World-standard MRI imaging and research

CAMRI – the Centre for Advanced MRI

The University of Auckland is home to an imaging centre dedicated to high-level MRI research and clinical services.

CAMRI is the first MRI centre of its kind in New Zealand to focus on high-end clinical and research work as well as medical training and clinical imaging.

Established in 2004, CAMRI provides access to the latest technology from the world’s leading supplier of MRI equipment for advanced research and clinical protocols.

MRI is a prime diagnostic tool and is now playing a crucial role in imaging of the heart, brain, blood vessels, musculoskeletal system and abdomen for both research and clinical needs. Being a research facility, CAMRI performs scans to much higher technical specifications and tolerances than standard installations.

CAMRI is led by Associate Professor Brett Cowan, who is renowned internationally for his work in cardiac imaging. “MRI is an essential part of medical research and teaching. The Nobel Prize for Medicine in 2003 was for MRI, demonstrating the importance of the technology, which is unrivalled for producing high quality images of the inside of the human body,” says Associate Professor Cowan.

“What makes MRI technology so important is its extreme versatility. Not only can it provide detailed anatomical images, but it can also provide information such as where the brain is thinking and provide accurate measures of blood flow”.

CAMRI also performs a range of veterinary imaging for pets with New Zealand’s only veterinary radiologist, scans for engineering projects, and other imaging which has included a mummified moa specimen, fruit and insects. CAMRI has the expertise to ensure the technology delivers cost effective solutions in areas not traditionally associated with medical imaging.

The Centre is also a base for University researchers with their international experience in conducting large-scale international clinical trials and expertise in MRI research. It is involved in training medical and postgraduate students, and delivers research and imaging expertise to the broader health sector through district health boards and to other government organisations. CAMRI is also involved in local and international clinical trials.

CAMRI is the most important international site for developments in Siemens cardiovascular program. CAMRI employs a PhD physicist, a specialist to program the machine for novel applications and has access to extensive image processing.

CAMRI specialises in cardiac, paediatric, neurological, abdominal and breast MRI. The Centre is internationally recognised for its specialist expertise in cardiac MRI research. It is also involved in New Zealand and international research and clinical trials.
CAMRI undertakes both clinical MRI imaging and research projects

Imaging services
CAMRI specialises in cardiac, paediatric, neurological, abdominal and breast MRI. It also provides specialised expertise for applications outside traditional medical imaging areas.

Cardiac: CAMRI works with all areas of the heart but with a specific interest in congenital heart disease, ventricular function for cardiomyopathy and viability, pericardial disease and flow imaging.

Paediatric: CAMRI is one of the few MRI facilities in New Zealand fully equipped with general anaesthesia and resuscitation equipment to enable children to be scanned.

Neurological: Surgical planning for brain lesions can often be assisted with specialist brain sequences, including functional MRI.

Breast: CAMRI offers high resolution evaluation of both breasts simultaneously and surrounding soft tissues of the chest wall and axillary lymph nodes can also be evaluated.

Research
CAMRI’s research includes a range of international collaborations.

Liver lesions: CAMRI is part of an international multi-centre trial for Bayer. MRI scans and specific liver contrast agents enable a more accurate diagnosis for liver lesions.

Foetal anaemia: CAMRI provides scans for this collaboration with Oregon Health and Science University (USA) which is organised through the Liggins Institute.

Huntingdon’s: CAMRI collaborates with Harvard University and Massachusetts General Hospital (USA) in a longitudinal study where the Centre contributes scans for analysis.

Stroke research
CAMRI scans patients as they move through their recovery and rehabilitation process.

Associate Professor Brett Cowan – Director
Associate Professor Cowan is an experienced medical practitioner who also has a first-class honours degree in Mechanical Engineering. He specialises in medical imaging and image processing as well as the development of a broad range of new and innovative medical technologies.

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