

# The power of cocoa polyphenols against neurodegenerative diseases

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Epidemiological studies have indicated that dietary habits and antioxidants from diet can influence the incidence of neurodegenerative disorders such as Alzheimer's and Parkinson's diseases. In the recent years, a number of papers have reported on neuroprotective effects of polyphenols in cell and animal models.

However, the majority of these studies have focused only on the anti-oxidant properties of these compounds and less on the mechanism/s of action at cellular and molecular levels. Now, a new study from the Sbarro Health Research Organization (SHRO, Center for Biotechnology, Temple University, Philadelphia PA USA), Lombardi Cancer Center , Georgetown University and the University of L'Aquila (Italy)) shows that cocoa polyphenols triggers neuroprotection by activating BDNF survival pathway, both on A $\beta$  plaque treated cells and on A $\beta$  oligomers treated cells, resulting in the counteraction of neurite dystrophy.

The findings, published in *Journal of Cellular Biochemistry*, may have important implications for prevention of cognitive impairment in elderly and in [neurodegenerative diseases](#) in counteracting disease's progression. "Our studies indicate for the first time the cocoa polyphenols do not act only as mere anti-oxidant but they, directly or indirectly, activate the BDNF survival pathway counteracting [neuronal death](#)" says Annamaria Cimini of the University of L'Aquila, lead author of the study.

"Understanding the preventive potential and the mechanism of action of functional food may provide a means to limit cognitive impairment

progression" says Antonio Giordano, founder and director of the Sbarro Institute for Cancer Research and [Molecular Medicine](#).

Provided by Sbarro Health Research

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