

Protein function may hold key to cures

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(PhysOrg.com) -- Not exactly the most well-known protein in the medical world, but they could become very important says University of Alberta biochemist Dave Brindley.

These recently discovered proteins, by Brindley and an American colleague, are what he calls "master regulators." There are four lipins in mammals and two of them control fat production in the body.

"If there is an absence of the lipin then you have no fat tissue at all. If you have too many lipin proteins you become obese," said Brindley, who added that gaining control of these proteins could mean an end to the obesity epidemic.

Diabetes and insulin resistance is characterized by high blood triglycerides and Brindley's research has proven that lipins are involved in stimulating the liver to secrete fat into the blood. This discovery could be the start of something huge, he says, as the influence of lipins on the body could help develop a treatment or even a cure for one of society's major killers: metabolic syndrome. This syndrome includes diabetes, obesity, high blood fats and high blood pressure.

"Nobody is going to cure anything in the near future; these things take time," said Brindley. But, he adds this is an exciting time because scientists now know lipins are involved in the expression, or causes, of metabolic syndrome.

The research is still in its early stages; the first discoveries of lipins'

functions was only two years ago. However long the research takes, though, Brindley plans to be along for the ride.

"You never know with research; you never know what you're going to discover; you never know how long it's going to take," said Brindley.

"What we need to do is create therapies that would influence metabolic syndrome. I would love to get involved in developing activators or inhibitors for the different lipins."

Provided by University of Alberta

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