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(54) Title: HUMAN MILK OLIGOSACCHARIDES FOR TREATING MIGRAINE

(57) Abstract: The invention relates to a human milk oligosaccharide (HMO) for use in, a synthetic composition comprising an HMO for use in and a method for preventing or treating migraine in a human.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/IB2018/059503

A. CLASSIFICATION OF SUBJECT MATTER

A61K 31/702 (2006.01), A61P 25/06 (2006.01)

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)

CPC & IPC: A61K, A61P

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

DK, NO, SE, FI: Classes as above.

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EPODOC, WPI, FULL TEXT: ENGLISH, GERMAN, MEDLINE, XPESP
HCAPLUS, BIOSIS, EMBASE

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 2017198276 A1 (GLYCOM A/S) 23 November 2017. See claims and page 9, lines 3-5; page 10, lines 7-9 and example 1	1-30
X	WO 2013126015 A1 (N.V. NUTRICIA) 29 August 2013. See claims and page 1, lines 1-3; page 10, lines 9-24	1, 10, 14, 15, 21, 30
A	WO 2017103019 A1 (NESTEC S.A.) 22 June 2017. See page 6, lines 6-8 and 19-21; page 3 lines 3-5; page 1 line 7; page 8, lines 10-15 and page 10, line 21	
A	FINEBERG N. A. et al. "P.5.038 Role of the serotonin transporter in migraine with aura", EUROPEAN NEUROPSYCHOPHARMACOL, 2005, Vol. 16, Page S573. See whole document. The linked below can only be opened and printed once. Please remember to print the document when using the link http://www.reprintsdesk.com/landing/dl.aspx?o=5750036&r=12 6646681 This document is protected by copyright. A single copy of this article has been provided for your use. You are responsible for complying with all appropriate copyright laws with your use of this article.	

☒ Further documents are listed in the continuation of Box C. ☒ 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 application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

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

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"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

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
24/01/2019	30/01/2019
Name and mailing address of the ISA Nordic Patent Institute Helgeshøj Allé 81 DK - 2630 Taastrup, Denmark. Facsimile No. + 45 43 50 80 08	Authorized officer Bodil Bernt Hasling Telephone No. +45 43 50 83 75

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	D'ANDREA G. et al.," Tryptamine levels are low in plasma of chronic migraine and chronic tension-type headache", 2014, Vol. 35, No. 12, Pages 1941-1945. See Biosis abstract accession no.:2015:64041	

INTERNATIONAL SEARCH REPORT

International application No.

PCT/IB2018/059503

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.: 6 and 14-30
because they relate to subject matter not required to be searched by this Authority, namely:

Claims 6 and 14-30 relates to a subject matter considered by this Authority to be covered by the provision of Rule 39.1(iv) PCT. Although these claims are directed to a method of treatment of the human or animal body, the search has been carried out based on the alleged effect of the composition. Likewise, an opinion on novelty, inventive step and industrial applicability will be given taking these alleged effects into account.

2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.

2. ☐ As all searchable claims could be searched without effort justifying additional fees, this Authority did not invite payment of additional fees.

3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.

☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.

☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.
PCT/IB2018/059503

Patent document cited in search report / Publication date		Patent family member(s) / Publication date	
WO 2017198276 A1	2017.11.23	None	
WO 2013126015 A1	2013.08.29	WO 2013126015 A8	2013.10.24
WO 2017103019 A1	2017.06.22	AU 2016372446 A1	2018.05.10
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		EP 3389668 A1	2018.10.24
		EP 3389404 A1	2018.10.24
		BR 112018010505 A2	2018.11.13
		US 2018368460 A1	2018.12.27