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Antitumor properties of *Eryngium amethystinum* extract

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Eryngium amethystinum is herb from *Apiaceae* family. It has been used as a food or in traditional medicine for the treatment of various diseases¹. In the present work, we have evaluated its cytotoxic effect on a panel of human cancer cells (human breast carcinoma MCF7, human malignant melanoma A375, human colon carcinoma HCT116 and human lung cancer A549). Treatment with *Eryngium amethystinum* ethanol extract decreased viability of all cancer cell lines in a dose-dependent manner after 72 h. For further investigation of potential mechanism of action A549 cell line was selected. The observed viability decrease was followed by loss of dividing potential after the treatment. Additionally, 90% of A549 cells were subjected to programmed cell death – apoptosis which was not followed with caspase activation. In paralel with this, typical apoptotic morphology of treated cells was observed by fluorescent microscopy. Apart from this decreased cell viability was due to triggered autophagic cell death. Taken together, the shown effect of *Eryngium amethystinum* makes this plant worthwhile for further evaluation in the field of oncology.

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References

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