

Chemical Composition of Essential Oil and in vitro Antibacterial and Anticancer Activity of the Hydroalcolic Extract from *Coronilla varia*

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Abstract : The aims of study were investigation on chemical composition essential oil and the effect of extract of *Coronilla varia* on antimicrobial and cytotoxicity activity. The essential oils of *Coronilla varia* is obtained by hydrodistillation and analyzed by (GC/MS) for determining their chemical composition and identification of their components. Antibacterial activity of plant extract was determined by disc diffusion method. The effect of hydroalcolic extracts from *Coronilla varia* investigated on MCF7 cancer cell line by MTT assay. The major components were Caryophyllene Oxide (60.19%), Alphacadinol (4.13%) and Homoadantaneca Robexylic Acid (3.31%). The extracts from *Coronilla varia* had interesting activity against *Proteus mirabilis* in the concentration of 700 µg/disc and did not show any activity against *Staphylococcus aureus*, *Bacillus subtilis*, *Klebsiella pneumonia* and *Enterobacter cloacae*. The positive control, Ampicillin, Chloramphenicol and Cephalexin had shown zone of inhibition resistant all bacteria. *Coronilla varia* ethanol extract could inhibit the proliferation of MCF7 cell line in RPMI 1640 medium. IC₅₀ 5(mg/ml) was the optimum concentration of extract from *Coronilla varia* inhibition of cell line growth. The MCF7 cancer cell line and *Proteus mirabilis* were more sensitive to *Coronilla varia* ethanol extract.

Keywords : *Coronilla varia*, essential oil, antibacterial, anticancer, hela cell line

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