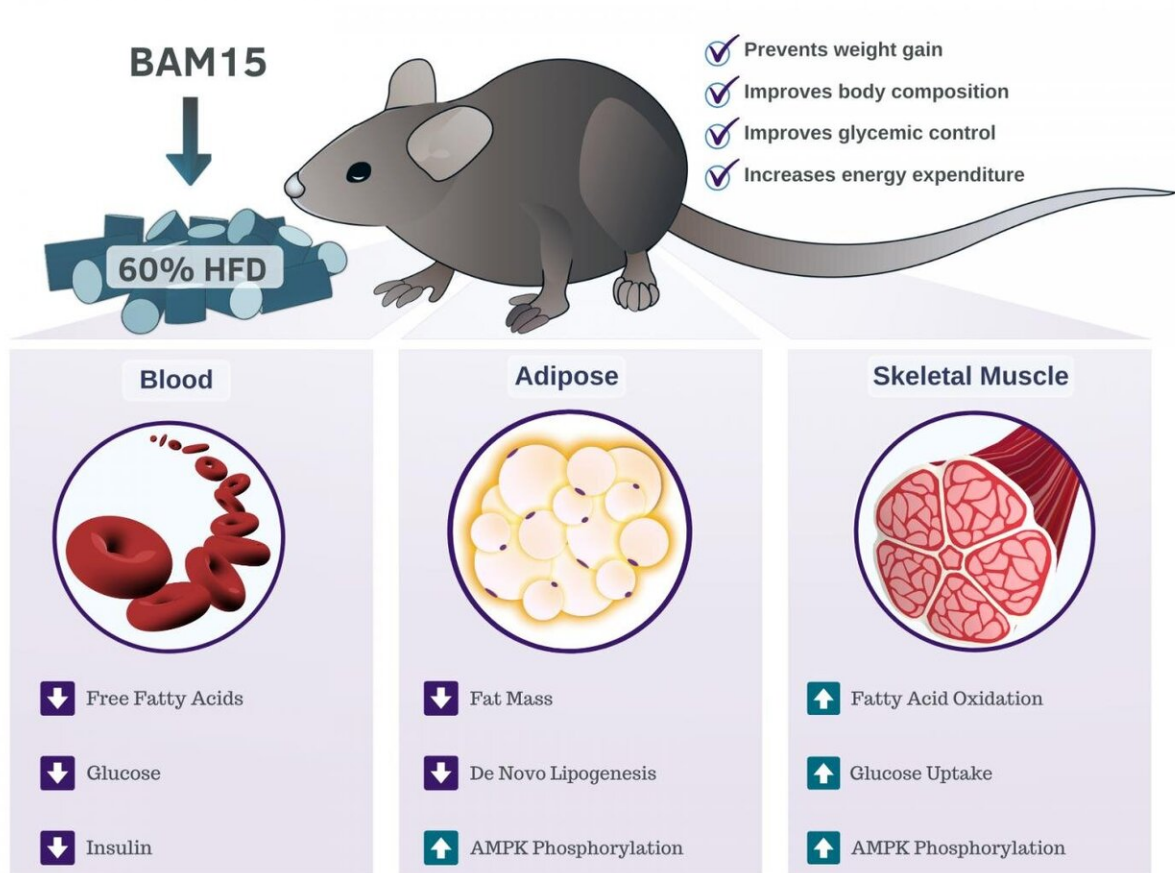


Study discovers BAM15 as a potential treatment for obesity

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BAM15 prevents weight gain, fat buildup and reduces blood sugar. Credit: Kathryn Pergola

A new study offers the first evidence that a protein named BAM15 acts as an energy uncoupler and could be an effective drug for treating obesity and related diseases.

Obesity affects more than 650 million people worldwide and drives a number of dangerous health conditions, including type 2 diabetes, [heart disease](#) and more than a dozen deadly cancers. Global spending to treat [obesity](#) and obesity-related illnesses amounts to well above \$150 billion a year.

"Despite this, only a handful of medications are currently FDA-approved for obesity treatment, and the people who take these drugs rarely achieve long-term weight loss," said John Kirwan, Ph.D., Executive Director of the Pennington Biomedical Research Center in Baton Rouge, Louisiana. "Halting the obesity epidemic requires new, more effective medications. This research represents a very promising step in the discovery process. We hope that in the not-too-distant future, BAM15 or related compounds will advance to clinical drug development and become a viable treatment option for patients with obesity."

BAM15 differs from the existing weight-management medications, which largely work by reducing the amount of food a person eats or the calories their bodies absorb. BAM15 works by making the mitochondria, the power plants of the cell, less efficient. The result is that the mitochondria burn more energy.

Researchers believe BAM15 could be used to treat a number of health conditions including diabetes, [fatty liver disease](#) and some forms of cancer.

In the new study, Pennington Biomedical scientists show for the first time that mice given BAM15 are resistant to weight gain by burning more calories than their untreated counterparts. Other benefits of

BAM15 include:

- Reducing [blood sugar](#) and insulin levels, regardless of weight loss.
- Improving sensitivity of skeletal muscle to the effects of insulin. Skeletal muscle insulin resistance is a primary risk factor for the development of type 2 diabetes.
- Reducing [fat accumulation](#) overall by restricting fat from building up in the liver, kidney, and blood. Accumulating too much fat in one's liver, kidneys, or blood can damage the organs and lead to heart disease.

The study "BAM15 Mediated Mitochondrial Uncoupling Protects Against Obesity and Improves Glycemic Control" was published in the journal *EMBO Molecular Medicine*.

More information: *EMBO Molecular Medicine* (2020). [DOI: 10.15252/emmm.202012088](https://doi.org/10.15252/emmm.202012088)

Provided by Pennington Biomedical Research Center

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