Scientists pinpoint protein link to fat storage

September 17 2009

A protein found present in all cells in the body could help scientists better understand how we store fat.

Researchers at the University of Edinburgh have found that the protein invadolysin, which is essential for healthy cell division, is present in lipid droplets - the parts of cells used to store fat.

The study also found that lower levels of invadolysin were linked to reduced amounts of fat deposits.

The findings, published in the Journal of Cell Science, could ultimately help scientists to better understand obesity-related complications, which can include diabetes, blood clotting and heart disease.

Professor Margarete Heck, at the University's Centre for Cardiovascular Science, said: "The presence of this protein in lipid droplets may suggest that it has a role in obesity. What we would like to understand is whether its presence is related to obesity, and if so, whether the protein's activity aggravates obesity and its consequences. Understanding its role will help us to better understand how the body stores fat."

Invadolysin was first identified by Professor Heck's laboratory in fruit flies. The latest study looked at the protein in human cells, pinpointing its presence in the part of cells used to store fat.

The researchers also found that when invadolysin was absent in fruit fly larvae, fat storage was impaired.

Further studies will look at how the protein affects metabolism to better understand its role in obesity-related disorders.

Source: University of Edinburgh