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MICROBIOTA TREATMENT OF OBESITY & TYPE-2 DIABETES

BIOTECHNOLOGY

Bacteria that inhibit the gut's absorption of fat.

TECHNOLOGY TYPE
Genomics

STAGE OF DEVELOPMENT
Working towards isolating the molecules produced by Clostridia that impact weight.

IP PROTECTION
Provisional patent filed.

LEARN MORE
Reference Number: U-6403

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TECHNOLOGY SUMMARY
There are growing numbers of obesity, type 2 diabetes, and metabolic disorders, but few effective treatments exist.

A University of Utah researcher has identified a specific class of bacteria from the gut that prevents mice from becoming obese. These microbes may similarly control weight in people. The beneficial bacteria, called Clostridia, are part of the gut microbiome. Healthy mice have plenty of Clostridia, but those with an impaired immune system lose these microbes from their gut as they age. Even when fed a healthy diet, the mice inevitably become obese. Administering the Clostridia bacteria to the animals allowed them to stay slim. One or more molecules produced by Clostridia prevented the gut from absorbing fat. These molecules will be isolated and should enable the development of therapeutics for obesity and type-2 diabetes.

FEATURES AND BENEFITS
- Targeted therapy.

RECENT PUBLICATIONS
Petersen, C., Bell, R., Klag, K. A., Lee, S., Soto, R., Ghazaryan, A., . . . Round, J. L. (2019). T cell–mediated regulation of the microbiota protects against obesity. Science, 365(6451). doi: 10.1126/science.aat9351

INVENTOR PROFILE
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