

GENETIC VARIABILITY STUDIES IN *ALOE VERA* USING RAPD MARKERS

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Abstract: Studies were conducted to evaluate the genetic diversity among twenty genotypes of Aloe vera using the RAPD markers. RAPD analysis with ten primers generated all polymorphic bands and no monomorphic band was observed. The number of polymorphic allele ranged from 2 to 6 with different primers. Genetic diversity of twenty genotypes as estimated by polymorphic information content (PIC) value ranged from 0.52 to 0.96. The cluster dendrogram of RAPD showed similarity values from 0.65 to 0.92. Dandrogram generated using RAPD data showed two major clusters. Cluster I consist of two genotypes however, cluster II included eighteen genotypes. Dendrogram revealed that Rishakesh Aloe-1 was distinctly related with home Aloe at a similarity coefficient 0.54. PIC values of RAPD primers namely MAP-4, MAP-1 and MAP-9 were 0.96, 0.88, 0.86, respectively and provides maximum accessions coverage in the aloe vera genome. These RAPD primers are useful for genetic variability studies in aloe vera.

Keywords: RAPD, *Aloe vera*, Genetic variability

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