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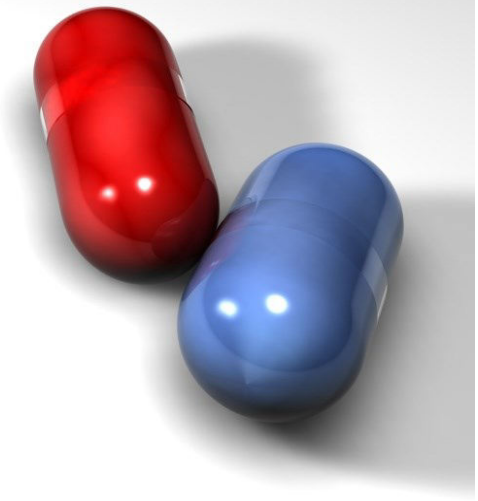

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Letter to the Editor

Antimicrobial activities of *Calligonum polygonoides, Albezia lebeck and Piper nigrum*

Sir,

Medicinal plants play crucial role in prevention of chronic diseases and improving human health. Natural products obtained from medicinal plants play important role as a source of antibiotic and anticancer drugs. According to Cragg et al., (1997), 78% drugs are prepared from medicinal plants and their derived natural bioactive constituents. These evidences provide us a platform to screen various medicinal plants for their bioactive natural products and active metabolites (Suffredini et al., 2004). Present study is aimed to evaluate the antimicrobial activity of *Calligonum polygonoides*, *Albezia lebeck and Piper nigrum* (black pepper).

Two hundred gram of powder from each of the samples were taken and placed in the 70% commercial grade methanol and stirred well, then after passing of 72 hours the extracts were filtered by using qualitative Whatman filter paper. In wise bath the filtrate was placed at 40°C and thus the entire methanol was evaporated, so the crude extract of the plants were obtained and stored in the refrigerator at 4°C for the purpose of future *in vitro* studies.

Various concentrations of the crude extracts, ranging from 30, 15, 7.5, 3.75, 1.875 and 0.86 mg/mL were prepared in distilled water. The antibacterial potency of various fractions of *C. polygonoides* methanol extracts were carried out through protocol of Bagamboula et al., (2003) against *Staphylococcus aureus* and *Escherichia coli*.

The antifungal activity of the plant extracts *Albezia lebeck and P. nigrum* were screened through the agar tube dilution method by using the protocol of Duraipandiyan and Ignacimuthu (2009).

Growth of the Gram-positive bacteria *S. aureus* as well as Gram-negative bacteria *E. coli* was markedly inhibited by *C. polygonoides* (**Table I**). Inhibitory activities against *S. aureus* and *E. coli* were recorded in all concentrations of *C. polygonoides*

The *A. lebeck* and *P. nigrum* extracts showed activity against *Aspergillus niger* followed by *A. flavis* while the highest activity was shown by *A. lebeck* against *A. niger* by 50% and by *P. nigrum* against *A. flavis* 45% (**Table II**). Similarly the terbinafine, a positive control was indicated highly active against this fungal strains, while the DMSO (negative control) indicate zero percent inhibition activity against all the used fungal strains.

Table I: Antibacterial of *Calligonum polygonoides*

Concentration (mg/mL)	Inhibition of growth (mm)	
	E. coli	*S. aureus*
30	15.2 ± 1.5	16.5 ± 0.5
15	13.5 ± 1.2	13.5 ± 0.4
7.5	12.4 ± 0.8	10.4 ± 0.5
3.75	9.4 ± 0.5	9.4 ± 0.6
1.875	-	-
0.86	-	-
Data are mean ± SD		

Table II: Antifungal activity of *Albezia lebeck* and *Piper nigrum* extract (% inhibition)

Strain	Terbinafine	*Albezia lebeck*	*Piper nigrum*
Aspergillus niger	99.4 ± 5.5	50.0 ± 0.0	45.0 ± 0.0
Aspergillus flavius	98.1 ± 3.7	45.0 ± 0.0	40.0 ± 0.0
Data are mean ± SD			

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