

Title (en)

INTERCONVERSION OF PLANT FATTY ACID DESATURASES AND HYDROXYLASES

Title (de)

UMWANDLUNG VON PFLANLICHEN FETTSÄURE-DESATURASEN UND HYDROXYLASEN

Title (fr)

INTERCONVERSION DE DESATURASES ET D'HYDROXYLASES D'ACIDES GRAS VEGETAUX

Publication

**EP 1071785 A2 20010131 (EN)**

Application

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Abstract (en)

[origin: WO9953073A2] A method is provided for modifying a fatty acyl desaturase to a fatty acyl hydroxylase consisting of identifying and changing as few as four amino acid residues that are conserved in functionally equivalent desaturase enzymes from various plant species but that are not identical in fatty acyl hydroxylases that exhibit significant overall sequence similarity to the fatty acyl desaturases, and which catalyze hydroxylation at one of the carbon residues on the fatty acyl substrate that is desaturated by the corresponding desaturase; the modifications being made by changing the amino acid residue so that it is identical or functionally equivalent to the amino acid residue found in the naturally occurring hydroxylase. Also provided is a similar method of modifying a fatty acyl hydroxylase to a fatty acyl desaturase by changing seven or fewer amino acid residues. Transgenic plants and products of such transgenic plants wherein the plants have been modified to produce a modified hydroxylase or desaturase are also provided.

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