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Comparative analytical and pharmacological profiling of biomarker psoralen in antioxidant active extracts of different species of genus *Ficus* by validated HPTLC method

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A simple and sensitive HPTLC method was developed for comparative evaluation of psoralen in the antioxidant active extract of five different species of genus *Ficus* (*Ficus carica*, *Ficus nitida*, *Ficus final*, *Ficus palmata* and *Ficus vest*). The chromatography was performed on glass-backed silica gel 60 F254 precoated HPTLC plates with solvents toluene: methanol (9:1, v/v) as mobile phase. Scanning and quantification was done at wave length 305 nm. The system was found to give compact spot for psoralen at $R_f = 0.55 \pm 0.001$. Psoralen was found only in two species i.e. *F. carica* (0.24%, w/w) and *F. palmata* (1.88%, w/w) and was absent in the remaining three species. The maximum antioxidant activity among all these species were shown by *F. palmata* (93.8% and 96.7%) and *F. carica* (56.6% and 72.8%) in comparison to the other species i.e. *F. nitida* (27% and 40.9%), *F. final* (26.3% and 45.4%) and *F. vest* (11.5% and 28.2%) at low to moderate concentrations (50 and 100 µg/ml), however ascorbic acid used as standard showed 86.4 and 95.5%, respectively. Since psoralen was reported to have antioxidant property hence from the findings of this experiment, we can conclude that the presence of psoralen in *F. carica* and *F. palmata* might be responsible for their better antioxidant response than other species. Since, the given HPTLC method is simple, precise and specific; hence it can be employed for further study of degradation kinetics of psoralen and its determination in plasma and other biological fluids.

Biography

Perwez Alam has completed his PhD at the age of 32 years from Hamdard University, New Delhi (India). He served two years in the field of education in India and then moved to King Saud University (Riyadh) as an Assistant Professor in the Department of Pharmacognosy. He has published more than 20 papers in reputed journals. He has attended 40 national and international conferences.

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