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(88) Date of publication of the international search report:

24 January 2013

(54) Title: MEDICAL FOOD FOR COGNITIVE DECLINE

(57) Abstract: Nutraceutical formulations that improve cognitive function in adults diagnosed with neurodegenerative disease are provided, which comprise a combination of fisetin and DHA.



WO 2012/159092 A3

A. CLASSIFICATION OF SUBJECT MATTER*A61K 31/352(2006.01)i, A61K 31/35(2006.01)i, A61K 31/20(2006.01)i, A61K 31/23(2006.01)i, A61P 25/00(2006.01)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)

A61K 31/352; A61P 9/00; A61K 36/87; A61K 35/70; A61P 25/28

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 practicable, search terms used)

eKOMPASS(KIPO internal)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2010-0021573 A1 (GONZALEZ, MICHAEL J. et al.) 28 January 2010 See claims 1, 7, 17, 23, abstract.	1-12
A	EP 1419780 A1 (MARTEK BIOSCIENCES CORPORATION) 19 May 2004 See claims 1, 3, 9, abstract.	1-12



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 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

24 OCTOBER 2012 (24.10.2012)

Date of mailing of the international search report

24 OCTOBER 2012 (24.10.2012)

Name and mailing address of the ISA/KR

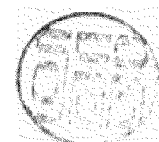
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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US2012/038720**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.: 13-16
because they relate to subject matter not required to be searched by this Authority, namely:
Claims 13-16 pertain to a method for treatment of the human by therapy, and thus relate to a subject matter which this International Searching Authority is not required, under Article 17(2)(a)(i) of the PCT and Rule 39.1(iv) of the Regulations under the PCT, to search.
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 an additional fee, this Authority did not invite payment of any additional fee.
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/US2012/038720

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2010-0021573 A1	28.01.2010	None	
EP 1419780 A1	19.05.2004	AU 6963594 A	03.01.1995
		DE 69433713 D1	19.05.2004
		DE 69435246 D1	03.12.2009
		EP 0831805 A1	12.09.2001
		EP 1419780 B1	21.10.2009
		ES 2335991 T3	07.04.2010
		JP 08-511533 A	03.12.1996
		JP 2008-133286 A	12.06.2008
		US 2005-0027004 A1	03.02.2005
		US 2011-0015160 A1	20.01.2011
		WO 94-28913 A1	22.12.1994