Brisbane, Nov 11, 2013

As the first Australian to win the Tour de France, cycling champion Cadel Evans has already pedalled his way into our hearts. Now Evans is taking part in world-leading cardiopulmonary research - by pedalling inside an MRI scanner.

Christian Hamilton-Craig said: “This advanced MRI scanning provides us with incredibly detailed images of the heart, and does so in the shortest possible time, even while the patient is still exercising inside the scanner.”

While pedalling inside an MRI machine, Cadel will show the research team how the heart and lungs of an elite athlete operate under exercise conditions, thus providing a benchmark for researchers.

The aim of the research study, being done at the Richard Slaughter Centre of Excellence in Cardiac MRI at The Prince Charles Hospital, is to better understand how the heart and lungs operate under exercise conditions, which researchers believe will lead to improved treatment for patients with heart and lung disease.

The MRI will capture images at ultra-fast speed of Cadel’s heart as he is pedalling inside the MRI machine.

“Through my work with Siemens, if I can raise awareness about how technology can better understand heart and lung disease and lead to improved treatments, then I know I’m helping reduce the strain on our hospitals for a more sustainable healthcare system,” Cadel, 36, said.

“Since becoming a dad I’m very conscious about my health, and of ensuring that Australia has the best quality healthcare system for the future.

“Heart Foundation of Australia figures show that one person dies from heart or lung disease every 24 minutes - about the same time it takes me to complete a short time trial.

“I hope this technology and research will ultimately save lives.”

The Prince Charles Hospital is one of few such facilities in the world undertaking research of this type.

According to Associate Professor Christian Hamilton-Craig, symptoms mostly occur when doing exercise, rather than when the heart and lungs are at rest.

“Exercise research on patients with heart and lung disease is being achieved through Siemens’ leadership in MRI technology, teamed with our hospital’s clinical and research expertise in the cardiopulmonary arena,” he said.

“The results are likely to change the way we diagnose and treat people with heart and lung disease. Scans will help inform us when the patient may need open heart surgery, a heart or lung transplant, or whether medications are working for the patient.

“By combining the very latest imaging technology, patient comfort and new imaging research software, this research provides the most detailed cardiac images in the shortest time.”

Siemens Vice President Imaging and Clinical Products, David Brown said The Prince Charles Hospital is the only hospital in Australia with this ground breaking MR research software, special expertise and advanced technological capability.

“This is the only facility in Australia where the technology can capture clear images of the heart at ultra-fast speed while exercising - similar to using a camera in ‘sports-mode’,” Mr Brown said.

“Through our research partnership, the hospital is using the latest Siemens software which delivers high speed imaging. The patient-friendly design of our MRI scanner means there is enough room for a patient to pedal while being scanned.

Associate Professor Andre La Gerche (of St Vincent’s Hospital, Melbourne), whose international cardiac research is centred on athletes, said that using elite athletes like Cadel Evans for exercise-MRI research would allow special insights into how the heart and lungs work.

“By understanding how the heart and lungs operate when they are working really well in athletes, we can understand what’s not working correctly in patients with heart and lung disease,” Dr La Gerche said.