

“Tumour-derived extracellular vesicles (EV) – a real time functional assessment of tumour activity in cancer patients”

Dr Katie Meehan
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The University of Western Australia

Date : 19 October 2018

Time: 11:00am to 12:30pm

Venue: Meeting Room 2-130, 1/F, Block 2, To Yuen Building

Abstract

Tumour-derived exosomes are actively secreted tumour nanovesicles in biofluids, and have recently emerged as a potential novel biomarker. They contain high amounts of molecular content originating from the primary or metastatic tumour and can represent active clonal population. A core theme of my research is to investigate the role of tumour-derived exosomes as a novel biomarker in patients with breast and head and neck cancer undergoing therapy. The main aims are to: 1) Determine whether fluctuations in the amount of exosomes in circulation and DNA contained in tumour-derived exosomes correlates with treatment response; and 2) Confirm if DNA tumour mutational burden are predictive of response to therapy. This research is conducted in close collaboration with medical oncologists and pathologists and has the potential to change the way we diagnose and monitor disease response through routine blood tests.

Biography

Associate Professor Meehan is Head of the Cancer Biology Division within the School of Biomedical Sciences at the University of Western Australia. She graduated with a *BSc* (First Class Honours) from Curtin University in 1998, completed a PhD from UWA in 2002 and a Graduate Certificate in Applied Epidemiology and Biostatistics from Curtin University in 2015. She has ~9 years of national and international research and teaching experience in cancer biology and pathology. Dr Meehan has worked at the British Columbia Cancer Agency (Vancouver, Canada), University of Arizona (Tucson, USA) and Hudson Institute of Medical Research (Melbourne, Australia). Dr Meehan has published over 30 papers in high quality journals and has secured over \$1.8 million dollars as a chief investigator.

Dr Meehan's current research program includes a number of projects including: (1) unravelling mechanisms that facilitate the metastatic potential in oral carcinomas; (2) investigation of the clinical potential of exosomes in cancer monitoring; (3) defining and defeating Indigenous disadvantage in breast cancer survival; and (4) exploring the genomic complexity of Carcinoma of Unknown Primary for better patient outcomes.

In addition to her undergraduate teaching duties in cancer pathology, Dr Meehan is currently supervising 6 PhD students, 1 master's student and 3 honours students.

Enquiry:

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All are welcome !