



Media Release

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Monash bid backs new imaging and therapy beamline

Monash University has led a successful funding bid to use the Australian Synchrotron to research and potentially treat human diseases such as cancer.

A \$13.7 million grant announced today from the National Health and Medical Research Council and the Victorian Government will see a major upgrade of the imaging and therapy beamline to become one of most advanced and comprehensive medical beamlines in the world.

Professor Rob Lewis, the Director of the Monash Centre for Synchrotron Science, who chairs the medical beamline science advisory panel, said the funding would allow the full range of medical applications requested by the research community to be realised.

“The beamline will produce unrivalled images at micron level resolution whilst also being able to trial new radiotherapy techniques, creating the potential for more effective treatment and less damage to surrounding healthy tissue,” Professor Lewis said.

Deputy Vice-Chancellor (Research) Professor Edwina Cornish said the new Australian Synchrotron - Imaging Therapy Beamline (AS - ITBL), would have wide ranging applications, with particular utility in the early detection and treatment of cancer.

“Monash University staff have worked with fellow scientists, clinicians, other universities, the CSIRO and medical research institutes across the nation to establish a compelling case to build this facility,” Professor Cornish said.

“Today’s announcement is a coup for Australian science and will further cement this region of Victoria as one of the nation’s premier innovation precincts.”

Professor Ian Smith, Director of Monash University Research Platforms, said that until now the Synchrotron had been primarily a research facility. “This announcement means scientists here can take the first steps towards using synchrotron light for human imaging and therapy,” he said.

“This facility will enable Australian and international researchers to undertake world-first research studies and provide potentially ground-breaking solutions to many of the diseases affecting our community,” he said.

The AS ITBL is immediately adjacent to a new joint CSIRO/Monash University imaging and therapy research facility. It is hoped both facilities will ultimately be physically connected to expand research capacity.

“Monash University has forged a strong record in synchrotron science, including radiation, physics, engineering and medical research. This new imaging facility will provide a comprehensive and unique imaging ‘one stop shop’ for researchers in Australia and across the world,” Professor Smith said.

The Monash Institute of Medical Research (MIMR) is one institution to benefit from the expansion.

It is working with the Synchrotron and the Cancer Council of Victoria on a project that could see cancer patients withstand radiotherapy treatment at much higher radiation levels and suffer fewer side effects.

“Upgrading the beamline at the Australian Synchrotron means our researchers can now base their research here in Melbourne,” MIMR director Professor Professor Williams said.

The project’s chief investigator Professor Peter Rogers believes his team will be the first to explain how and why patients could safely undergo radiotherapy at 400 times higher than the current clinical dose.

“Approximately 50 percent of cancer patients receive radiotherapy. The major limitation of current radiotherapy treatment is devising ways to administer enough radiation to kill the tumour without destroying the surrounding, healthy tissue,” he said.

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