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- **12723 | Cell growth inhibitory effect of an aqueous extract of *Achillea millefolium* in human tumor cell lines**

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Plants used in folk medicine have increased importance in the pharmaceutical field. *Achillea millefolium*, also known as yarrow, is a traditional plant that can be found in Europe, Asia, North Africa and North America [1, 2]. Yarrow was shown to have antitumour, antimicrobial, anti-inflammatory and antioxidant properties [3]. Indeed, several studies indicated that this plant has antioxidant potential due to its chemical composition in phenolic acids and flavones [3].

The aim of this work was to study if an aqueous extract of *A. millefolium* presents cell growth inhibitory activity in three human tumor cell lines: non-small cell lung cancer (NCI-H460), human colorectal adenocarcinoma (HCT-15) and breast adenocarcinoma (MCF-7). Sulforhodamine B assay was carried out to determine in which cells the extract was more potent. In addition, the effect of the aqueous extract on NCI-H460 cell cycle profile and programmed cell death was analyzed by flow cytometry following incubation with propidium iodide (PI) or Annexin V-FICT/PI staining, respectively.

Results showed that *A. millefolium* extract inhibited the growth of the mentioned cell lines. Moreover, further studies of this extract in NCI-H460 cells indicated that the reduction in cell growth was due to alterations in cell cycle profile and in apoptosis. Future work will also include analysis of protein expression by Western Blot to further unravel the mechanism of action of this extract.

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