عنوان مقاله:

Phylogenetic Analysis of PAL Gene in Different Plant Species

محل انتشار:

سومین کنفرانس ملی و اولین کنفرانس بین المللی پژوهش های کاربردی در علوم شیمی و مهندسی شیمی و سومین کنفرانس ملی و اولین کنفرانس بین المللی پژوهش های کاربردی در زیست شناسی (سال: 1395)

تعداد صفحات اصل مقاله: 4

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خلاصه مقاله:

Flavonoids and phenolic acids are one of the most important groups of plant phenolic compounds. They play undeniable role in the plant production of secondary metabolites, plant metabolism, plant stress tolerance and also human health. PAL (phenylalanine ammonia-lyase) is a key enzyme in the pathway leading to the synthesis of plant phenolic compounds that recently in the medical field is administered oral form for treatment of phenylketonuria. The purpose of this study was bioinformatic analysis of PAL gene. Phylogenetic comparison were performed for the genes responsible for phenylalanine ammonia lyase (PAL) enzyme in ten plant species. Results of phylogenetic analysis showed that the closest genetic distance was found between species of Malus hybrid and Pyrus communis and whereas the most genetic distance were observed between Saccharum hybrid species and all other species. The maximum percentage of cytosine and guanine was observed in Saccharum hybrid cultivar HSF-240 and the maximum percentage of adenine and thymine was related to Astragalus membranaceus

کلمات کلیدی:

Genetic diversity, phylogenetic tree, flavonoids