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(54) Title: PRODUCTION OF CANTHAXANTHIN BY PHAFFIA

(57) Abstract: Disclosed is a process for producing canthaxanthin and echinenone which comprises cultivating a recombinant microorganism which is expressing a ß-carotene ketolase gene and belonging to the genus Xanthophyllomyces (Phaffia) in an aqueous nutrient medium under aerobic conditions, and isolating the resulted carotenoids from the cells of said recombinant microorganism or from the cultured broth.

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INTERNATIONAL SEARCH REPORT

International Application No
PCT/EP 03/10294

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 C12P23/00 C12N9/02

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)
IPC 7 C12P 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, EMBASE, BIOSIS

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6 291 204 B1 (PASAMONTES LUIS ET AL) 18 September 2001 (2001-09-18) cited in the application column 1 column 5 ---	1-8
X	US 6 365 386 B1 (HOSHINO TATSUO ET AL) 2 April 2002 (2002-04-02) cited in the application column 1 -column 4 ---	1-8
Y	EP 1 111 067 A (HOFFMANN LA ROCHE) 27 June 2001 (2001-06-27) page 1 --- -/--	1-8

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

[X] Patent family members are listed in annex.

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Date of the actual completion of the international search	Date of mailing of the international search report
21 January 2004	01/03/2004

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	Schneider, P

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PCT/EP 03/10294

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication,where appropriate, of the relevant passages	Relevant to claim No.
Y	MISAWA NORIHIKO ET AL: "Canthaxanthin biosynthesis by the conversion of methylene to keto groups in a hydrocarbon beta-carotene by a single gene" BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS, vol. 209, no. 3, 1995, pages 867-876, XP002264744 ISSN: 0006-291X abstract; figure 5 -----	1-8

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