

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

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Application

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Priority

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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 Δ -6-desaturase, Δ -6-elongase and Δ -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^{Δ 9}], linoleic acid [C18:2^{Δ 9, 12}], α -linolenic acid [C18:3^{Δ 6, 9, 12}], eicosenoic acid (20:1^{Δ 11}) and erucic acid [C22:1^{Δ 13}] is reduced by at least 10% compared with the nontransgenic wild type plant. Advantageously, other enzymes selected from the group of the enzymes Δ -3-desaturases, Δ -12-desaturases, Δ -6-desaturases, Δ -6-elongases, Δ -5-desaturases, Δ -5-elongases and/or Δ -4-desaturases can be introduced into the plants.

IPC 8 full level

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