



Wednesday, October 18, 2017

LSC 3 | 12:00 - 1:00PM

## Dr. Karla Williams

Assistant Professor, Pharmaceutical Sciences, UBC

*“Extracellular Vesicles for ‘Liquid Biopsy’ Development in Cancer”*

The use of EVs as biomarkers is a rapidly expanding field with great promise and clinical potential to report on tumors and their heterogeneity. The advantages of using EVs over cells and circulating tumor DNA is their abundance and stability. EVs are rapidly shed from tumor cells either directly from the plasma membrane (microvesicles) or through exocytosis (exosomes) and are readily detectable in the blood ( $\sim 1-3 \times 10^{12}$  exosomes per ml of plasma). The cargo contained within the EV is representative of the cell of origin containing lipids, proteins, glycans and nucleic acids. Direct enumeration of tumor-derived EVs and/or profiling of their molecular cargo in patient body fluids have been shown to provide valuable information about the biology of the tumor. We are using nanoscale flow cytometry to identify tumor-derived EVs and profile their protein and glycan composition. This has led to the discovery of a novel glycan present on the surface of prostate and breast derived EVs. From this work we are developing blood-based ‘liquid biopsy’ to risk-stratifying patients, distinguish indolent from aggressive disease.

Live Online Seminar Viewing:  
<http://tinyurl.com/cbrseminaronline>

