

عنوان مقاله:

Investigation of Genetic Diversity in Different Species of Salvia Medicinal Plant by ISSR Markers

محل انتشار:

مجله سلول و تحقیقات مولکولی، دوره 15، شماره 1 (سال: 1402)

تعداد صفحات اصل مقاله: 6

نویسنده:

Zahra Sepehry Javan - Department of Biology, Faculty of Science, Mohaghegh Ardabili University, Ardabil, Iran

خلاصه مقاله:

Salvia is the largest genus in the Lamiaceae family in the world and Iran contains 58 species. This genus contains over 900 species of annual and perennial herbaceous plants and differs from other lamias in the unusual structure of their plumage. Information on important medicinal plants' genetic diversity and population structure is well documented in the literature. Increased genetic diversity can reduce the negative effects of inbreeding on populations. We investigated genetic variation among eight Salvia species using ISSR molecular markers. ISSR is a molecular marker amplified by PCR using microsatellite primers. Samples were gathered from various locations in Iran. Most samples were assigned to Ardabil city. Twenty randomized ISSR primers were used, generating different polymorphic bands. The 20 ISSR primers generated 225 valuable bands and 221 bands were polymorphic (98/2%). Pairwise genetic distances ranged from 0.083 to 0.577. Dendrograms were generated using the UPGMA method using NTSYSpc 2.02i software to identify seven major groups from eight Salvia species. The polymorphism levels observed in the present study represent a high degree of genetic diversity among Salvia species. Following the first study on the genetic relationships of eight species of Salvia in Iran using RAPD and ISSR molecular markers, this study was performed using the ISSR molecular marker to investigate the genetic relationships of eight other species of Salvia. The results of this research represented that the molecular markers of the ISSR are suitable for assessing genetic variation and evolutionary relationships among Salvia species, showing a wide range of dispersal.

کلمات کلیدی:

Primer, ISSR, Salvia, UPGMA, dendrogram

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/1903427>

