

Anticancer, Antimicrobial, Antioxidant Properties and Preliminary Phytochemical Screening Of *Dittrichia Viscosa* (L.) Greuter, *Taraxacum Cyprium* H.Lindb. and *Eruca Vesicaria* (L.) Cav.

Students:

Aya Tamimi
Abdullah Almasri
Waleed Abu Najeeb

Supervisor:

Dr. Johnny Amer

Abstract:

Background

Background cancer has become a serious, global concern, and so the discovery of novel antioxidant and antimicrobial from herbal sources may provide anticancer and valuable solutions for this problem. Actually, replacement of harmful chemical antioxidants with natural ones may prevent various diseases. The present investigation describes for the first time the antioxidant , phytochemical screening , Anticancer and antimicrobial activities of aqueous and organic extracts to the roots of *Dittrichia Viscosa*, *Taraxacum Cyprium* and *Eruca Vesicaria* .

Methods:

Free radical scavenging property was analyzed using the 2,2-diphenyl-1-picrylhydrazyl (DPPH) method, while antimicrobial activity was tested against the selected strains from American Type Culture Collection (ATCC) and clinical isolates such as *Shigella sonnie*, *Staphylococcus aureus*, *Enterococcus faecium*, *Escherichia coli*, *Pseudomonas aeruginosa*, *Candida albicans*, *Epidermophyton floccosum* and Methicillin Resistant *Staphylococcus aureus* (MRSA), and using minimum inhibitory concentration (MIC) assay.

Results:

A mixture of phytochemical compounds was found in all of the studied extracts which also showed remarkable potentials of antioxidant , and antimicrobial activities. The current study provides initial data that justify the use and importance of these plants in Palestinian traditional medicine.

Conclusion:

This study provides evidence that the aqueous and organic extracts from the roots of *Dittrichia Viscosa*, *Taraxacum Cyprium* , and *Eruca Vesicaria* exhibited interesting antioxidant activities when compared to Trolox ,