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(54) Title: FATTY ACID SYNTHETASE, POLYNUCLEOTIDE ENCODING THE SAME, AND USES THEREOF

(57) Abstract: The present invention provides fatty acid synthetases which are responsible for novel fatty acid synthesis, polynucleotides which encode such fatty acid synthetases (e.g., a polynucleotide comprising (a) a polynucleotide consisting of the nucleotide sequence of Positions 1 to 12486 of SEQ ID NO: 1, or (b) a polynucleotide which hybridizes under stringent conditions to a polynucleotide comprising a nucleotide sequence complementary to the nucleotide sequence of Positions 1 to 12486 of SEQ ID NO: 1, and which encodes a protein having a fatty acid synthetase activity), expression vectors and transformants comprising such polynucleotides, methods for producing food and other products using such transformants, food products produced by such methods, and methods for assessing and selecting lipid-producing test fungi.

INTERNATIONAL SEARCH REPORT

International application No
PCT/JP2007/059815

A. CLASSIFICATION OF SUBJECT MATTER
INV. C12N9/10 C12N15/63 C12N5/10

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
C12N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)
EPO-Internal, WPI Data, PAJ, BIOSIS, Sequence Search

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X Y X	US 2004/172681 A1 (VOELKER TONI A [US] ET AL) 2 September 2004 (2004-09-02) the whole document -& DATABASE Geneseq [Online] 23 September 2004 (2004-09-23), "Schizosaccharomyces pombe fatty acid synthase subunit alpha." XP002450605 retrieved from EBI accession no. GSP:ADQ26426 Database accession no. ADQ26426	1,2,7-12 1-20 1,2,7

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[X] Further documents are listed in the continuation of Box C.

[X] See patent family annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

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"P" document published prior to the international filing date but later than the priority date claimed

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"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

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Name and mailing address of the ISA/	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL – 2280 HV Rijswijk Tel. (+31–70) 340–2040, Tx. 31 651 epo nl, Fax: (+31–70) 340–3016	Perez, Caroline

INTERNATIONAL SEARCH REPORT

International application No
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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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Y	page 620, paragraphs 2,3	1-20
A	SCHWEIZER ECKHART ET AL: "Microbial type I fatty acid synthases (FAS): Major players in a network of cellular FAS systems" MICROBIOLOGY AND MOLECULAR BIOLOGY REVIEWS, vol. 68, no. 3, September 2004 (2004-09), pages 501-517, 500, XP002450537 ISSN: 1092-2172 cited in the application page 506 - page 508	1-20

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No
PCT/JP2007/059815

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		EP 1583417 A2	12-10-2005
		WO 2004056848 A2	08-07-2004