



## Molecular characterization and RAPD analysis of *Juniperus* species from Iran

J. Kasaian<sup>1</sup>, J. Behravan<sup>1,2</sup>, M. Hassany<sup>1</sup>, S.A. Emami<sup>2</sup>, F. Shahriari<sup>3</sup> and M.H. Khayat<sup>2</sup>

<sup>1</sup>Biotechnology Research Center, Mashhad University of Medical Sciences, Mashhad, Iran

<sup>2</sup>Faculty of Pharmacy, Mashhad University of Medical Sciences, Mashhad, Iran

<sup>3</sup>Faculty of Agriculture, Ferdowsi University of Mashhad, Mashhad, Iran

Corresponding author: J. Kasaian

E-mail: kasaeianj1@mums.ac.ir

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**ABSTRACT.** The genus *Juniperus* L. (Cupressaceae), an aromatic evergreen plant, consists of up to 68 species around the world. We classified five species of *Juniperus* found in Iran using molecular markers to provide a means for molecular identification of Iranian species. Plants were collected (three samples of each species) from two different provinces of Iran (Golestan and East Azarbayejan). The DNA was extracted from the leaves using a Qiagen Dneasy Plant Mini Kit. Amplification was performed using 18 ten-mer RAPD primers. Genetic distances were estimated based on 187 RAPD bands to construct a dendrogram by means of unweighted pair group method of arithmetic means. It was found that *J. communis* and *J. oblonga* were differentiated from the other species. Genetic distance values ranged from 0.19 (*J. communis* and *J. oblonga*) to 0.68 (*J. communis* and *J. excelsa*). *Juniperus foetidissima* was found to be most similar to *J. sabina*. *Juniperus excelsa* subspecies *excelsa* and *J. excelsa* subspecies *polycarpus* formed a distinct group.

**Key words:** *Juniperus*; RAPD markers; DNA amplification; Genetic distance; Iran