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Antimicrobial potential of aerial parts of *Dichanthium annulatum* and *Ochthocloa compressa*

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Bahawalpur region is situated in the southern Punjab province in Pakistan. Present study was done to evaluate the biological potential of the methanol and n-hexane extracts of two species of Bahawalpur i.e., *Dichanthium annulatum* and *Ochthocloa compressa* belonging to family Poaceae. Phytochemical studies revealed that various secondary metabolites were strongly present in the methanol extracts of both species. Maximum phenols (263.345 ± 16.35 mg GAE/g) and flavonoids (28.147 ± 0.32 mg QE/g) contents were detected in the methanol extracts of *O. compressa* species. Antioxidant potential of plants was determined via free radical scavenging assays and the antimicrobial assays were performed using agar disc diffusion method. Results revealed maximum antioxidant potential in both extracts of *O. compressa* species as compared to the *D. annulatum*. Similarly, in case of antimicrobial assay, maximum inhibition zones were formed by the extracts of *O. compressa* against most of the tested bacterial and fungal strains. However, *S. typhi*, *W. anomalous*, *A. niger* and *F. oxysporum* were revealed as the most resistant strains and *L. monocytogenes*, *B. spizizenii* and *A. flavus* were revealed as the most sensitive strains. Overall, extracts of *O. compressa* showed significant biological potential as compared to the *D. annulatum* plant extracts. Hence, its crude extract can be used in pharmaceutical industries to cure various infectious diseases caused by resistant microbes.

Biography

Iram Fatima is doing her PhD from Quaid-e-Azam University, Islamabad. She is currently doing part of her PhD research work at Newcastle University, UK under HEC (Higher Education Commission of Pakistan) International Research Support Initiative Program (IRSIP). She has published five papers in reputed journals and has presented her work in various international conferences.

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