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Crude Flavonoids from *Carya cathayensis* Sargent inhibited HeLa Cells Proliferation through Induction of Apoptosis and Cell Cycle Arrest

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SUMMARY. The aim of this study was to investigate the anticancer properties of crude flavonoids from *Carya cathayensis* Sargent bark (CCS-F), including the inhibitory effect of CCS-F on HeLa cells and the apoptosis-inducing capacity *in vitro*. In our results, treatment of HeLa cells with CCS-F resulted in the growth inhibition effect, and the IC_{50} was 95 μg/ml. Detection of apoptosis was performed by acridine orange / ethidium bromide (AO/EB) and Tdt-mediated dUTP nick end labeling (TUNEL) staining assays, which showed more apoptosis cells in CCS-F treatment group than the control group. Furthermore, CCS-F (100 μg/ml) could arrest the cells in G0/G1 phase. Meanwhile, the expression of Bax was increased in the cells treated with CCS-F (100 μg/ml), with an increase in the activity of caspase-3, while Bcl-2 expression was decreased compared to the control cells. It demonstrated that CCS-F had antiproliferative activity in HeLa cells and might be a potential anticancer drug.

KEY WORDS: Carya cathayensis Sargent, flavonoids, anticancer, apoptosis, HeLa.

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