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## **Cancer drug development to be turbocharged as ACRF funding brings 'broadband' protein analysis to Australia**

Research across the country into how cancers begin and spread is set to be turbocharged, after the Australian Cancer Research Foundation (ACRF) last night awarded \$2 million in funding for a new detector that will provide faster protein analysis at the Australian Synchrotron.

The ACRF Detector will enable the shape and function of proteins to be analysed on the Australian Synchrotron's Micro Crystallography (MX2) beamline in a fraction of the time taken currently, providing a ten-fold increase in capacity crucial to accelerating cancer drug development.

Professor Charles Bond, Deputy Head Chemistry and Biochemistry at The University of Western Australia and co-Principal Investigator on the successful grant, says the ACRF investment in this key cancer research technology, available at only a handful of other synchrotron facilities around the world, will lead to better outcomes for people living with the disease.

'Importantly, by increasing the capacity for drug development research in Australia, it is Australians with cancer who will be the first to benefit as novel treatments move from laboratories into clinical trials at our public hospitals.

Professor Bond says proteins, large molecules essential to all living organisms, are crucial to understanding disease and treatment targets.

'With malfunctioning proteins causing many diseases, including cancer, arming researchers with clear representations of protein structures supports efforts to design drugs that target particular proteins, to boost their anti-cancer properties or suppress their cancer-enabling effects.'

Professor Andrew Peele, Director of the Australian Synchrotron, says the ACRF Detector will liberate researchers on the MX2 beamline, which is now at capacity.

'The brilliant light of the MX2 beamline allows us to investigate the arrangement and activity of molecules involved in cancer and cancer treatments at a level of detail that is not possible at any other Australian research facility.

'The increase in speed and quality of the data from the ACRF Detector is akin to shifting from dial-up to broadband, enabling more and better research outcomes that will improve our ability to combat disease.'

Professor Ian Brown, Chief Executive ACRF, says the new ACRF Detector will significantly increase protein analysis capability in Australia.

'We hope research into even more protein structures and drug targets will enable the development of new treatments for cancer that could be produced in Australia and applied worldwide.

'Most importantly, more researchers will gain answers much faster, shortening the time from laboratory research to the clinical testing of new cancer drugs.'

The ACRF Detector at the Australian Synchrotron will be operational in 2017.

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For further information or to organise an interview with Professor Charles Bond or Professor Andrew Peele, please call Nick Sharp-Paul, Communications Advisor at the Australian Synchrotron on 0411 098 838.

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