



Mining the body for protein mother lode

Kim Macdonald

Nedlands-based Proteomics International Laboratories is using the emerging field of protein analysis to test drugs and to detect disease — sometimes before it appears.

In 2009, Proteomics, a finalist in the export category of the Industry and Export Awards, was the first laboratory in the world to get ISO proteomics accreditation and has since gone on to test new protein-based drugs from a dozen countries.

Co-founder Richard Lipscombe said there was a strong demand for the service, with seven of the top-10 selling drugs last year using a protein-base, but only a handful of companies

involved in analysis of these essential macromolecules.

“There are a lot of drugs out there that are protein-based drugs and a lot of these drugs are now coming off patent and they are making generic versions of them,” Dr Lipscombe said. “We specialise in testing those generic versions to make sure those molecules are the right shape and have the right profile.”

Dr Lipscombe said his team was currently involved in using its technology to map the proteins in key parts of the body in a similar — albeit much less comprehensive — way to the Human Genome Project.

He said the mapping had led to its cutting-edge, patent-pending diagnostic test which can predict which diabetic patients will

develop kidney disease.

“The proteomics approach hasn’t been done for diabetic kidney disease before and hasn’t really been used for any diseases to create new tests,” he said.

The firm is often the first port-of-call in testing drugs, which are then passed on for human testing at companies such as the neighbouring Linear Clinical, which is also a finalist in the 2015 awards.

Dr Lipscombe said WA’s medical research sector was similar to the mining sector, but struggled to achieve the same level of community awareness.

“We explore different things, in our case it’s the human body, and we try to find things that are of value,” he explained.

“In the same way miners can detect and strike gold, we can use diagnostic tests.

“So there is a similar risk profile in terms of discovery and striking the mother lode.”



In the same way miners detect and strike gold, we use diagnostic tests.

Richard Lipscombe



Detectives: Proteomics' Pearl Tan, Andreja Livk and Richard Lipscombe predict kidney disease by analysing proteins. Picture: Michael Wilson