



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

(21) International Application Number:
PCT/US2012/053114

(22) International Filing Date:
30 August 2012 (30.08.2012)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
61/529,917 31 August 2011 (31.08.2011) US

(71) Applicant (for all designated States except US): **GEN-
ENTECH, INC.** [US/US]; 1 DNA Way, South San Fran-
cisco, California 94080 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **SHAMES, David**
[US/US]; c/o Genentech, Inc., 1 DNA Way, South San
Francisco, California 94080 (US). **JANUARIO, Thomas**
E. [US/US]; c/o Genentech, Inc., 1 DNA Way, South San
Francisco, California 94080 (US).

(74) Agents: **ROPP, Traci H.** et al.; Genentech, Inc., 1 DNA
Way, MS-49, South San Francisco, California 94080 (US).

(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY,
BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM,
DO, 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, LY, MA, MD,
ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI,
NO, NZ, OM, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW,
SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, 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, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ,
UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ,
TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK,
EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV,
MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM,
TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW,
ML, MR, NE, SN, TD, TG).

Published:

- with international search report (Art. 21(3))
- with sequence listing part of description (Rule 5.2(a))

(54) Title: DIAGNOSTIC MARKERS

(57) Abstract: The present invention provides methods of predicting response to a cancer therapy based on the methylation status of the ERBB2 gene. One aspect of the invention provides a method of predicting response to an EGFR inhibitor therapy based on the methylation status of the ERBB2 gene.



WO 2013/033380 A1