



MEDICAL DEVICE RESEARCH INSTITUTE

“Flinders at Tonsley offers enormous scope to continue to expand our collaborative networks with industry partners to develop, harness and direct technologies, connect with the community, focus research in areas of priority and create smart, high-tech industries that will provide the jobs of the future.”

- Professor Karen Reynolds, Institute Director

The Medical Device Research Institute (MDRI) has the expertise and capabilities to deliver innovative solutions to the medical and allied health sectors.

With dedicated programs such as the Medical Device Partnering Program (MDPP), the Institute has formal avenues and successful models for collaborating with industry partners. Now co-located with industry at Tonsley, we are able to expand our collaborative networks to further focus our research in areas of priority.

Our vision is to be the Australian leader in medical device research and development.

Capability within the Institute is multi-disciplinary, covering areas such as engineering, computer science, mathematics, chemistry, psychology, nursing, occupational therapy, aged care, medical and surgical expertise amongst others.

Located in close proximity to Flinders Medical Centre and Flinders Private Hospital, we have close ties with our clinical community.



AREAS OF RESEARCH EXPERTISE

- Assistive technology and rehabilitation engineering
- Biomechanics and implants
- Computational biomechanics
- Devices, sensors and signals
- Health informatics
- Medical image analysis
- Medical simulation

INDUSTRY-DRIVEN RESEARCH

The Institute is home to the nationally recognised Medical Device Partnering Program (MDPP), a unique model for collaboration between researchers, clinicians, end-users and industry. The Program responds to industry-driven research problems and connects ideas to develop innovative medical devices and assistive technologies.

“The MDPP has proven expertise and networks to take projects through various stages of innovation, from concept through to design, development, trials and manufacture.”

“Capability within the Institute is varied and cross-disciplinary and our close connections to the clinical community ensure our research is relevant and accessible.”

**- Professor Karen Reynolds,
Institute Director**

FAST FACTS

- The MDRI recently received a significant collaborative grant from the State Government to work with industry and health groups to design and develop new drug delivery systems to improve the State's Hospital in the Home service. This services provides home-based treatments (chemotherapy, antibiotics, chronic pain relief) to patients who would otherwise require hospital care.
- A team of cross-institutional researchers and designers led by David Hobbs (MDRI PhD Candidate) have developed an award-winning accessible gaming system and novel controller named 'Orby' to assist people with limited hand function, such as children with cerebral palsy.
- The Institute's Six Degree of Freedom Hexapod Robot (developed to enhance understanding of the 3D performance of normal and diseased joints by simulating complex joint motion) won the highest accolade at the 2012 SA Engineering Excellence Awards.

For further information visit www.flinders.edu.au/mdri or email Institute Manager, carmela.sergi@flinders.edu.au



Flinders University
The Medical Device
Research Institute

Level 5
1284 South Road
Clovelly Park SA 5042
+61 8 8201 2901
mdri@flinders.edu.au
www.flinders.edu.au/mdri