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(54) Title: POLYMORPHISMS IN THE HUMAN CMOAT GENE AND USES THEREOF

(57) Abstract: This invention relates to polymorphisms in the human cMOAT gene and corresponding novel allelic polypeptides encoded thereby. The invention also relates to methods and materials for analysing allelic variation in the cMOAT gene, and to the use of cMOAT polymorphism in treatment of diseases with cMOAT transportable drugs.

INTERNATIONAL SEARCH REPORT

PCT/GB 02/00651

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 C12Q1/68 C07K16/18 C07K14/705

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 C12Q C07K

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, BIOSIS, MEDLINE, EMBL, PAJ, WPI Data, EMBASE, CHEM ABS Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WADA M ET AL: "Mutations in the canilicular multispecific organic anion transporter (cMOAT) gene, a novel ABC transporter, in patients with hyperbilirubinemia II/Dubin-Johnson syndrome." HUMAN MOLECULAR GENETICS. ENGLAND FEB 1998, vol. 7, no. 2, February 1998 (1998-02), pages 203-207, XP002249633 ISSN: 0964-6906	1,4,7
Y	the whole document	2,5,6

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

[ ] 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
31 July 2003	12/08/2003

Name and mailing address of the ISA	Authorized officer
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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	TOH S ET AL: "Genomic structure of the canalicular multispecific organic anion-transporter gene (MRP2/cMOAT) and mutations in the ATP-binding-cassette region in Dubin-Johnson syndrome." AMERICAN JOURNAL OF HUMAN GENETICS. UNITED STATES MAR 1999, vol. 64, no. 3, March 1999 (1999-03), pages 739-746, XP002249635 ISSN: 0002-9297	1,4,7
Y	the whole document	2,5,6
X	KERB R ET AL: "ABC drug transporters: hereditary polymorphisms and pharmacological impact in MDR1, MRP1 and MRP2." PHARMACOGENOMICS. ENGLAND FEB 2001, vol. 2, no. 1, February 2001 (2001-02), pages 51-64, XP009014717 ISSN: 1462-2416 the whole document	2,7
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X	DATABASE EMBL 'Online! 7 November 1996 (1996-11-07) TANIGUCHI K. ET AL.: "Canalicular multispecific organic anion transporter 'Homo sapiens!" Database accession no. AAB39892 XP002249640 Sequence contains Val1188 the whole document -& TANIGUCHI KEN ET AL: "A human canalicular multispecific organic anion transporter (cMOAT) gene is overexpressed in cisplatin-resistant human cancer cell lines with decreased drug accumulation." CANCER RESEARCH, vol. 56, no. 18, 1996, pages 4124-4129, XP000607845 ISSN: 0008-5472	9

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	TSUJII HIROYUKI ET AL: "Exon-intron organization of the human multidrug-resistance protein 2 (MRP2) gene mutated in Dubin-Johnson syndrome." GASTROENTEROLOGY, vol. 117, no. 3, 1999, pages 653-660, XP009014900 ISSN: 0016-5085 the whole document -& DATABASE EMBL 'Online! 11 June 2003 (2003-06-11) KEPPLER D.: "Multidrug resistance protein 2 (MRP2) (Homo sapiens)" Database accession no. CAB45309 XP002249641 Sequence contains Val1188 ---	9
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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication,where appropriate, of the relevant passages	Relevant to claim No.
Y	PAULUSMA C C ET AL: "CONGENITAL JAUNIDICE IN RATS WITH A MUTATION IN A MULTIDRUG RESISTANCE-ASSOCIATED PROTEIN GENE" SCIENCE, AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE,, US, vol. 271, 23 February 1996 (1996-02-23), pages 1126-1128, XP000606395 ISSN: 0036-8075 the whole document	10