

# Amazonian fruit prevents obesity in overfed mice

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An extract of camu camu—a fruit native to the Amazon—prevents obesity in mice fed a diet rich in sugar and fat, say researchers at Université Laval and the Quebec Heart and Lung Institute Research Centre. The discovery, which was recently published in the scientific journal *Gut*, suggests that camu camu phytochemicals could play a leading role in the fight against obesity and metabolic disease.

The chemical composition of camu camu is unique in that it contains 20 to 30 times more vitamin C than kiwis and 5 times more polyphenols than blackberries. "We demonstrated the beneficial health effects of polyphenol-rich berries in previous studies," explains André Marette, a professor at Université Laval's Faculty of Medicine and principal investigator for the study. "That's what gave us the idea to test the effects of camu camu on obesity and metabolic disease."

The researchers fed two groups of [mice](#) a diet rich in sugar and fat for eight weeks. Half the mice were given camu camu extract each day. At the end of the experiment, weight gain in camu camu-treated mice was 50% lower than that observed in control mice and was similar to the weight gain of mice consuming a low-sugar, low-fat diet. The researchers believe the anti-obesity [effect](#) of camu camu could be explained by an increase in resting metabolism in the mice that received the extract.

The researchers also found that camu camu improved glucose tolerance and insulin sensitivity and reduced the concentration of blood endotoxins

and metabolic inflammation. "All these changes were accompanied by a reshaping of the intestinal microbiota, including a blooming of *A. muciniphila* and a significant reduction in *Lactobacillus* bacteria," explains Dr. Marette. Transplantation of intestinal microbiota from the camu camu group to germ-free mice lacking an intestinal microbiota temporarily reproduced similar metabolic effects. "Camu camu thus exerts its positive metabolic effects at least in part through the modulation of the gut microbiota," concludes the researcher.

André Marette now wants to examine whether camu camu produces the same metabolic effects in humans. The toxicity of the fruit extract should not pose a problem since it is already commercialized to combat fatigue and stress and stimulate the immune system.

In addition to André Marette, the study's co-authors are Fernando Anhô, Renato Nachbar, Thibault Varin, Jocelyn Trottier, Stéphanie Dudonné, Mélanie Le Barz, Perrine Feutry, Geneviève Pilon, Olivier Barbier, Yves Desjardins, and Denis Roy.

**More information:** Fernando F Anhô et al, Treatment with camu camu (*Myrciaria dubia*) prevents obesity by altering the gut microbiota and increasing energy expenditure in diet-induced obese mice, *Gut* (2018). [DOI: 10.1136/gutjnl-2017-315565](https://doi.org/10.1136/gutjnl-2017-315565)

Provided by Laval University

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