

The Molecular Characteristic of *Heliotropium digynum* in Saudi Arabia by Inter-Simple Sequence Repeat (ISSR) Analysis

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Abstract : *Heliotropium digynum*, a member of Boraginaceae family, the growth of the plant, as well as its size, length of inflorescence, and speed of development depends on the amount of rain in its habitat. In this study, we studied the applicability of inter-simple sequence repeat (ISSR) polymorphism in *Heliotropium digynum* in a different region of Saudi Arabia. We found that. ISSR analysis using 15 primers were used for ISSR-PCR optimization trials, five primers (UBC810, UBC811, UBC818, UBC834, and UBC849) which gave the best amplification results produced a total of 43 polymorphic bands. The number of polymorphic loci was 20 and the percentage of polymorphism was 90.47%. The similarity result indicates the presence of a high-level genetic diversity between populations and a dendrogram constructed by UPGMA method.

Keywords : genetic differentiation, genetic diversity, *Heliotropium digynum*, ISSR

Conference Title : ICCMB 2015 : International Conference on Cellular and Molecular Biology

Conference Location : London, United Kingdom

Conference Dates : March 14-15, 2015