UNIVERSITY of OTAGO
Te Whare Wānanga o Otāgo
NEW ZEALAND
SAPERE AUDE

Department of Pathology
*Te Tari Mātauraka Mate*

PRESENTS

# Activins, cancer and oocyte quality

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In this seminar I will introduce you to my research on ovarian and prostate cancer, and oocyte quality. Members of the transforming growth factor beta (TGFB) family, including activins, have important roles in the development, growth and function of normal ovaries and prostate. Dysregulation of activin A signalling has been linked to tumour progression in many cancer types. However, very little is known about the roles of activin B and activin C in regulating tumour growth, while the data that has been reported is somewhat contradictory. We have used digital immuno-reactive scoring of cancer tissue microarrays to show that expression of members of the TGFB family, including activins, change with increasing tumour grade in both prostate and ovarian cancer and that cell lines differ in their response to activin treatment.

Poor oocyte quality is one of the major causes of reduced fertility in many species, including humans, sheep and cattle. Unfortunately, we do not fully understand the key components underpinning good oocyte quality. Using a sheep model of oocyte quality, I have demonstrated that juvenile (poor quality) oocytes exhibited differences in the volume, distribution and morphology of organelles such as lipid droplets, mitochondria and vesicles when compared to adult (good quality) oocytes. By continuing to research how the function of these organelles affects oocyte quality we hope to identify novel ways of improving assisted and natural reproduction in humans and domestic animal species.

Friday 2 October, 1 pm  D'Ath Lecture Theatre  Department of Pathology

More information: otago.ac.nz/dsm-pathology