

عنوان مقاله:

Expression of ۴ Genes in *Ocimum basilicum* and their Relationship with Phenylpropanoids Content

محل انتشار:

مجله گیاهان دارویی و محصولات فرعی، دوره 1، شماره 1 (سال: 1391)

تعداد صفحات اصل مقاله: 12

نویسندگان:

Jaleh Tahsili - *Department of Plant Biology, Faculty of Biological Sciences, Tarbiat Modares University, P.O. Box 14115-154 Tehran, I.R Iran*

Mohsen Sharifi - *Department of Plant Biology, Faculty of Biological Sciences, Tarbiat Modares University, P.O. Box 14115-154 Tehran, I.R Iran*

Mehrdad Behmanesh - *Department of Genetics, Faculty of Biological Sciences, Tarbiat Modares University, P.O. Box 14115-154 Tehran, I.R Iran*

Nahid Pourbozorgi-Rudsari - *Department of Plant Biology, Faculty of Biological Sciences, Tarbiat Modares University, P.O. Box 14115-154 Tehran, I.R Iran*

Mahbobeh Ziaei - *National Institute of Genetic Engineering and Biotechnology, P.O Box 14965-161 Tehran, I.R Iran*

خلاصه مقاله:

Recent data showed that phenylpropanoid compound, methylchavicol is essential component of Iranian cultivars of basil. Studying their occurrence during development of plant may help to elucidate the role of phenylpropanoids in plant cell physiology. We followed the phenylpropanoids concentration and the expression of genes related to their biosynthesis during growth and development of two cultivars of Iranian basil. Cinnamate ۴-hydroxylase (C۴H), ۴-Coumarate CoA ligase (۴CL), Eugenol O-methyltransferase (EOMT) and Chavicol O-methyl transferase (CVOMT) are known as key enzymes regulating phenylpropanoids production. The yield of essential oils and concentration of phenylpropanoid, methylchavicol, increased during growth of the plant to reach a peak before pre-flowering stage. Gene expression analyses showed that the expression of the genes encoding C۴H, ۴CL, EOMT and CVOMT are increased during the plant development in parallel to the methylchavicol reaching a maximum before pre-flowering. These correlations showed that the biosynthesis of phenylpropanoid may regulated at transcriptional level.

کلمات کلیدی:

Ocimum basilicum L, Phenylpropanoid, ۴CL (۴Coumarate CoA ligase), C۴H (Cinnamate ۴-hydroxylase), EOMT ((Eugenol O-methyltransferase), CVOMT (Chavicol O-methyltransferase)

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/1834080>



