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New precision medicine laboratory to help fight cancer

The Centenary Institute has announced it will establish a new precision medicine laboratory, enabling world-leading research into the use of theranostics to treat cancer, thanks to a grant from the Australian Cancer Research Foundation (ACRF).

An emerging field, theranostics refers to a combined therapy and diagnostics approach to patient treatment. It involves the use of a diagnostic drug to first identify and label tumour cells – followed by the delivery of a therapeutic isotope (radioactive drug) to then kill the identified tumours.

The ACRF grant of \$1.5 million, together with additional co-funding of \$300,000 from Cancer Institute NSW, will be used to setup and establish the ACRF Molecular Theranostics Laboratory which will be led by Professor Philip Hogg, Head of the ACRF Centenary Cancer Research Centre.

Professor Hogg believes that the field of personalised medicine has tremendous potential for the treatment of a wide range of cancers.

“Cancer is responsible for about one in six deaths globally and the economic cost is in the trillions of dollars annually. New methods to tackle this cancer burden are greatly needed. One such method is theranostics which allows for a finely targeted search and destroy process with a therapeutic isotope delivered directly to a cancerous cell,” said Professor Hogg.

A key project to be undertaken at the laboratory by Professor Hogg is the development of a theranostic agent (called Cell Death Indicator or CDI) that targets a common property of all solid tumours – dead and dying tumour cells. Once these cells have been identified by CDI, therapeutic radiation is then able to be delivered to adjacent viable and growing tumour cells to kill them.

Professor Mathew Vadas AO, Executive Director of the Centenary Institute said the ACRF grant was a fantastic outcome for cancer research in Australia as it pioneered a totally new modality of treating cancer.

“This exciting new initiative will be applicable as a treatment for many types of cancers. We believe this new and technologically advanced laboratory will operate at the very forefront of the burgeoning personalised medicine research field in NSW and beyond,” said Professor Vadas.

Research projects at the new ACRF Molecular Theranostics Laboratory are set to also include the investigation of a new theranostic for the treatment of liver tumours and the development of new chelator-antibody complexes (agents that help carry the therapeutic isotope to the cancer cell).

[ENDS]

Images:

Professor Philip Hogg.

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For all media and interview enquiries, please contact

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About the Centenary Institute

The Centenary Institute is a world-leading independent medical research institute, closely affiliated to the University of Sydney and the Royal Prince Alfred Hospital. Our research focuses on three key areas: cancer, inflammation and cardiovascular disease. Our strength lies in uncovering disease mechanisms and applying this knowledge to improve diagnostics and treatments for patients.

For more information about the Centenary Institute, visit centenary.org.au

About ACRF

Australian Cancer Research Foundation (ACRF) is a leading independent charity. Focused on funding the technology, equipment and infrastructure researchers need to progress the prevention, detection and treatment of all cancers. ACRF is uniquely positioned to bring together outstanding expertise from medical research organisations across Australia and initiate pioneering cancer research programs, revolutionising outcomes for patients. ACRF believes that only brilliant ideas can tackle something as big as cancer.

For more information about Australian Cancer Research Foundation, visit acr.com.au