



**ASSESSMENT OF GENETIC DIVERSITY OF *ANEMONE NARCISSIFLORA*
FROM *RANUNCULACEAE* FAMILY POPULATIONS BY USING RAPD-PCR
MOLECULAR MARKERS**

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ABSTRACT

Species of *Anemone narcissiflora* is belong to *Anemone* genus of *Ranunculaceae* family. This species has two subspecies named *narcissiflora* and *willdenowii* which the latest is recorded in Iran in 2010.

Some samples of *Anemone narcissiflora* is gathered from regions of East Azarbayjan province, Iran to study the genetic diversity of the species by using RAPD molecular markers and estimation of genetic diversity were evaluated by using 7 random primers with 10 nucleotides by using PCR-RAPD method. 39 polymorphic bands were produced from the seven primers used in this technique that the maximum bands were related to the RP1 primer, the lowest bands were related to the RP7 and the average bands for all primers were 6.5 polymorphic bands. Cluster analysis of samples is done by upgma method in NTSYSpc 2.02 software.

Dendrogram resulting from separated bands showed that the studied samples can be divided into two groups. The first group includes samples of one flower and two flowers and the second group consists of two sub-groups which the first subgroup consists of three flowers, four flowers and five flowers samples, and the second subgroup consists of six and seven flowers samples. The results of the comparison and analysis of the data obtained from RAPD technique and similarity matrix represented the genetic variation between collected samples.