

Protein key to diabetes study

CATHY O'LEARY
MEDICAL EDITOR

WA researchers will use the world-renowned Busselton Health Study to see if certain proteins in the blood could be used to diagnose people at risk of diabetes.

The work will centre on proteomics, an emerging field of science that uses information about how proteins regulate the body's cells.

Researchers suspect that particular proteins "switch on" type 2 diabetes

and could become new biomarkers to help pick up those at high risk, particularly those facing both diabetes and obesity, an increasingly common condition dubbed diabetes.

WA's Centre for Food and Genomic Medicine, based at the WA Institute for Medical Research, is using protein analysis by the research consortium Proteomics International to test blood samples from people with diabetes.

Proteomics managing director Richard Lipscombe said advanced computer technology was being used

to search for biomarkers that could give clues to how diabetes might be switched on by proteins.

The research aimed to find protein "signature" information from the blood of people with diabetes to compare with samples from other people.

"By using samples from the Busselton Health Study and the latest technology of proteomics, we're analysing the function of a cell to find out how and why things switch on or switch off, to uncover what might trigger diabetes," Dr Lipscombe said.

"We have access to a large number of blood samples with diabetes and are able to compare and match thousands of proteins to look for signals which might identify those at high risk.

"If we can pinpoint what triggers diabetes we would have a huge advantage in being able to identify those most likely to develop the condition, giving them a head start to help avoid its onset or serious complications.

"Proteomics looks closely at proteins responsible for how each cell

operates and functions, so it has huge potential to unlock clues to hundreds of health conditions which it can do on an industrial scale not seen before."

An estimated 275 Australians develop diabetes every day, and type 2 diabetes is projected to overtake cancer and heart disease as the biggest drain on health services by 2023.

The CFGM will host a free public seminar on August 6 to discuss the latest research into diabetes and obesity. For more information, phone 9224 0338.