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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
28 July 2011 (28.07.2011)

PCT

(10) International Publication Number
WO 2011/089101 A1

(51) International Patent Classification:
A61K 39/395 (2006.01) *G01N 33/574* (2006.01)

(21) International Application Number:
PCT/EP2011/050564

(22) International Filing Date:
18 January 2011 (18.01.2011)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
10151109.5 19 January 2010 (19.01.2010) EP

(71) Applicant *(for all designated States except US)*: **F. HOFFMANN-LA ROCHE AG** [CH/CH]; Grenzacherstrasse 124, CH-4070 Basel (CH).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **DELMAR, Paul** [FR/CH]; Hammerstrasse 89, CH-4057 Basel (CH). **FOERNZLER, Dorothee** [DE/CH]; Eisengasse 16, CH-5600 Lenzburg (CH). **SCHERER, Stefan** [DE/US]; Genentech, Inc., 1 DNA Way, South San Francisco, California 94080 (US).

(74) Agent: **WAECHTER, Dieter**; Grenzacherstrasse 124, CH-4070 Basel (CH).

(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, 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, RO, RS, RU, 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, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, 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))*

— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*

— *with sequence listing part of description (Rule 5.2(a))*

(54) Title: TUMOR TISSUE BASED BIOMARKERS FOR BEVACIZUMAB COMBINATION THERAPIES

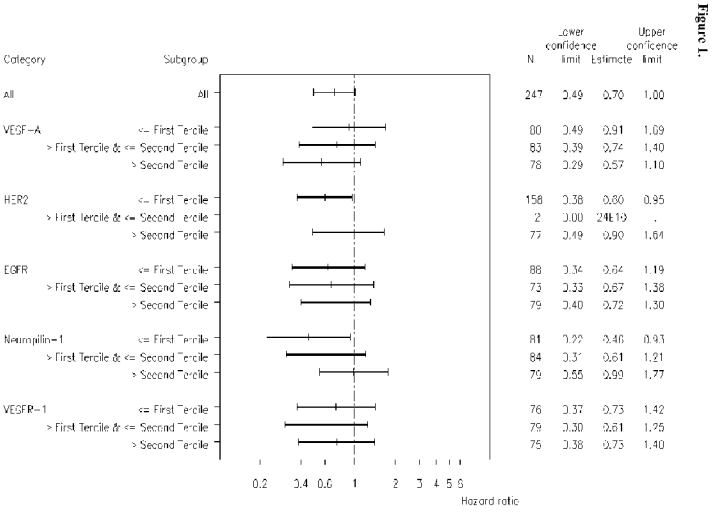


Figure 1.

(57) Abstract: The present invention provides methods for improving the progression- free survival of a patient suffering from gastrointestinal cancer, in particular, metastatic colorectal cancer (mCRC), by treatment with bevacizumab (Avastin®) in combination with a chemotherapy regimen by determining the expression level of one or more of VEGFA, HER2 and neuropilin relative to control levels in patients diagnosed with gastrointestinal cancer, in particular, metastatic colorectal cancer (mCRC). The present invention further provides for methods for assessing the sensitivity or responsiveness of a patient to bevacizumab (Avastin®) in combination with a chemotherapy regimen, by determining the expression level of one or more of VEGFA, HER2 and neuropilin relative to control levels in patients diagnosed with gastrointestinal cancer, in particular, metastatic colorectal cancer (mCRC).

WO 2011/089101 A1