

OR-11**A New Chemopreventive Agents, *Lignosus Rhinocerus* Induces Apoptosis on HCT 116 Human Colorectal Cancer Cells**

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Tiger milk mushroom is a unique mushroom that has number of medicinal properties. Communities in Malaysia have been using this mushroom to treat different kinds of cancer. This study was conducted to elucidate the antiproliferation activity of this national treasure mushroom on human colorectal cancer cells (HCT 116). Colon cancer cells were cultured in the presence of tiger milk mushroom for aqueous or methanol pressurized liquid extraction (PLE) extract at various concentrations for 24 hours. The percentage of cell viability was determined by 3-(4, 5-dimethylthiazol-2-yl)-2, 5-di phenyl tetrazolium bromide (MTT) assay. The antioxidant capacity of both extracts was determined using Ferric reducing ability of plasma (FRAP) assay. Our results showed that methanol PLE of *Lignosus rhinocerus* sclerotia was found to exhibit antiproliferative activity against HCT 116 cells, with an IC₅₀ of 600 µg/mL and 1200 µg/mL for aqueous PLE. The IC₅₀ values suggested that the solvent differences in pressurized liquid extraction greatly affected their antiproliferative activities. The mode of cell death induced by *Lignosus rhinocerus* PLE was primarily apoptosis by externalization of phosphatidylserine.

Keywords: Human Colorectal Cancer Cells, Pressurized liquid extraction, Antiproliferative activity, Apoptosis, Ferric reducing ability of plasma.
