

Herbal extract found to increase lifespan

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The herbal extract of a yellow-flowered mountain plant indigenous to the Arctic regions of Europe and Asia increased the lifespan of fruit fly populations, according to a University of California, Irvine study.

Flies that ate a diet rich with *Rhodiola rosea*, an herbal supplement long used for its purported stress-relief effects, lived on an average of 10 percent longer than fly groups that didn't eat the herb. Study results appear in the online version of *Rejuvenation Research*.

“Although this study does not present clinical evidence that *Rhodiola* can extend human life, the finding that it does extend the lifespan of a model organism, combined with its known health benefits in humans, make this herb a promising candidate for further anti-aging research,” said Mahtab Jafari, a professor of pharmaceutical sciences and study leader. “Our results reveal that *Rhodiola* is worthy of continued study, and we are now investigating why this herb works to increase lifespan.”

In their study, the UC Irvine researchers fed adult fruit fly populations diets supplemented at different dose levels with four herbs known for their anti-aging properties. The herbs were mixed into a yeast paste, which adult flies ate for the duration of their lives. Three of the herbs – known by their Chinese names as Lu Duo Wei, Bu Zhong Yi Qi Tang and San Zhi Pian – had no effect on fruit fly longevity, while *Rhodiola* was found to significantly reduce mortality. On average, *Rhodiola* increased survival 3.5 days in males and 3.2 days in females.

Rhodiola rosea, also known as the golden root, grows in cold climates at

high altitudes and has been used by Scandinavians and Russians for centuries for its anti-stress qualities. The herb is thought to have anti-oxidative properties and has been widely studied.

Soviet researchers have been studying Rhodiola since the 1940s on athletes and cosmonauts, finding that the herb boosts the body's response to stress. And earlier this year, a Nordic Journal of Psychiatry study on people with mild-to-moderate depression showed that patients taking a Rhodiola extract called SHR-5 reported fewer symptoms of depression than did those who took a placebo.

Jafari said she is evaluating the molecular mechanism of Rhodiola by measuring its impact on energy metabolism, oxidative stress and anti-oxidant defenses in fruit flies. She is also beginning studies in mice and in mouse and human cell cultures. These latter studies should help understand the benefits of Rhodiola seen in human trials.

Source: University of California - Irvine

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