

Title (en)

MODIFICATION OF FATTY ACID METABOLISM IN PLANTS

Title (de)

VERÄNDERUNG DES FETTSÄURESTOFFWECHSELS IN PFLANZEN

Title (fr)

MODIFICATION DU METABOLISME DES ACIDES GRAS DANS DES PLANTES

Publication

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Application

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Priority

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Abstract (en)

[origin: WO9945122A1] Methods and systems to modify fatty acid biosynthesis and oxidation in plants to make new polymers are provided. Two enzymes are essential: a hydratase such as D-specific enoyl-CoA hydratase, for example, the hydratase obtained from *Aeromonas caviae*, and a beta -oxidation enzyme system. Some plants have a beta -oxidation enzyme system which is sufficient to modify polymer synthesis when the plants are engineered to express the hydratase. Examples demonstrate production of polymer by expression of these enzymes in transgenic plants. Examples also demonstrate that modifications in fatty acid biosynthesis can be used to alter plant phenotypes, decreasing or eliminating seed production and increasing green plant biomass, as well as producing polyhydroxyalkanoates.

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