ST VINCENT'S INSTITUTE
MEDICAL RESEARCH

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APPLICATION OF NEW TECHNOLOGIES TO LEUKAEMIA RESEARCH

Tatura man, Ray Matheson, was diagnosed with leukaemia last month. He hopes that research being carried out at Melbourne's St Vincent's Institute (SVI) will lead to improvements for leukaemia therapy in the future.

Recent work at SVI using the Australian Synchrotron may help in the development of next-generation drugs to treat major diseases such as leukaemia.

Professor Michael Parker's team at SVI has used the Australian Synchrotron to visualize a protein called the GM-CSF receptor. Abnormal signalling through this family of receptors is thought to be involved in certain types of leukaemia. The first step has been made in the long process of turning this research into a potential treatment.

Following earlier work using the Chicago Synchrotron, the team, in collaboration with CSL Ltd and Professor Angel Lopez and colleagues at Adelaide's Centre for Cancer Biology of SA Pathology, have now used the Australian Synchrotron to look more carefully at areas of the receptor which have previously proven difficult to visualise.

"More detailed knowledge of the shape of the receptor and its function may help us to design new and potentially more effective drugs to target leukaemia," said Professor Parker.

The work has been supported by grants from the National Health and Medical Research Council (NHMRC), a Federation Fellowship from the Australian Research Council (ARC), and enabled by equipment funded by the Australian Cancer Research Foundation (ACRF).

"Dramatic technological advances continue to increase our ability to get to the heart of how cancer behaves, so we are now seeing specially designed drugs which are being developed to alter that behaviour and control the growth of leukaemia," said ACRF Chief Executive, Mr David Brettell.

The research was highlighted in a presentation today by the Minister for Innovation, Gavin Jennings, who visited SVI to launch the Victorian government's Operational Infrastructure Support program grants to Victoria's medical research institutes.

"This work highlights the power of effective collaborations between research organizations using leading-edge technology to tackle serious health problems," said Innovation Minister Gavin Jennings.

"The research that Professor Parker's team is doing shows the value of our investment in world-class technologies such as the Australian Synchrotron, as well as in our outstanding medical research organizations, such as SVI," said Mr Jennings.

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About SVI
St Vincent's Institute is a medical research institute that conducts laboratory research into the cause, prevention and treatment of high-impact diseases such as cancer, heart disease, diabetes, obesity, bone diseases and Alzheimer's. SVI is affiliated with St. Vincent's Hospital and the University of Melbourne.