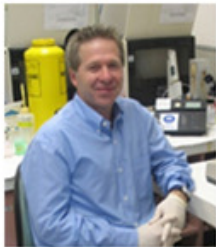


Dr Wayne Thomas



Children's Cancer Institute Australia for Medical Research

Funded by Can Too

Identifying and inhibiting the mechanisms of MYCN activation in brain tumours (Brain Tumours)

Brain cancer is a leading cause of death in children under 10 years of age, and medulloblastoma represents approximately 25% of childhood brain cancers. Our studies will focus on identifying and understanding the mechanism of activation of the oncogene MYCN in medulloblastoma. Understanding the nature of tumour development will lead to the development of novel pharmaceuticals.

Dr Hugh Morgan



Royal North Shore Hospital

Funded by Can Too

The role of active demethylation in maintaining the differentiation status of cells (Understanding Gene Expression)

Cancer can be caused by genetic mutations, or "epigenetic" changes that affect gene expression. Some genes become epigenetically silenced during development, while other genes become "un-silenced". Epigenetic changes can allow cells to escape normal controls and lead to cancer. This project tests whether mechanisms in the embryo also occur during normal development, providing a basis for understanding dysregulation of epigenetics in the onset of cancer.

Dr Ron Sluyter



University of Wollongong

Funded by Can Too

The P2X7 receptor and microparticles in cancer-associated thromboembolism (Understanding Blood Clotting)

Blood clotting is a serious and life-threatening complication in people with cancer. Improved knowledge about the processes contributing to cancer related clotting may lead to improved treatments, and increase the quality of life and the life-span of cancer patients. This study aims to identify the causes of clotting in cancer patients by investigating the influence of the P2X7 receptor on tumour derived microparticles.

Dr Susan Fanayan



The Australian Proteome Analysis Facility

Funded by Can Too

Significance of MAL2-MUC1 interactions and identification of other novel MAL2 binding partners in cancer by proteomic approaches (Breast Cancer)

A major challenge in cancer research is the identification of novel tumour markers, which can improve our ability to accurately diagnose and predict disease and treatment outcomes. This study investigates the MAL2 and MUC1 genes: despite numerous reports of MAL2 overexpression in different cancers, little is known about how increased MAL2 expression may advantage cancer cells. We will investigate the significance of MAL2-MUC1 interactions in cancer, and attempt to identify other novel MAL2 partners to help us understand the significance of MAL2 overexpression in cancer.

Dr Toby Hulf



Garvan Institute of Medical Research

Funded by Can Too

Epigenetic deregulation of miRNAs in cancer (Prostate Cancer)

miRNAs are molecules that regulate gene expression in many biological processes, including growth and differentiation, but the role miRNAs play in cancer is not clearly understood. This project aims to identify and characterise the miRNAs involved in epigenetic mechanisms by analysing the regulation of miRNAs in prostate cancer cells. It is expected that the results will advance our understanding of miRNA biology, and potentially generate novel targets for cancer therapeutics.

Dr Viive Howell



Kolling Institute

Funded by Can Too

Ovarian surface epithelial carcinoma modelling mediated by Sleeping Beauty insertional mutagenesis (Ovarian Cancer)

Ovarian epithelial cancer (OEC) is the most lethal of the gynaecological cancers. Activation of "Sleeping Beauty", which causes random disruption of additional genes, will induce rapid tumour formation. Tumours will be collected for future research to identify these cancer-causing genes, with the goal of discovering new genes of OEC. This will lead to earlier diagnosis and better understanding of the causes of OEC.

Professor Maurice Eisenbruch



Sydney University

Funded by Can Too

Understanding barriers to effective cross-cultural communication about prognosis of metastatic breast and other cancers (Communicating Prognoses)

More than a quarter of cancer patients in Australia are from culturally diverse backgrounds, and miscommunications can lead to delayed treatment and poorer prognoses. This study will explore how cultural differences influence communication between doctors, cancer specialists, and patients from Greek, Chinese and Arabic speaking backgrounds. The results will provide information that can be used to train doctors to be more responsive to cultural differences, to better meet the psychosocial needs to cancer patients, and ensure patient participation in decision making .