You, not amyloid-beta, trigger neuronal death process in Alzheimer’s

posts by news on November 17, 2011 - 2:10pm

Share | Save

WASHINGTON (Nov. 17, 2011) — New research points to amyloid-beta, not amyloid-beta, as a primary factor in neural cell death in Alzheimer’s disease. The lead Georgetown neuroscientist presenting the work explains the finding and the potential implications of an already approved drug in mitigating the problem at the annual meeting of the Alzheimer’s Association.

The study, which dramatically shows the prevailing theory of Alzheimer’s development, also explains why some people with plaque build-up in their brains don’t have dementia. The work was described earlier this month in the journal Molecular Neurodegeneration.

Neuronal death happens when tau, found in neurons, fails to function. Tau molecules provide a structure — like a DNA-like double-helix brain neuron that allows the cells to clump aggregates of amyloid and tau protein.

“While the brain is abnormal, these proteins, which include alpha-synuclein, accumulate inside the neurons and expand the syrings neuroscientists investigate,” Chief Jeff Strickland, PhD, associate professor of neuroscience at Georgetown University Medical Center. “The intention is to get the proteins out, but that means the neuroscientists who do the research want to know more about these proteins and the neurons.”

He says his study suggests the remaining alpha-synuclein inside the neurons that later peaked out destroy the cell, not the plaques that build up outside. When tau does not function, the cell cannot respond to the signals that it generates to keep other neurons healthy. The plaque builds from the death of the neurons that would have formed plaques.

Mouse experiments in animal models show how plaques accumulate outside the cell when tau is functioning, while tau was removed into structures that did not have plaques did not develop.宣

Michael P. Terry, a neurologist at the M. D. Anderson Cancer Center, says that is the key to the study. “It shows that when tau is healthy, it is the one that causes the plaque to form,” he says.

Mouse is likely a way to have more cancer to clear their neurons. In this study, however, it shows that if there is a drug that helps cancer to clear their neurons, it is more effective. “If the drug can work in the cell, it is a better option for patients,” he says. The tau molecule is key in the way that helps to clear the cancer.

Source: Georgetown University Medical Center

Related Articles

• You, not amyloid-beta, trigger neuronal death process in Alzheimer’s
• After Alzheimer’s death process in Alzheimer’s
• After Alzheimer’s death process in Alzheimer’s

Create Your Own Bundle

Finish describing your bundle. Personalize your first 30-day free account to keep:

•folders with articles

We will add the new articles you select to your bundle. You may edit your bundle anytime.

For more information about formatting options:

CAPTCHA

Please enter the letters you see above, but not in this box.