Poster

Synergistic effects of essential oil components: MCF-7 cytotoxicity

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Introduction. Essential oils, the volatile compounds from aromatic plants, are used in perfumery, aromatherapy, and for flavoring. They have been shown to possess antimicrobial, insecticidal, and antioxidant activities, and some have been used in cancer treatment [1,2].

Objectives. To test various two-component combinations of essential oil components for synergistic and/or antagonistic effects on in-vitro cytotoxic activity against MCF-7 cells.

Methods. Cytotoxic activity was determined using the MTT assay for cell viability [3].

Results. Enhanced cytotoxic activity (synergism) is generally observed in combinations of other essential oil components with beta-caryophyllene. Attenuated cytotoxic activity (antagonism) is generally observed in combinations of other essential oil components with camphene.

Conclusion. Potential synergistic effects should be taken into account when evaluating the biological activity of essential oils.

Keywords: synergism, antagonism, essential oils, beta-caryophyllene, camphene

Selected References

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