Medical Xpress

Nectandrin B in nutmeg found to significantly increase lifespan of fruit flies

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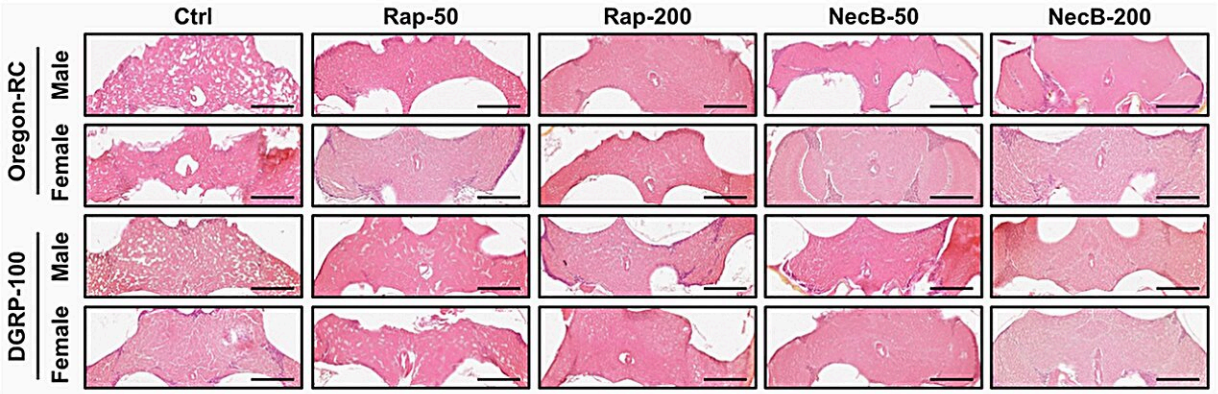

NecB inhibited age-related neurodegeneration in D. melanogaster's brain morphology. Credit: *Aging* (2023). DOI: 10.18632/aging.205234

A new research paper titled "Nectandrin B significantly increases the lifespan of Drosophila—Nectandrin B for longevity" has been published in *Aging*.

Phytochemicals are increasingly recognized in the field of healthy aging as potential therapeutics against various aging-related diseases. Nutmeg,

derived from the Myristica fragrans tree, is an example. Nutmeg has been extensively studied and proven to possess antioxidant properties that protect against aging and alleviate serious diseases such as cancer, heart disease, and liver disease. However, the specific active ingredient in nutmeg responsible for these health benefits has not been identified thus far.

In this new study, researchers Ji-Seon Ahn, Nasir Uddin Mahbub, Sura Kim, Han-Byeol Kim, Jong-Soon Choi, Hea-Jong Chung, and Seong-Tshool Hong from Korea Basic Science Institute, Jeonbuk National University Medical School and Chung-Ang University present evidence that Nectandrin B (NecB), a bioactive lignan compound isolated from nutmeg, significantly extended the lifespan of the fruit fly Drosophila melanogaster by as much as 42.6% compared to the control group.

In discussing their research, the authors write, "[...] we hypothesized that NecB might possess anti-aging efficacy."

The dramatic reduction of intracellular ROS levels by NecB captured the researchers' attention. NecB also improved age-related symptoms including locomotive deterioration, body weight gain, eye degeneration, and neurodegeneration in aging D. melanogaster. The researchers wrote that this result represents the most substantial improvement in lifespan observed in animal experiments to date, suggesting that NecB may hold promise as a potential therapeutic agent for promoting longevity and addressing age-related degeneration.

"We strongly believe that NecB urgently needs further attention and research, as we believe it has made a potential contribution to our understanding of the aging process as well as its application as a potential therapeutic agent for longevity and age-related [sic]," the researchers conclude.

More information: Ji-Seon Ahn et al, Nectandrin B significantly increases the lifespan of Drosophila—Nectandrin B for longevity, *Aging* (2023). DOI: 10.18632/aging.205234

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