

**Induced cytotoxicity by *Fomitopsis officinalis* and *Ganoderma oregonense*
treatment on cervical cancer cells (HeLa)**

By: Laurence Bélanger-Royer

VIU Faculty Advisor: Dr. Rosemarie Ganassin

Research that continually develops cost effective and safer treatments for cancer patients has grown in popularity. Cancer is one of the leading causes of death worldwide and the need for more effective treatments is higher than ever. The objective of this research was to explore the potential cytotoxicity of natural products, such as fungi extracts, on cancerous cells. This study investigated the induced cytotoxicity by *Fomitopsis officinalis* and *Ganoderma oregonense* treatment on cervical cancer cells (HeLa). Fungi were acquired as dual extracts and prepared into 2.5 mg/mL fungal solution that was administered to HeLa cells at two concentrations (2.5, 1.25 mg/mL) and observed at increasing incubation time (24, 48 and 72 hour). Cell viability was estimated using resazurin dye and fluorescence units calculated by the microplate reader at 528 nm excitation / 596 nm emission. The data suggest that *Ganoderma oregonense* induced cell proliferation at higher fungal concentration, whereas *Fomitopsis officinalis* substantially decreased cell viability throughout the experiment. Both treatments showed no significant differences in average cell viability when compared to untreated HeLa cells ($p > 0.005$).