



Speech by

Hon. PETER BEATTIE

MEMBER FOR BRISBANE CENTRAL

Hansard Wednesday, 11 October 2006

MINISTERIAL STATEMENT

Nuclear Magnetic Resonance Network

Hon. PD BEATTIE (Brisbane Central—ALP) (Premier and Minister for Trade) (9.51 am): Last month I launched one of the world's most powerful magnetic instruments to help pave the way for research and development into the next wave of life-saving drugs.

The 900-megahertz nuclear magnetic resonance high-resolution spectrometer is the largest machine of its kind in the Southern Hemisphere. It is the centrepiece of a new \$17 million Queensland Nuclear Magnetic Resonance Network based at the University of Queensland. This new facility will help make the Smart State a key centre for biodiscovery and drug design. I seek leave to have incorporated in *Hansard* the remainder of my ministerial statement.

Leave granted.

Nuclear magnetic resonance is a key technology for determining the structure of molecules and for visualising the anatomy of living tissue and microscopic structure.

It has helped revolutionise chemistry, physics, diagnostic medicine and structural biology.

It will enable scientists in Queensland and across our region to pioneer pharmaceuticals that require a detailed understanding of large molecules and target diseases such as cancer, heart disease and inflammatory disease.

It will also help attract top international researchers in fields such as drug design, biodiscovery, neuroscience and materials science.

Already, UQ researchers are working with this technology to develop a treatment for multiple sclerosis and a pain killer that could be 1000 times more powerful than morphine.

The State Government contributed \$5 million through the Smart State Research Facilities Fund to help establish the network.

Other partners included the University of Queensland, QUT, Griffith University, James Cook University, Central Queensland University, the University of the Sunshine Coast, the University of Auckland and the Massey University in New Zealand.

This funding has been used to help purchase three systems—the 900MHz high-resolution machine for biomolecular studies; a 700MHz wide-bore micro-imaging system for small animal neuroimaging and a 600MHz system for use in biodiscovery.

These powerful machines have the potential to take our scientists into a whole new realm of discovery.

For example the network operates under the same principles as magnetic resonance imaging which many patients experience as part of modern medical procedures.

But it's powered by a superconductor and has a magnetic field 400,000 times stronger than the Earth's magnetic field.

The machine is so strong it has the power to "wipe" information from credit cards, to stop watches, and also to interfere with heart pacemakers.

The new facility will provide Queensland with a competitive edge in biotechnology research and development unparalleled in Australia.

This type of facility provides not only the technological solutions for our future, but also vital, knowledge-intensive jobs.

It also means that our best research brains do not have to go interstate or overseas to conduct top level research and we can attract top researchers from overseas, who will come not just for our lifestyle but because of what this state-of-the-art facility offers.