

DREADD-ing your next meal

March 1 2011

In the face of the growing obesity epidemic, much research has focused on the neuronal control of feeding behavior. Agouti-related protein (AgRP) neurons express three proteins that have been implicated in changes in energy balance, but the studies linking AgRP neurons to feeding behavior have produced mixed results.

To directly analyze the role of AgRP [neurons](#), Bradford Lowell and colleagues, at Beth Israel Deaconess Medical Center in Boston, used DREADD technology (designer receptors exclusively activated by designer drugs) to specifically control the activation and deactivation of this population in mice. They found that chronic stimulation of AgRP neurons induced weight gain related to an increase in food intake.

Similarly, inhibition of this neuronal population inhibited [food intake](#). Furthermore, stimulation of AgRP neurons induced an intense, unrelenting food seeking behavior. The researchers believe that this study demonstrates that AgRP neurons are critical regulators of a behavioral program that drives individuals to find and consume food.

More information: View this article at:
[www.jci.org/articles/view/4622 ... 09789853ca520550840b](http://www.jci.org/articles/view/4622...09789853ca520550840b)

Provided by Journal of Clinical Investigation

Citation: DREADD-ing your next meal (2011, March 1) retrieved 4 May 2024 from

<https://medicalxpress.com/news/2011-03-dreadd-ing-meal.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.