Title (en)

PROCESS FOR PRODUCING ARACHIDONIC ACID AND/OR EICOSAPENTAENOIC ACID IN PLANTS

Title (de)

VERFAHREN ZUR HERSTELLUNG VON ARACHIDONSÄURE UND/ODER EICOSAPENTAENSÄURE IN PFLANZEN

Title (fr)

PROCÉDÉ DE FABRICATION D'ACIDE ARACHIDONIQUE ET/OU D'ACIDE EICOSAPENTAÉNOÏQUE DANS DES PLANTES

Publication

EP 2046960 A1 20090415 (DE)

Application

EP 07787358 A 20070711

Priority

- EP 2007057084 W 20070711
- DE 102006034313 A 20060721

Abstract (en)

[origin: WO2008009600A1] The present invention relates to a process for producing arachidonic acid (= ARA) or eicosapentaenoic acid (= EPA) or arachidonic acid and eicosapentaenoic acid, advantageously in the seed of transgenic plants of the family Brassicaceae having a content of ARA or EPA, or ARA and EPA, of at least 3% by weight, based on the total lipid content of the transgenic plant, by introducing into the organism nucleic acids which code for polypeptides having ?-6-desaturase, ?-6-elongase and ?-5-desaturase activity, wherein, as a result of the enzymatic activity of the introduced enzymes, a fatty acid selected from the group consisting of the fatty acids oleic acid [C18:1^{?9}], linoleic acid [C18:2^{?9, 12}], a-linolenic acid [C18:3^{?6, 9, 12}], eicosenoic acid (20:1^{?11}) and erucic acid [C22:1^{?13}] is reduced by at least 10% compared with the nontransgenic wild type plant. Advantageously, other enzymes selected from the group of the enzymes ?-3-desaturases, ?-12-desaturases, ?-6-desaturases, ?-6-elongases, ?-5-desaturases, ?-5-elongases and/or ?-4-desaturases can be introduced into the plants.

IPC 8 full level

C12N 15/82 (2006.01); **A23L 1/30** (2006.01); **A61K 31/202** (2006.01); **C07K 14/415** (2006.01)

CPC (source: EP US)

A23L 33/12 (2016.07 - EP US); **C12N 9/0083** (2013.01 - EP US); **C12N 9/1029** (2013.01 - EP US); **C12N 15/8247** (2013.01 - EP US)

Citation (search report)

See references of WO 2008009600A1

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC MT NL PL PT RO SE SI SK TR

Designated extension state (EPC)

AL BA HR MK RS

DOCDB simple family (publication)

WO 2008009600 A1 20080124; AU 2007276257 A1 20080124; CA 2658273 A1 20080124; DE 102006034313 A1 20080124; EP 2046960 A1 20090415; US 2009172837 A1 20090702

DOCDB simple family (application)

EP 2007057084 W 20070711; AU 2007276257 A 20070711; CA 2658273 A 20070711; DE 102006034313 A 20060721; EP 07787358 A 20070711; US 37442907 A 20070711