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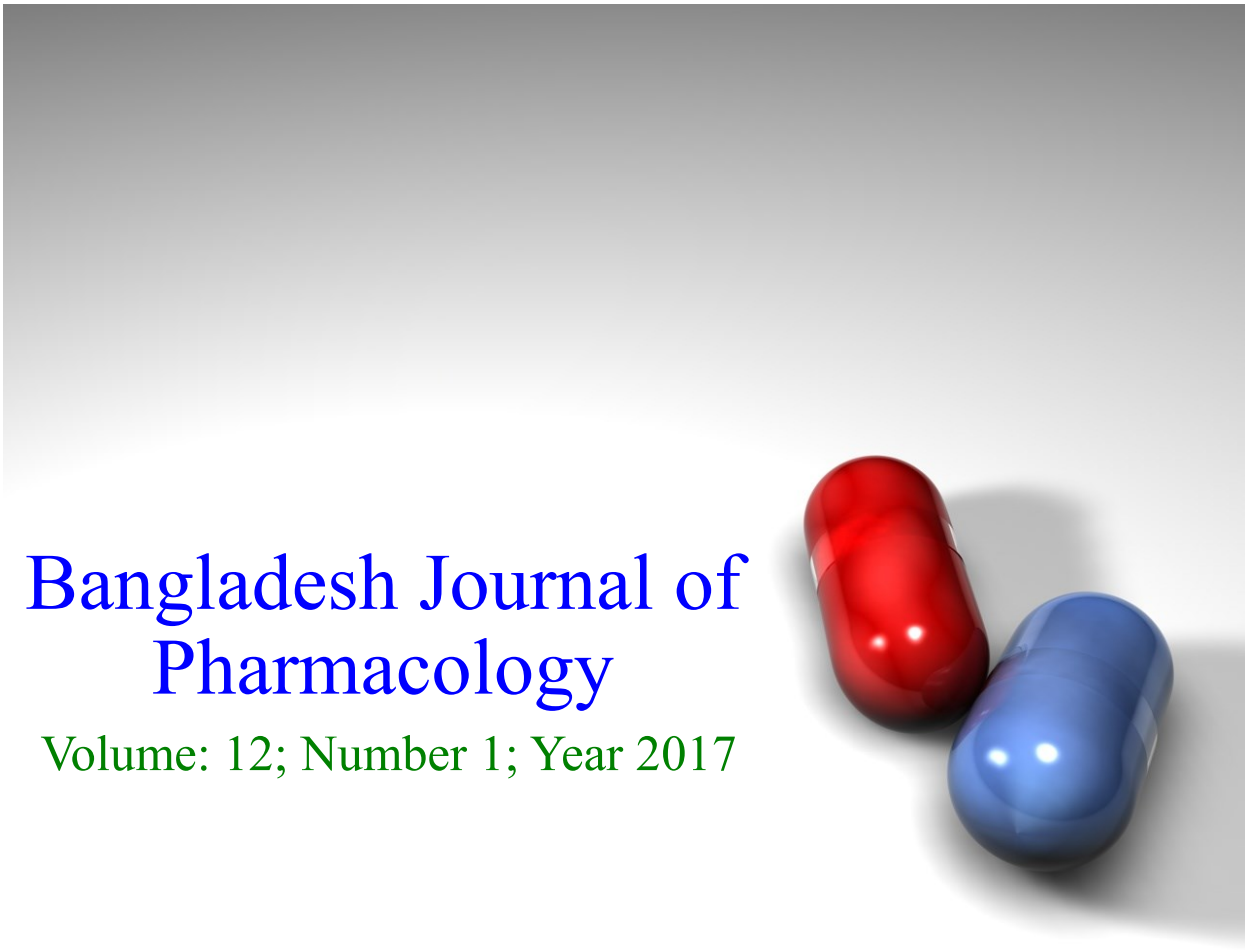

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Letter to the Editor

Pharmacological activities of the methanolic extract of *Quercus dialatata* fruit

Sir,

Natural products have been in practice for the treatment of free radicals (Kokate and Purohit 2004). Reactive oxygen species are increased or in the body the anti-oxidants level decreased thus the balance changes towards the pro-oxidants and this conditions is known as oxidation stress and cellular damage occur in prolong oxidative stress. To solve this problem we can add the antioxidants in a proper amount in our nutrition (Ku and Mun, 2007). According to Rababah et al. (2004) different parts of the plants such as leaves, fruits, oil seed roots and vegetables have the capacity as natural antioxidants. Presently we arranged a study to investigate the methanolic fruit extract of *Quercus dialatat*a a novel plant obtained from hilly areas for antifungal, antioxidant and phytochemical analysis.

Dry fruit of *Q. dialatata* was collected from the North Waziristan Agency and the methanolic extract was prepared using rotary evaporator. Protocol of Duraipandiyan and Ignacimuthu (2009) was used to screen cytotoxic, DPPH and antifungal activities while Re et al. (1999) for ABTS and Nishikimi et al., (1972) for superoxide free radical scavenging activities.

Results of the present study revealed that the crude extract showed that the death of brine shrimp was directly proportional to the concentration of fruit extract and was maximum (70.0%) at 1,000 µg/mL (Table I). Significant scavenging results were obtained during scavenging of free radicals viz; 71.2 ± 2.1% against DPPH, 76.3 ± 2.4% to ABTS and 30 ± 3.5% against superoxide at 600 µg/mL were obtained (Table II). Growth inhibition of 6.8 ± 0.2 and 4.7 ± 0.6 mm were recorded using *Alternaria* and *Fusarium oxysporium* (Figure 1). The results obtained in this study indicate that *C. Dialatota* possesses significant anti-oxidant, antifungal and cytotoxic actvaties which are may be due to the presence of bioactive compounds.

Table I

Survival of brine shrimps in the presence of various concentration of *Q. dialatata* extract

Concentration (µg/mL)	No. of brine shrimp	% Survival
50	10	80.0 ± 1.1
100	10	60.0 ± 1.3
300	10	50.2 ± 1.0
500	10	40.2 ± 1.4
1000	10	30.1 ± 1.7

Data are mean ± SD

Table II

Free radical scavenging activity

Free Radical	% Scavenging ability
DPPH	71.2 ± 2.1
ABTS	76.3 ± 2.4
Superoxide radical	30.0 ± 3.5

Data are mean ± SD

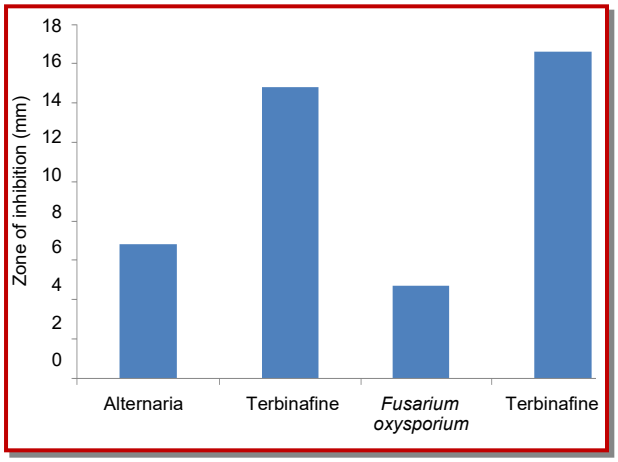

Figure 1: Antimicrobial activity of extract (mm)

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