(19) World Intellectual Property Organization

International Bureau





(43) International Publication Date 7 June 2007 (07.06.2007)

(10) International Publication Number WO 2007/064675 A3

- (51) International Patent Classification: *G06Q 50/00* (2006.01)
- (21) International Application Number:

PCT/US2006/045631

(22) International Filing Date:

28 November 2006 (28.11.2006)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

60/740,430 29 November 2005 (29.11.2005) US 60/783,118 16 March 2006 (16.03.2006) US

- (71) Applicant (for all designated States except US): CHIL-DREN'S HOSPITAL MEDICAL CENTER [US/US]; Intellectual Property and Venture Development, 3333 Burnet Avenue, Cincinnati, OH 45229-3039 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): GLAUSER, Tracy, A. [US/US]; 3333 Burnet Avenue, Cincinnati, OH 45229-3039 (US). WENSTRUP, Richard, J. [US/US]; 3333 Burnet Avenue, Cincinnati, OH 45229-3039 (US). VINKS, Alexander, A. [US/NL]; 3333 Burnet Avenue, Cincinnati, OH 45229-3039 (US). PESTIAN, John [US/US]; 3333 Burnet Avenue, Cincinnati, OH 45229-3039 (US).

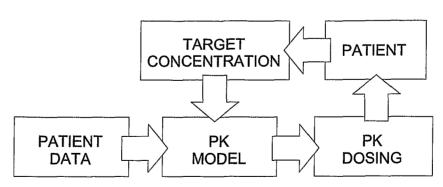
- (74) Agents: WILLIS, Ryan, L. et al.; Taft, Stettinius & Hollister, LLP, 425 Walnut Street, Cincinnati, OH 45202-3957 (US).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments
- (88) Date of publication of the international search report:

20 November 2008

(54) Title: OPTIMIZATION AND INDIVIDUALIZATION OF MEDICATION SELECTION AND DOSING



(57) Abstract: The invention provides population models, methods, and algorithms for targeting a dosing regimen or compound selection to an individual patient. The methods and algorithms of the invention utilize population models that incorporate genotype information for genes encoding drug metabolizing enzymes for one or more compounds of interest. The methods allow integration of genotype information for one or more genes encoding a drug metabolizing enzyme, particularly a cytochrome P450 gene with patient data. The methods allow integration of genotype information and the effect of one or more compounds on one or more drug metabolizing enzymes. The methods allow iterative feedback of drug metabolizing data obtained from a patient into the process of generating a dosage regimen recommendation for a compound of interest for an individual patient.



VO 2007/064675 A

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US06/45631

A. CLAS	SSIFICATION OF SUBJECT MATTER G06Q 50/00(2006.01)		
USPC: According to	705/2 Distribution (IPC) or to both na	ational classification and IPC	
B. FIEL	DS SEARCHED		
Minimum do U.S.: 7	ocumentation searched (classification system followed 105/2	by classification symbols)	
Documentation	on searched other than minimum documentation to the	extent that such documents are included in	n the fields searched
Please See C	ata base consulted during the international search (name continuation Sheet	e of data base and, where practicable, sear	rch terms used)
C. DOC	UMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where a		Relevant to claim No.
X	US 2002/0076774A1 (Yan et al.) 20 June 2002 (20.0 [0018][0088][0151]-[0152].	06.2002), paragraphs [0012][0017]-	1-39
Α	US 2004/0260666A1 (Pestotnik et al) 23 December 2004 (23.12.2004) Abstract and		1-39
A ,	paragraph [0083]. US 2003/0157110 (An et al.) 21 August 2003 (21.08.2003) Abstract. 1-39		1-39
Further	r documents are listed in the continuation of Box C.	See patent family annex.	
* Special categories of cited documents:		"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the	
	t defining the general state of the art which is not considered to be alar relevance	principle or theory underlying the inve	
"E" earlier application or patent published on or after the international filing date		"X" document of particular relevance; the considered novel or cannot be considered when the document is taken alone	
"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)		"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	
"O" document referring to an oral disclosure, use, exhibition or other means		being obvious to a person skilled in the	
"P" document published prior to the international filing date but later than the priority date claimed		"&" document member of the same patent	
		Date of mailing of the international search report	
	(04.06.2008)	19 SEP 2008 Authorized officer	
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450		Joseph Thomas Telephone No. 571-272-3600	
	o. (571) 273-3201		

Form PCT/ISA/210 (second sheet) (April 2007)

	International application No.			
INTERNATIONAL SEARCH REPORT	PCT/US06/45631			
Continuation of B. FIELDS SEARCHED Item 3:				
EAST: USPAT; US_PGPUB; EPO; JPO; SERWENT; IBM_TDB				
search terms: pharmacogenomics, dose-dependent; drug metabolism				
	•			