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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
16 November 2006 (16.11.2006)

PCT

(10) International Publication Number
WO 2006/119980 A1

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

(21) International Application Number:
PCT/EP2006/004370

(22) International Filing Date: 10 May 2006 (10.05.2006)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
05010244.1 11 May 2005 (11.05.2005) EP
05011070.9 23 May 2005 (23.05.2005) EP

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

(71) Applicant *(for US only)*: **BRENNSCHEIDT, Sabine** (legal representative of the deceased inventor) [DE/DE]; Karl-Schmidt-Strasse 1c, 79312 Emmendingen (DE).

(72) Inventor: **BRENNSCHEIDT, Ulrich** (deceased).

(72) Inventors; and
(75) Inventors/Applicants *(for US only)*: **HELLER, Astrid** [DE/DE]; Falkenstrasse 9, 82377 Penzberg (DE). **LUTZ, Verena** [DE/DE]; Unterbrunnerstrasse 14, 81475 Muenchen (DE). **MOECKS, Joachim** [DE/DE]; Max-Joseph-Strasse 9, 68167 Mannheim (DE). **WARD, Carol** [GB/FR]; 30 Rue Des Vignes, F-68510 Helfrantzkirch (FR).

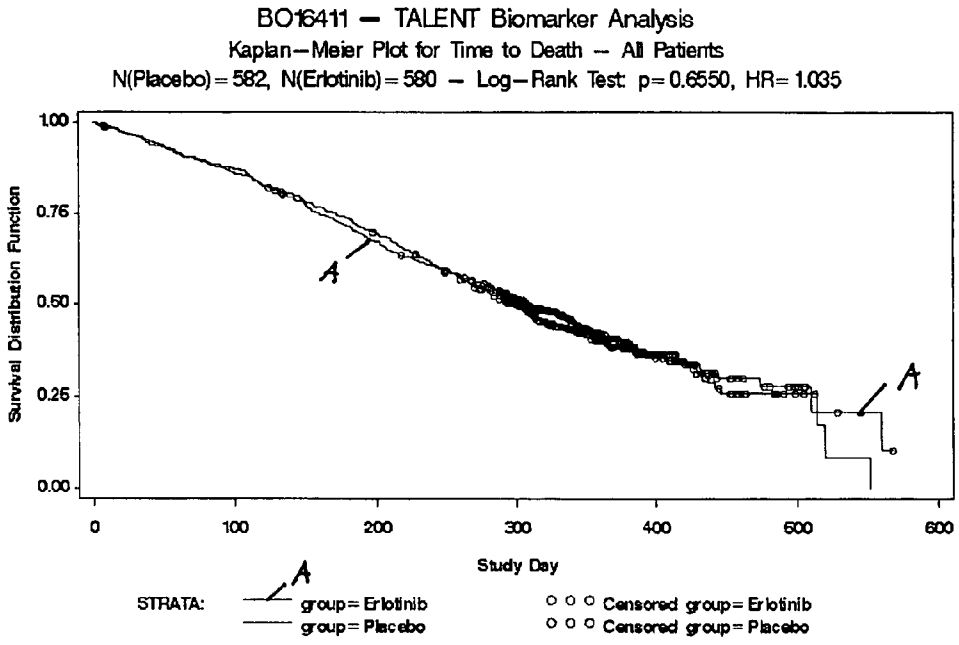
(74) Agent: **BURGER, Alexander**; Roche Diagnostics GMBH, Patent Department (TR-E), Postfach 11 52, 82372 Penzberg (DE).

(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, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, 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),

*[Continued on next page]*

(54) Title: DETERMINATION OF RESPONDERS TO CHEMOTHERAPY




(57) Abstract: The present invention relates to a method of determining whether a biological sample comprising human lung cancer cells is sensitive to a combination of an epidermal growth factor receptor inhibitor and a chemotherapeutic agent by determining the overexpression of a phosphorylated AKT protein and/ or a phosphorylated MAPK protein in the biological sample. The invention is also related to methods for deriving a candidate agent or for selecting a composition for inhibiting the progression of lung cancer in a patient wherein a phosphorylated Akt protein and/ or a phosphorylated MAPK protein is used.

WO 2006/119980 A1

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).

**Declaration under Rule 4.17:**

— *of inventorship (Rule 4.17(iv))*

**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*

*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.*