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Phytochemical analysis, antimicrobial and antioxidant activity of ethanolic extract of *Vernonia anthelmintica*

Idress Hamad Attitalla
Omar Al-Mukhtar University, Libya

Abstract

Vernonia anthelmintica is a wild medicinal herb distributed throughout the world. It is used as a folk medicine against cough, skin diseases, diarrhea and fever. In the present study, ethanolic extract was obtained from seeds of *Vernonia anthelmintica* and Phytochemical analysis was done to screen alkaloids, saponins, steroids, carbohydrates, flavonoids, glycosides, polyphenols and gums and mucilage. Antimicrobial activity was carried out by using four bacterial strains *Staphylococus aureus, E. coli, Pseudomonas aeruginosa, Bacillus subtilis* and two fungal strains such as *Aspergillus niger* and *Trichophyton rubrum.* This ethanolic extract showed good antibacterial activity against *Bacillus subtilis* (20.21±0.8mm) and *Pseudomonas aeruginosa* (19.25±0.6) whereas moderate activity against Staphylococcus aureus (15.34±0.5) and *E. coli* (14.56±0.8). Whereas ethanolic extract showed good anti-fungal activity against Aspergillus flavus (19.64±1.8) and showed moderate activity against Trycophyton rubrum (13.21±1.1) at highest concentration of ethanolic extract 80mg/ml concentration. *V.antihelmintica* seed ethanolic extract showed good free radical scavenging activity at all concentrations of ethanolic extract. Our results clearly saying that seed ethanolic extract showed high content of Phytochemical, highest antimicrobial and antioxidant activity and our results supported the usage of *Vernonia anthelmintica* in folk and traditional medicine.

Biography

Dr. Idress Hamad Attitalla, (Associate Professor) has completed his PhD at the age of 31 years from Uppsala University (Sweden) and postdoctoral studies from USM:: University Sains Malaysia. He is the director of Research and Study at ARC, Libya and director of departments of microbiology at (OMU, Al-Bayda, Libya). He has published more than 60 papers in reputed journals and serving as an editorial board member of repute.