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Multipotent luminal mammary cancer stem cells model
tumor heterogeneity

Tuesday 18 August 2015 at 2.00pm
Room 1.81, Anatomy, Physiology & Human Biology Building North
The University of Western Australia (off Hackett Entrance No. 2)

The Seminar: The diversity of human breast cancer subtypes has led to the hypothesis that breast cancer is a number of different diseases arising from cells at various stages of differentiation. We have derived clonal multipotent metastatic mammary cancer stem cells from the polyomavirus middle T mouse model of breast cancer that can differentiate into luminal, myoepithelial and alveolar cells. When injected orthotopically the cells give rise to luminal tumors that can undergo additional epigenetic and/or genetic changes that result tumor heterogeneity. The temporal sequence of events suggests that contrary to current paradigms, multiple tumor subtypes can originate from a single multipotent cancer stem cell that undergoes evolution during tumor progression.

The Speaker: Dr. Ellies, a graduate of the UWA dental school, received her Ph.D. in oral biology from the University of Toronto, Canada. She carried out postdoctoral research in the area of immunology at the University of British Columbia, Canada and then relocated to the University of California, San Diego to work on the gene targeting of glycosyl-transferase enzymes. She later transitioned to breast cancer research and has expertise in the polyomavirus middle T mouse model of breast cancer. She has recently returned to Western Australia.