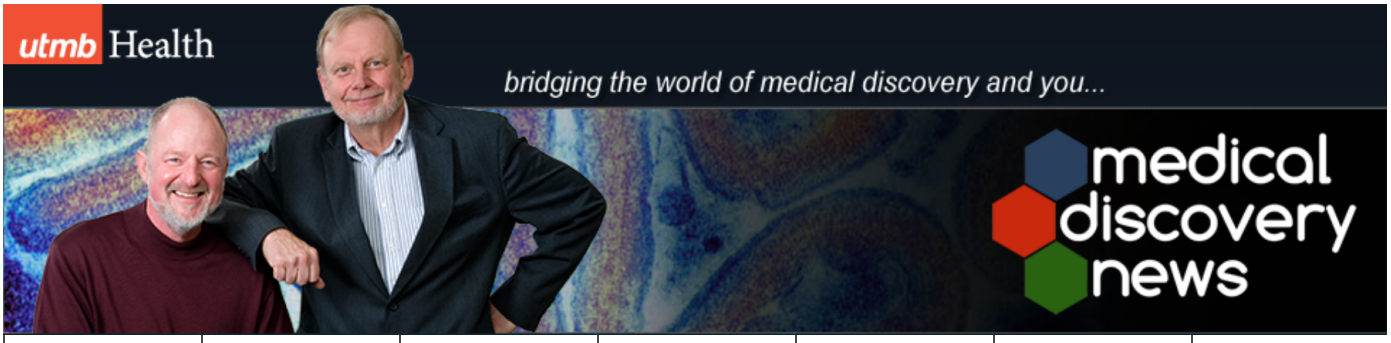

The Impossible Problem - Weight Loss

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By now, eighty percent of you who made New Yearï¿½s resolutions to lose weight have failed. Thatï¿½s discouraging, but predictable given our stress and food temptations which are everywhere, compounded by our pitiful willpower.Well, thereï¿½s a new weight loss approach being studied that shrinks fat even as you eat the same amount of food.

Developed by researchers at the University of Texas Medical Branch, this drug has been effective on studies with mice. The drug is a chemical that targets a key protein called NNMT in fat cells. This protein becomes overexpressed as fat cells grow larger which slows their metabolism and leads to more fat being stored. The new drug blocks this protein so that fat is burned at a higher rate.

In obese mice, ten days on the drug dropped their weight seven percent and shrank their fat tissue mass and fat cells by thirty percent. Their cholesterol also lowered and this happened even while the mice ate the same amount of food.

Whatï¿½s intriguing about this work is that the drug was designed based on its ability to interact with the chemically active parts of the NNMT protein in the fat cell.This approach is called structure-guided design. It identifies drugs that have the correct shape and properties to complement an active part of a protein.

These drugs are then assessed for their ability to treat certain diseases and then tested in animals. Researchers are increasingly using this approach in their studies. If NNMT works on obesity, thatï¿½s a third of our country it has the potential to impact, improving the health of many who may be hindered by their weight.

For more information...

UTMB develops promising anti-obesity drug that shrinks fat without suppressing appetite
Given the ever-increasing obesity epidemic, researchers from The University of Texas Medical Branch at Galveston have discovered a promising developing drug that has been shown to selectively shrink excess fat by increasing fat cell metabolism. The drug significantly reduces body weight and blood cholesterol levels without lowering food intake in obese mice, according to a recent study published in Biochemical Pharmacology...

Selective and membrane-permeable small molecule inhibitors of nicotinamide N-methyltransferase reverse high fat diet-induced obesity in mice
There is a critical need for new mechanism-of-action drugs that reduce the burden of obesity and associated chronic metabolic comorbidities. A potentially novel target to treat obesity and type 2 diabetes is nicotinamide-N-methyltransferase (NNMT), a cytosolic enzyme with newly identified roles in cellular metabolism and energy homeostasis...