

Title (en)
GENETIC MANIPULATION OF ISOFLAVONOIDS

Title (de)
GENETISCHE VERÄNDERUNG VON ISOFLAVONOIDEN

Title (fr)
MANIPULATION GENETIQUE D'ISOFLAVONOIDES

Publication
EP 1161540 A1 20011212 (EN)

Application
EP 00916134 A 20000308

Priority
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• US 12326799 P 19990308

Abstract (en)
[origin: WO0053771A1] Soybean and Medicago truncatula CYP93C genes have been isolated which encode a cytochrome P450 that can catalyze the aryl migration of a flavanone to yield an isoflavanone intermediate or an isoflavone. Plants can now be genetically engineered to produce isoflavones that provide potential human health benefits and increase disease resistance in plants. Isoflavones can now be produced in transgenic plants species in which isoflavones do not naturally occur, i.e., in species other than legumes. Alternatively, introducing infection-inducible isoflavonoid biosynthesis into non-legumes qualitatively complements these plants' phytoalexin defenses against microbial pathogens, whereas over-expression of the isoflavonoid pathway in legumes quantitatively increases this defense response. Finally, modifying the extend of production of isoflavonoids in legume roots positively impacts nodulation efficiency and therefore plant yield.

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Citation (search report)
See references of WO 0053771A1

Citation (examination)
• WO 0044909 A1 20000803 - DU PONT [US], et al
• DATABASE EMBL [online] 1 April 1999 (1999-04-01), AKASHI ET AL.: "Glycyrrhiza echinata CYP Ge-8 mRNA for cytochrome P450, complete CDS", Database accession no. AB023636

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