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Antibacterial activity of *Commiphora gileadensis* and *Abutilon bidentatum*, collected from Al-Abwa region, Saudi Arabia

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Different plants have been traditionally used in folkloric medicine to treat many diseases and disorders or to improve human health due to their secondary metabolites which have excellent antimicrobial activities. *Commiphora gileadensis* and *Abutilon bidentatum* were collected from Al-Abwa region, Saudi Arabia, identified, extracted and their antibacterial activity was determined by agar well diffusion method. Extraction by methanol, ethanol, acetone and hot water was carried out and some multidrug-resistant bacteria were used as test bacteria. Maximum activity was recorded for the methanolic extract against all tested bacteria with inhibition zone diameter ranged from 31-35 mm and MIC was ranged 37.5 µg/ml. The lowest activities were recorded for the water extracts of the two plants *Commiphora gileadensis*, and *Abutilon bidentatum*. *Abutilon bidentatum* extract showed weaker antimicrobial activity against the tested bacteria compared to *C. gileadensis* leave extracts. It is noticed that *C. gileadensis* stem extracts showed stronger antimicrobial activity. The methanolic extracts of the two tested plants have no toxicity using *Artemia salina* as a test organism. In conclusion, *C. gileadensis* and *A. bidentatum* can be traditionally and safely used against multidrug-resistant bacteria due to the efficient antimicrobial activities and low toxicity.

Biography

Amal Y Aldhebiani, associate professor in Plant Taxonomy, Biological Sciences Dept. Jeddah, Kingdom of Saudi Arabia. PhD from University of Reading, United Kingdom. Research interest in Flora of Saudi Arabia and medicinal plant in the country, their taxonomy and uses. Phytochemical compounds analysis and their application. Genetic diversity among medicinal plant and how would that affect the chemical constituents and the environmental relation.

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