Question on Notice

No. 1223

Asked on 15 September 2009

MS NELSON-CARR ASKED THE TREASURER AND MINISTER FOR EMPLOYMENT AND ECONOMIC DEVELOPMENT (MR FRASER)—

Will the Minister inform the House on the Government's investment in the life-saving biomarker technology at James Cook University?

ANSWER:

On Tuesday 8 September 2009, I announced that funding of $931,500 from the National and International Research Alliances Program (NIRAP), which is part of the Smart Futures Fund, had been granted to James Cook University for the project AAA Biomarker Alliance.

James Cook University will collaborate with project partners the University of Adelaide, the University of Western Australia, the University of Technology Sydney and the University of Queensland to develop biomarkers to be used in novel screening and monitoring tests for abdominal aortic aneurysm (AAA) by capitalising on an alliance of world class researchers. This cutting edge R&D will position North Queensland as a leader in the fields of biomarkers and AAA prognosis and diagnosis. The project will leverage an additional $1,578,998 in funding from James Cook University and its partners.

AAA occurs when the large blood vessel that supplies the abdomen, pelvis and legs becomes abnormally large and can rupture. Most of these aneurysms are "silent", meaning they enlarge slowly without any symptoms, and the danger is that they will burst, causing life-threatening bleeding.

The causes of AAA are poorly understood. There are currently no medical therapies to slow their progression, nor are there blood tests to indicate their presence or likelihood. Detection is only possible via ultrasound or more advanced imaging, which is not always practical or reliable. There is an urgent need to more clearly define AAA based on the biology of the weakening process rather than simply by aortic diameter defined by imaging. Such an advance would allow easier detection of those aneurysms with the propensity to enlarge and rupture, as well as better ways of monitoring the condition after surgical treatment.

A biomarker is a biological molecule found in blood, other body fluids, or tissues that is a sign of a normal or abnormal process. The lack of a definitive AAA diagnostic tool highlights the critical need to develop sensitive and specific diagnostic, predictive and condition outcome biomarkers for use in non-invasive screening procedures. Researchers will generate a comprehensive list of the specific changes in the composition of biological molecules (or molecular signature) during the process of the

weakening of the large blood vessel, with the intention of identifying specific AAA diagnostic and prognostic biomarkers.

This project will also assess all identified AAA biomarkers to ascertain which biomarkers are feasible for commercial development.

The successful identification of AAA biomarkers as a result of this project will benefit patients by allowing:

1) Identification of patients at risk of developing AAA, resulting in the implementation of preventative measures.
2) Earlier, definitive detection of AAA in patients when the disease is more manageable and outcomes significantly more favourable.
3) Increased ability to monitor the condition leading to more accurate prediction of treatment success for improved patient care and outcomes.

This project is one of five supported by the last round of the National and International Research Alliances Program which aims to further enhance Queensland's national and international research alliances and support the delivery of research, development and innovation outcomes that will benefit Queensland.