

# How to lose weight and not go hungry: Researcher develops drug that mimics feeling of 'fullness'

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Millions of people the world over suffer today from obesity, yet there is no “magic bullet” that has yet provided a universally accepted solution. However, a young researcher at the Hebrew University of Jerusalem feels he has come up with a practical weight loss solution for the obese person without his having to feel hungry.

For this development, Yaniv Linde, a 32-year-old Ph.D. student of Prof. Chaim Gilon in the Department of Organic Chemistry at the Hebrew University, has been named a first place winner of a Kaye Innovation Award, which was presented today (June 6) during the 70th meeting of the Hebrew University Board of Governors.

Linde and his associates have developed a compound that mimics the activity of the naturally occurring hormone called aMSH. This hormone is naturally excreted during eating and binds to a receptor in the brain called MC4R. When this “communication” occurs on a substantial level, the brain sends out a signal that one feels “full.”

The young Hebrew university researchers developed a novel method for synthesizing a peptide (a peptide is a compound linking two or more amino acids) which can serve as an analog to the naturally occurring aMSH hormone. They were able to demonstrate that their peptide, which they call BL-3020, displayed good metabolic stability to intestinal enzymes when swallowed, and that it was able to cross the intestinal wall

and gain access into the blood stream. Once in the blood, it could make its way to the MC4R receptor and “close the circuit” to send out the “full” signal.

The result is that a person seriously wishing to overcome obesity could take this compound orally in order to curb his appetite, thus leading to natural weight loss. In experiments with mice, it was shown that a single oral administration of BL-3020 led to reduced consumption over a period of 24 hours. Over a 12-day period of daily dosages, the mice weighed 40 percent less than the average for mice of their size and age who were not being given the compound.

The peptide has been patented in Europe and the U.S., and a commercial firm, Bioline RX Ltd. of Jerusalem has purchased development rights from Yissum, the Hebrew University’s technology transfer company, and is currently working towards creating a commercial anti-obesity drug.

Source: The Hebrew University of Jerusalem

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