



Assessment of phylogenetic relationship of rare plant species collected from Saudi Arabia using internal transcribed spacer sequences of nuclear ribosomal DNA

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ABSTRACT. The rare and endangered plants of any country are important genetic resources that often require urgent conservation measures. Assessment of phylogenetic relationships and evaluation of genetic diversity is very important prior to implementation of conservation strategies for saving rare and endangered plant species. We used internal transcribed spacer sequences of nuclear ribosomal DNA for the evaluation of sequence identity from the available taxa in the GenBank database by using the Basic Local Alignment Search Tool (BLAST). Two rare plant species viz, *Heliotropium strigosum* claded with *H. pilosum* (98% branch support) and *Pancratium tortuosum* claded with *P. tenuifolium* (61% branch support) clearly. However, some species, viz *Scadoxus multiflorus*, *Commiphora myrrha* and *Senecio hadiensis* showed close relationships with more than one species. We conclude that nuclear ribosomal internal transcribed spacer sequences are useful markers for phylogenetic study of these rare plant species in Saudi Arabia.

Key words: nrDNA; Conservation measures; BLAST; Rare species