

Biotransformed blueberry juice fights fat and diabetes

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Juice extracted from North American lowbush blueberries, biotransformed with bacteria from the skin of the fruit, holds great promise as an anti-obesity and anti-diabetic agent. The study, published in the *International Journal of Obesity*, was conducted by researchers from the Université de Montréal, the Institut Armand-Frappier and the Université de Moncton who tested the effects of biotransformed juices compared to regular blueberry drinks on mice.

"Results of this study clearly show that biotransformed blueberry juice has strong anti-obesity and anti-diabetic potential," says senior author Pierre S. Haddad, a pharmacology professor at the Université de Montréal's Faculty of Medicine. "Biotransformed blueberry juice may represent a novel therapeutic agent, since it decreases hyperglycemia in diabetic mice and can protect young pre-diabetic mice from developing obesity and diabetes."

The scientists tested the effect of biotransformed blueberry juice on a group of mice prone to obesity, insulin resistance, diabetes and hypertension. Incorporating biotransformed blueberry juice into the water of mice reduced their food intake and their body weight. "These mice were an excellent model that closely resembles obesity and obesity-linked type 2 diabetes in humans," says Dr. Haddad, who is also director of the CIHR Team in Aboriginal Anti-Diabetic Medicines at the Université de Montréal.

Biotransformation of the blueberry juice was achieved with a new strain

of [bacteria](#) isolated from the blueberry flora, specifically called *Serratia vaccinii*, which increases the fruit's antioxidant effects. "The identification of the active compounds in biotransformed blueberry juice may result in the discovery of promising new antiobesity and antidiabetic molecules," says Dr. Haddad.

As for the impact of blueberry products on diabetes, says Tri Vuong, lead author and recent PhD graduate from the Université de Montréal's Department of Pharmacology: "Consumption of fermented blueberry juice gradually and significantly reduced high blood glucose levels in diabetic mice. After three days, our mice subjects reduced their glycemia levels by 35 percent."

More information: The article "Antiobesity and antidiabetic effects of biotransformed blueberry juice in KKAY mice," was published in the *International Journal of Obesity*. www.nature.com/ijo/journal/va0...ull/ijo2009149a.html

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