



Review of the tenth Cancer Research Workshop

Our 10th C4 Cancer Research Workshop was held on Wednesday 20 November in the Beaven Lecture Theatre at the University of Otago Christchurch (UOC). It attracted a healthy mix of university and hospital staff and students.

Prof Bridget Robinson (Medical Oncologist, CDHB) introduced the afternoon's session describing the history of the Canterbury Comprehensive Cancer Centre, and how it remains a virtual centre that encompasses interested parties across the broad spectrum of nurses, clinicians, scientists, NGOs and patients.

Dr Bryony Simcock (Gynae-Oncologist, CDHB) started the first session with a passionate talk on cervical cancer from the clinical perspective. She described the discovery pathway of human papilloma virus as a causative agent and how this led to the successful HPV vaccination schedule now rolled out for both girls and boys in NZ. HPV is now being used for screening and development of targeted therapy.

Dr Andrew Das (Postdoctoral Fellow, UOC) then gave a great overview of acute myeloid leukaemia and its need for new targeted treatments. He presented a fascinating case report of a patient with extended survival following high dose vitamin C infusions. Subsequent sequencing of the patient's samples identified specific mutations which may explain the response to vitamin C. Clinical trials are required to confirm these findings.

The session was rounded off by Dr Rajiv Kumar (Medical Oncologist, CDHB) providing an insight into the complexities of treatment for lung cancer, ranging from cytotoxic chemotherapy, via targeted treatments and to the most current approach, immunotherapy. These new and evolving therapies have improved survival, but many are not yet available in NZ.

Afternoon tea with home-baking provided a chance for participants to mingle and exchange ideas.

Dr Jacqui Keenan (Associate Professor, UOC) then gave a thoughtful talk on the potential role of diet and specific members of the human microbiome, the *Bacteroides* species, in the aetiology of colon cancer. She presented data on the molecular changes imposed by enterotoxigenic *B. fragilis* in cell culture and how aspirin counteracted some of these changes, therefore providing a logical support for clinical observations.

The second session ended with talks by two talented PhD students. Dr Ben Wamamili (University of Canterbury) described his data on smoking and vaping from two cross-sectional surveys in university students in New Zealand. His findings showed a dramatic increase in vaping during 2019 without any reduction in smoking rates, when compared with 2018 rates. Linda Buss (UOC) described the molecular changes in muscle tissue induced by exercise, with specific emphasis on the electron transport chain in the mitochondria (the cell's powerhouse). Her data in mice suggest that a tumour burden may contribute to an inability to adapt to exercise and become fit, as seen by differences in the mitochondrial composition.

Professor Robinson closed the workshop, thanking all participants for their contribution and the promise to have another C4 workshop in 2020.