

'Silver bullet' supplement could slow brain aging

January 4 2012, By Andrew Baulcomb

Professor David Rollo and a group of researchers at McMaster may have found a "silver bullet" when it comes to slowing the aging of the brain.

The team's latest paper documents a new dietary supplement that completely maintains [learning ability](#) in older mice.

"These findings are not just significant, they're remarkable," says Rollo.

The tests were conducted by Vadim Aksenov, a PhD candidate in the Rollo laboratory in McMaster's Department of Biology.

A complex nutritional supplement containing 30 ingredients, including vitamins such as B1, C, D and E, along with beta-carotene, ginseng, [green tea extract](#), cod liver oil and other acids and minerals, was used in the test. It was designed to offset five mechanisms associated with aging.

For mice aged 20-31 months (roughly equivalent to a 70-80-year-old human), those without the mixture in their diet showed no ability to learn new information. However, those who had taken the supplement displayed learning abilities equivalent to young mice, and more effectively completed the task.

The trials focused on a region of the brain associated with Alzheimer's disease.

Other findings revealed that brain mass was increased by up to 10 per

cent as a result of taking the supplement. The function of the cellular furnaces that provide [brain energy](#) (mitochondria) was also increased.

But what does it all mean for humans?

"This diet was our first try, so the door is just opening up," says Rollo. "Whether these results will translate to humans remains to be seen."

A major goal in anti-aging research involves the reduction of poisonous "[free radicals](#)" and their associated damage, while also maintaining mitochondrial function and [energy supply](#) later in life. The new supplement does both.

Unlike stand-alone vitamins, pills or anti-aging products, the combination of ingredients is far more effective in maintaining [brain function](#).

While human testing has yet to begin, Rollo is hopeful that the supplement may one day slow the progression of Alzheimer's, Parkinson's and other neurodegenerative diseases in older adults.

If human trials prove safe and successful, most of the aging population could access the ingredients at local health food stores.

Jiangang Long, Jiankang Liu, Henry Szechtman, Parul Khanna and Sarthak Matravadia were also involved in the study.

Provided by McMaster University

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