

Dr Kirsten Hammond



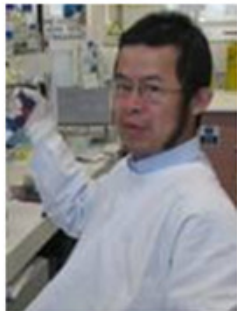
University of Sydney

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The role of UVA in Skin Cancer

Skin cancer is caused by ultraviolet (UV) radiation in sunlight. UV is a potent cancer causing agent because it causes cells to become cancerous while simultaneously preventing the immune system from destroying them. UV light is made up of two spectra: UVA and UVB. This study investigates a new mechanism whereby UVA causes immune suppression. Understanding how this process occurs is critical to preventing it.

Dr Tao Liu



Children's Cancer Institute Australia

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The role of class 111 histone deacetylase SIRT1 in neuroblastoma

Cancer is the second most common cause of childhood death. Neuroblastoma is the most common solid tumour of early childhood. This project aims to investigate how a gene called SIRT1 contributes to neuroblastoma initiation and whether combination therapy with an inhibitor of SIRT1 and chemotherapy exerts anti-cancer effects. The results from this study will provide better understanding of neuroblastoma and the basis for clinical trials of the combination therapy.

Matthew Naylor



Garvan Institute of Medical Research

Supported by Can Too

Role of Elf5 in mammary gland development and Breast Cancer

Elf5 controls cell development during normal development of the breast and increased Elf5 is associated with shorter survival in women with breast cancer. Matthew and his team have developed a model that will enable them to determine how Elf5 affects breast development and breast cancer.

Dr Graham Ball



University of New South Wales

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Structural studies of the DNA complexes of new anti-tumour agents to aid better drug design

Many drugs kill tumours by binding to DNA. A new group of DNA-binding drugs is emerging with good experimental antitumour activity that works by preventing cells from expressing their genes. We do not understand the details of the structure of these DNA-drug complexes, nor how they inhibit gene expression. In this work we are proposing to study the 3-dimensional structure of such complexes in solution by NMR spectroscopy (magnetic resonance), so as to aid better drug design in the future.

Dr Megan Fabbro



Children's Medical Research Institute

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Regulation of cytokinesis by EPLIN, and actin-binding protein (Understanding Cell Division)

Cell division maintains the stability and integrity of our genome. Genomic instability can lead to cancer. Cytokinesis is the final stage of cell division and is a critical step in protecting genomic integrity. Megan and her team identified EPLIN as a new component of this process and it appears to function in cytokinesis. The aim of this project is to characterise the mechanisms of action of EPLIN in the final stages of cell division.