

Novel antioxidant potential of commonly used plants of Unani system of medicine

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Reactive oxygen species (ROS) mediated oxidative stress, which is involved in several pathological diseases, such as cancer, atherosclerosis, diabetes, inflammation, and aging considered as serious concern globally. Natural antioxidants are playing a leading role to control these devastating conditions. Exogenous dietary antioxidants, called nutraceuticals, are capable of scavenging ROS and have shown potential promise in preventing certain disease conditions. Present investigation has been designed to explore the antioxidant potential of five plants routinely used in the Unani system of medicine. For that, several plants were screened for ROS scavenging activity, and five plants showed better results were selected for further evaluation. 50%

aqueous-methanol extracts were prepared from these five Unani plants, viz. *Cleome icosandra*, *Rosa damascena*, *Cyperus scariosus*, *Gardenia gummifera*, and *Holarrhena antidysenterica* and their *in vitro* scavenging of DPPH, ABTS+, and capacity to prevent oxidative DNA damage were determined. Cytotoxic activity was also determined against the U937 cell line and showed no toxicity. The total phenolic, flavonoid and ascorbic acid contents of the extracts were in the ranges 62.89±0.43 - 166.13±0.56 mg gallic acid equivalent (GAE)/g extract, 38.89±0.52 - 172.23±0.08 mg quercetin equivalent (QEE)/g extract and 0.14±0.09 - 0.98±0.21 mg AA/g extract. In conclusion, these routinely used Unani plants, viz. *C. icosandra*, *R. damascena* and *C. scariosus*, reported to have significant activity against several human ailments, could be exploited as potential sources of natural antioxidants as well as towards the development of dietary antioxidants or nutraceuticals.

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