

BIOACTIVE POLYSACCHARIDES FROM WILD MUSHROOM, *COPRINOSIS SP.*

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Abstract: The wild mushroom *Coprinosis* sp., was collected from local forest and water soluble fraction of the polysaccharide was extracted from the fruiting body. The polysaccharide (CPSS) was partially purified by dialysis. Biochemical estimation of crude extract shows that it contained 90.7% polysaccharides, 8.92% phenolics and 0.28% protein. FTIR spectroscopy further confirmed the presence of polysaccharides. HPLC analysis of CPSS indicated that glucose, galactose and xylose comprised monosaccharide units. Total antioxidant, total reducing power, nitric oxide scavenging and DPPH assay confirmed antioxidant property of CPSS and it was found to work in a dose dependent manner. DCFDA stained images of lung cancer line A549 showed that CPSS was able to reduce intracellular ROS in the cells. Cytotoxicity of CPSS was observed on A549 and L132 cell. It showed that CPSS had potential antitumor activity and it was specific to cancer cells only. Hoechst and PI staining indicated the induction of apoptosis in cancer cell by PI positive cells after CPSS treatment.

Keywords: Wild mushroom, Polysaccharides, Antitumour, Antioxidant

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