

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
26 April 2007 (26.04.2007)

PCT

(10) International Publication Number
WO 2007/048074 A1

(51) International Patent Classification:
C12Q 1/68 (2006.01)

(21) International Application Number:
PCT/US2006/041600

(22) International Filing Date: 23 October 2006 (23.10.2006)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/729,055 21 October 2005 (21.10.2005) US
60/758,418 12 January 2006 (12.01.2006) US

(71) Applicant (*for all designated States except US*): **GENE-NEWS INC.** [CA/CA]; Unit 15-800 Petrolia Road, Toronto, Ontario, M3J 3K4 (CA).

(72) Inventors; and

(75) Inventors/Applicants (*for US only*): **LIEW, Choong-chin** [CA/CA]; 81 Millersgrove Drive, Toronto, Ontario, M2R 3S1 (CA). **HAN, Mark** [CN/CA]; 5-3 Four Winds Dr., North York, Ontario, M3J 1K7 (CA). **YAGER, Thomas** [US/CA]; 1268 Cermel Drive, Mississauga, Ontario, L5H 3V4 (CA). **CHAO, Samuel** [CA/CA]; 114 Glen Shield Avenue, Concord, Ontario, L4K 1T6 (CA). **ZHENG, Run** [CA/CA]; 20 Observatory Lane Unit 135, Richmond Hill, Ontario, L4C 0M7 (CA). **ZHANG,**

Hongwei [CA/CA]; 3 Atwood Place, Toronto, Ontario, M9V 1L1 (CA).

(74) Agent: **FRASER, Janis, K.**; FISH & RICHARDSON P.C., P.O. Box 1022, Minneapolis, MN 55440-1022 (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.

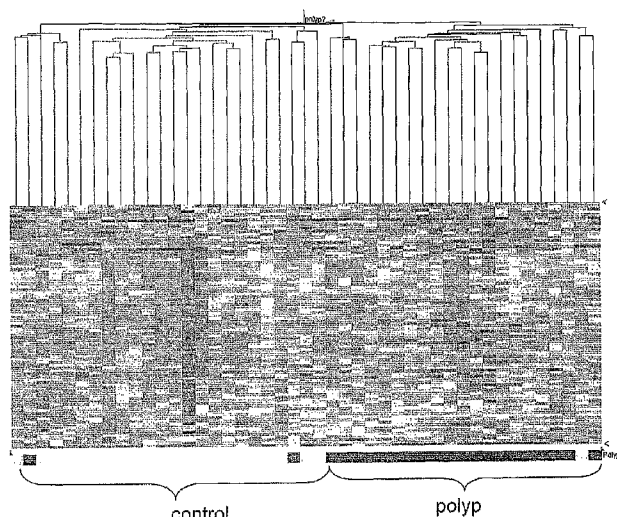
(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, 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).

Declarations under Rule 4.17:

— *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*

[Continued on next page]

(54) Title: METHOD AND APPARATUS FOR CORRELATING LEVELS OF BIOMARKER PRODUCTS WITH DISEASE



(57) Abstract: In one aspect the invention is a method of testing for one or more colorectal pathologies or one or more subtypes of colorectal pathology (in one embodiment colorectal cancer) in a test individual by providing data corresponding to a level of products of selected biomarkers and applying the data to a formula to provide an indication of whether the test individual has one or more colorectal pathologies or one or more subtypes of colorectal pathology. In some aspects the method is computer based and a computer applies the data to the formula. In other aspects a computer system is configured with instructions that cause the processor to provide a user with the indication of whether the test individual has colorectal pathology. Also encompassed are kits for measuring data corresponding to the products of selected biomarkers which in some embodiments include a computer readable medium. Also encompassed are kits and methods of monitoring therapeutic efficacy of treatments for one or more colorectal pathologies.

WO 2007/048074 A1



- *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

Date of publication of the amended claims: 28 June 2007

Published:

- *with international search report*
- *with amended claims*

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.