

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
10 May 2001 (10.05.2001)

PCT

(10) International Publication Number
WO 01/32706 A3

(51) International Patent Classification⁷: **C07K 14/47**,
C12N 15/11

(74) Agents: **ISHIMOTO, Lance** et al.; Lexicon Genetics Incorporated, 4000 Research Forest Drive, The Woodlands, TX 77381 (US).

(21) International Application Number: PCT/US00/29852

(22) International Filing Date: 31 October 2000 (31.10.2000)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/163,018 2 November 1999 (02.11.1999) US

(71) Applicant: **LEXICON GENETICS INCORPORATED**
[US/US]; 4000 Research Forest Drive, The Woodlands, TX 77381 (US).

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW.

(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

(88) Date of publication of the international search report:
17 January 2002

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(72) Inventors: **HARRAS, Marie**; 28717 Driftwood Lane, Spring, TX 77381 (US). **DONOHU, Gregory**; 41 Fallenstone Drive, The Woodlands, TX 77381 (US). **TURNER, C., Alexander, Jr.**; 67 Winter Wheat Place, The Woodlands, TX 77381 (US). **NEHLS, Michael**; Paul-Keller-Strasse 6, 82131 Stockdorf (DE). **FRIEDRICH, Glenn**; Breland & Breland, 2207 Hermann Drive, Houston, TX 77004 (US). **ZAMBROWICZ, Brian**; 18 Firethorne Place, The Woodlands, TX 77382 (US). **SANDS, Arthur, T.**; 163 Bristol Bend Circle, The Woodlands, TX 77382 (US).

(54) Title: NOVEL HUMAN TRANSPORTER PROTEINS AND POLYNUCLEOTIDES ENCODING THE SAME

(57) Abstract: Novel human polynucleotide and polypeptide sequences are disclosed that can be used in therapeutic, diagnostic, and pharmacogenomic applications.

WO 01/32706 A3

INTERNATIONAL SEARCH REPORT

International Application No.

PCT/US 00/29852

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C07K14/47 C12N15/11

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 C07K 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)

STRAND, EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DATABASE EMBL [Online] ID: HSM801041, 15 September 1999 (1999-09-15) POUSTKA ET AL.: "Homo sapiens mRNA" XP002163083 abstract	1
A	US 5 882 926 A (KAVANAUGH MICHAEL P ET AL) 16 March 1999 (1999-03-16) the whole document	1,2

☐ Further documents are listed in the continuation of box C.☒ Patent family members are listed in 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

"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

23 May 2001

Date of mailing of the international search report

28.05.01

Name and mailing address of the ISA

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

Authorized officer

Sprinks, M

INTERNATIONAL SEARCH REPORT

In .ational application No.
PCT/US 00/29852

Box I Observations where certain claims were found unsearchable (Continuation of item 1 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.:
because they relate to subject matter not required to be searched by this Authority, namely:

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 II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

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

see additional sheet

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.:

1,2

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1,2

A nucleic acid encoding a putative human transporter protein (SEQ ID NO:24) and subject-matter related thereto.

2. Claim : 3

A nucleic acid encoding a putative human transporter protein (SEQ ID NO:2) and subject-matter related thereto.

3. Claim : 4

A nucleic acid encoding a putative human transporter protein (SEQ ID NO:48) and subject-matter related thereto.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 00/29852

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 5882926 A	16-03-1999	US 5658782 A	19-08-1997
		US 5989825 A	23-11-1999
		US 6074828 A	13-06-2000
		US 5919628 A	06-07-1999
		US 6100085 A	08-08-2000
		US 5932424 A	03-08-1999
		US 6090560 A	18-07-2000
		US 6020479 A	01-02-2000
		US 6060307 A	09-05-2000
		US 5919699 A	06-07-1999
		US 5776774 A	07-07-1998
		US 5912171 A	15-06-1999
		US 5840516 A	24-11-1998
