

A Possible Safer Prescription for People with Obesity

By YAN Fusheng (Staff Reporter)

Scientists from the Beijing Institutes of Life Science of the Chinese Academy of Sciences have discovered a promising solution for obesity in the form of a 9-amino-acid peptide called D3. This new development was published in the esteemed journal *Gut* on July 8.

D3 is derived from human defensins, cationic antimicrobial peptides abundant in the intestine mucus and combat bacterial infections by piercing the bacterial membrane.

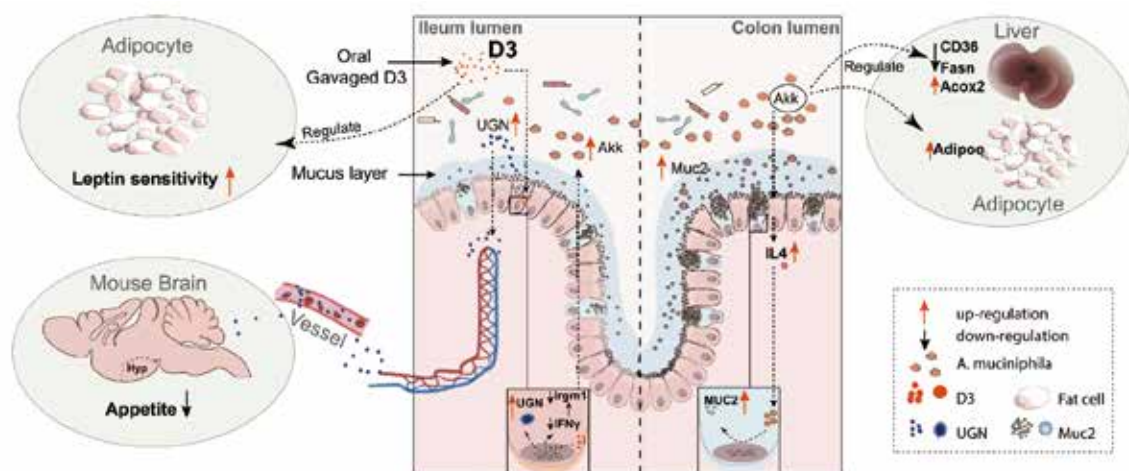
The researchers found that D3 works by increasing the production of hormones that signal fullness and suppress hunger. It also boosts gut bacteria that combat obesity by reducing the amount of fat absorbed by the body.

In the study, D3 was tested on mice, rats, and

monkeys and was found to reduce their weight by up to 12% in just 8 weeks without any significant side effects. This finding makes D3 a safer alternative to many FDA-approved drugs for treating obesity, which often come with unwanted side effects such as nausea and vomiting.

Furthermore, the study suggests that D3 can enhance the abundance of the weight-loss gut bacteria, *Akkermansia muciniphila*, by 100 times. This bacterium is thought to play a crucial role in maintaining lean body mass.

In conclusion, the study presents D3 as a potential treatment for obesity and related metabolic disorders and highlights the need for further research. The researchers are eager to start clinical trials on humans as early as next year and hope to bring this promising solution to the public.



Oral administration of D3, a 9-amino-acid peptide, can counteract diet-induced obesity in mice, rats and monkeys. It reduces appetite and boosts healthy gut bacteria that influence lipid absorption and metabolism within the liver, which leads to leanness. (Credit: *Gut*)

Reference

Li, Z., Zhang, B., Wang, N., Zuo, Z., Wei, H., & Zhao, F. (2022). A novel peptide protects against diet-induced obesity by suppressing appetite and modulating the gut microbiota. *Gut*. doi:10.1136/gutjnl-2022-328035