\] Taiwan's New Finding Might Bring Hope for Brain Diseases](#)

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CNA – Focus Taiwan (2012/02/13) A research team in Taiwan has identified the brain cells responsible for the formation of long-term memory in fruit flies, which could pave the way for curing human brain diseases and enhancing memory, a member of the team said February 13.

After seven years of research, the team found that the formation of long-term memory requires the synthesis of new proteins in only a few cells in the brain of fruit flies, said the team leader, National Tsing Hua University Professor Ann-shyn CHIANG.

The team discovered that the long-term memory of fruit flies was impaired after inhibiting protein synthesis in two cells called the "dorsal-anterior-lateral (DAL) neurons," CHIANG said at a press conference.

Scientists had believed that memory, including long-term memory, was stored in the "mushroom bodies" of the brain but the team found that the long-term memory of fruit flies remained normal when protein synthesis was inhibited in the "mushroom bodies," CHIANG said.

The team discovered that several proteins in DAL neurons are necessary for the formation of long-term memory in fruit flies, CHIANG said.

"This discovery could help humans understand how protein and neurons form memory, and could be conducive to developing ways of curing human brain diseases and enhancing human memory," the professor said.

"It may even be applied to the development of intelligent computers," he added.

The team's findings have been published in the Feb. 10 edition of Science in the U.S.

Further Information:

[CNA – Focus Taiwan 2012/02/13](#)

[National Science Council International Cooperation Sci-Tech Newsbrief](#)

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