Screening of Anticancer Activity of Danish Mushrooms

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During the last 2 years, many Danish mushrooms have been collected for anticancer study; most of these mushrooms are edible. The in vitro anticancer activity of the Danish mushrooms has been screened against two cancer cell lines, K562 and EL-4 (both of them are leukemic cells). A standard assay for anticancer drug screening recommended by the National Cancer Institute, sulforhodamine B (SRB), was employed for the study. Chinese Ganoderma lucidum has been used as a positive control and Danish Champignon has been used as a negative control. The results show that some Danish mushrooms exhibit potent inhibitory activity on the in vitro growth of EL-4 cell and K562 cell. Twelve Danish mushrooms inhibited the in vitro growth of EL-4 cells by 80–95%; 20 Danish mushrooms inhibited the in vitro growth of K562 cells by 80–95%; eight of these mushrooms inhibited the in vitro growth of both cell lines by 90–95%. All of these mushrooms are edible. The in vivo anticancer study of selected mushrooms in mice inoculated with EL-4 cell is in progress in our laboratory.