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P13 CYTOTOXIC ACTIVITIES OF *UMBILICARIA CRUSTULOSA, PARMELIOPSIS AMBIGUA, UMBILICARIA POLYPHYLLA, LECANORA MURALIS* AND *PARMELIA SAXATILIS* METHANOL EXTRACTS ON HUMAN COLON CANCER CELL LINE

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The aim of this study was to determine the antprolifertive effects of methanol extracts of five lichenes (*Umbilicaria crustulosa, Parmeliopsis ambigua, Umbilicaria polyphylla, Lecanora muralis and Parmelia saxatilis*) on colon cancer adenocarcinoma cell line HCT-116, as well analysis of cell death. The antiproliferative activity was measured by MTT [3-(4, 5-dimethylthiazol-2-yl)-2,5-diphenyltetrazolium bromide] test, which is commonly used to assess the activity of living cells through mitochondrial dehydrogenases. For analysis of cell death, we used fluorescent assays Acridine orange/ethidium bromide (AO/EB) double staining. The results showed that all of tested extracts show significant inhibition of cell proliferation, with IC_{50} valiues of 497.65 to 153.95 μg/ml for 24- and 72-h of exposure. The active substances extracted from four lichens were completely unable to inhibit HCT-116 cell growth (IC50 >30 μg/ml), and this extracts demonstrated an intermediate activity after 24 and 72 h. The methanol fraction of *Parmelia saxatilis* had the highest antiproliferative potential with IC50 values of 14.7 μg/ml, within the NCI criteria, thus are considered as of promising anticancer potential. Based on the above cytomorphological changes and cell death the effect of methanol extract in these cells were indicative of early apoptosis after 24 h and late apoptosis after 72 h. Based on these results *Parmelia saxatilis* is a potential source of phenols as natural anticancer and antioxidant substance of high value. This opens perspectives for deeper investigations extended also to other mammalian cell lines.