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(54) Title: ASTAXANTHIN-EXPRESSING YEAST AS FEED ADDITIVE FOR AQUACULTURE

Phagocytic Capability

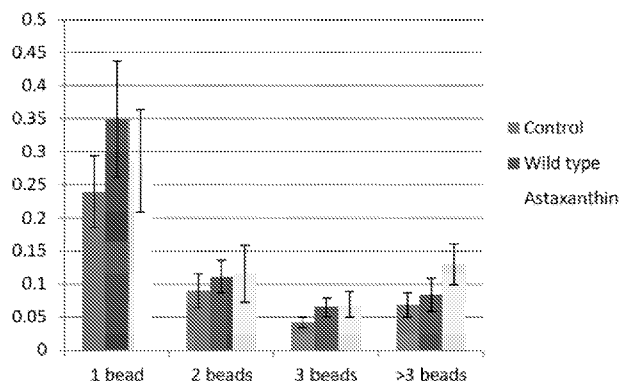


Figure 2

(57) Abstract: The present invention provides a feed additive composition comprising a recombinant polynucleotide sequence for producing astaxanthin or a plurality of recombinant yeast cells capable of expressing astaxanthin, for improving the immune and growth functions of aquatic animals, including finfish and shellfish, upon ingestion.



DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT,
LU, LV, MC, ME, MK, MT, NL, NO, PL, PT, RO, RS, SE,
SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN,
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A. CLASSIFICATION OF SUBJECT MATTER A23K 10/10(2016.01)i; A23K 20/179(2016.01)i; A23K 50/80(2016.01)i; A23K 10/22(2016.01)i; A23K 10/16(2016.01)i; A23K 20/158(2016.01)i 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) A23K 10/10(2016.01); A23C 21/00(2006.01); A23J 1/18(2006.01); A23K 10/30(2016.01); A23K 20/111(2016.01); A61K 31/05(2006.01); A61K 9/14(2006.01); A61P 1/00(2006.01); C07D 251/68(2006.01); C12N 9/14(2006.01); C12P 23/00(2006.01) Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Korean utility models and applications for utility models Japanese utility models and applications for utility models Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) eKOMPASS(KIPO internal) & Keywords: feed additive composition, astaxanthin, Kluyveromyces marxianus		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	WO 2018-206573 A1 (EVOLVA SA) 15 November 2018 (2018-11-15) abstract; claims 1-12; paragraphs [0049]-[0066], [0106]; table 3	1-9
Y	US 10865397 B2 (ACADEMIA SINICA) 15 December 2020 (2020-12-15) claim 1; column 2, lines 1-10	1-9
A	WO 2018-146643 A1 (EVOLVA SA) 16 August 2018 (2018-08-16) the entire document	1-9
A	US 2012-0003317 A1 (HIOLLE, A. et al.) 05 January 2012 (2012-01-05) the entire document	1-9
A	US 5486368 A (DE BOER, R. et al.) 23 January 1996 (1996-01-23) the entire document	1-9
☐ Further documents are listed in the continuation of Box C. ☒ See patent family annex.		
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Date of the actual completion of the international search 15 July 2024		Date of mailing of the international search report 15 July 2024
Name and mailing address of the ISA/KR Korean Intellectual Property Office 189 Cheongsa-ro, Seo-gu, Daejeon 35208, Republic of Korea Facsimile No. +82-42-481-8578		Authorized officer HEO, Joo Hyung Telephone No. +82-42-481-5373

INTERNATIONAL SEARCH REPORT
Information on patent family members

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