



MEDIA RELEASE

New facility boosts anti-cancer drug discovery

Thursday 1 March 2007

A new drug discovery facility, funded by the Australian Cancer Research Foundation (ACRF), will speed up the search for new anti-cancer treatments at Melbourne-based medical research establishment, St Vincent's Institute (SVI).

Opened today by The Hon. John Brumby MP, Minister for Innovation, the \$1.1 million facility at St Vincent's Institute includes a new X-ray crystallography machine, which works at five times the speed of its predecessor; virtual screening computers; and drug compound validation equipment.

Australian Cancer Research Foundation Chairman **Tom Dery** presented a \$900,000 cheque to **SVI Director, Professor Tom Kay** and leading researchers **Professor Michael Parker** and **Associate Professor Matthew Gillespie**.

"The research work underway at this new facility is laying the groundwork for the kind of major advances in cancer research that ACRF is committed to funding," Mr Dery said. "Dramatic technological advances have increased our ability to get to the heart of how cancer behaves and we are seeing special therapies developed to alter that behaviour and control the growth of cancer."

The Director of St Vincent's Institute, Professor Tom Kay, said that ACRF's commitment to providing state of the art facilities for cancer drug discovery was vital to perform internationally competitive research.

"This new facility will allow St Vincent's Institute to translate its gene discovery programs into molecular drug design with the aim of improving cancer treatment in the long term," he said.

X-ray crystallography enables scientists to visualise the 3-D atomic structures of proteins involved in cancer and virtual screening is a computer-based method for discovering drugs using the protein structures. These drugs could be used to prevent cancer development or improve treatment.

Professor Michael Parker, Head of the ACRF Rational Drug Discovery Facility, said that the new equipment will greatly enhance productivity and the ability to find novel cancer treatments.

"We have solved the structure of many proteins and we are now using the ACRF facility to find drug compounds that can be used to treat leukaemia, lung, prostate, breast and many other cancers."

One example is a protein called GST (glutathione transferase) that detoxifies foreign chemicals in the body including cancer chemotherapeutic drugs, causing their fast excretion from the body.

The St Vincent's team of scientists have visualised how anti-cancer drugs are attacked by this protein and are using the ACRF facility to design a drug to block the protein and prevent it interfering with anti-cancer treatment. Such a drug may lead to lower doses and shorter duration of chemotherapy treatment for cancer patients.

Associate Professor Matthew Gillespie, Head of the Bone, Joint and Cancer Unit at St Vincent's Institute, which investigates proteins that cause cancers to metastasise to bone, said: "The ACRF Rational Drug Discovery Facility provides a key piece of infrastructure, which coupled with the Australian Synchrotron at Clayton, will shorten lead compound discovery time."

About SVI

St Vincent's Institute is an independent medical research institute, which conducts laboratory research into the cause, prevention and treatment of high impact diseases such as cancer, diabetes, obesity, bone diseases, Alzheimer's, cardiovascular disease and infectious diseases. SVI is affiliated with St Vincent's Hospital and the University of Melbourne.

About ACRF

The Australian Cancer Research Foundation is now in its 21st year of operation. Individual ACRF grants exceed \$1.5 million with no upper limit – funds not available from any other private source in Australia. A grant from ACRF in 1999 kick-started 2006 Australian of the Year Professor Ian Frazer's quest to develop a vaccine to prevent and treat cervical cancer.

In the last two years alone, the foundation has awarded grants worth more than \$16 million, with recipients including St Vincent's Institute, Peter MacCallum, Royal Melbourne Hospital, Walter & Eliza Hall and Ludwig.

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