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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
21 June 2012 (21.06.2012)

WIPO | PCT

(10) International Publication Number
WO 2012/083132 A3

(51) International Patent Classification:
*G01N 33/53* (2006.01) *A61K 39/395* (2006.01)

(21) International Application Number:
PCT/US2011/065410

(22) International Filing Date:
16 December 2011 (16.12.2011)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

| | | |
|---|---|---|
| 61/459,760 | 16 December 2010 (16.12.2010) | US |
| 61/465,425 | 18 March 2011 (18.03.2011) | US |
| 61/484,650 | 10 May 2011 (10.05.2011) | US |
| 61/574,485 | 2 August 2011 (02.08.2011) | US |
| 61/557,295 | 8 November 2011 (08.11.2011) | US |


(71) Applicant *(for all designated States except AL, AT, BE, BG, CH, CN, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IN, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR, US)*: **GENENTECH, INC.** [US/US]; 1 DNA Way, South San Francisco, California 94080 (US).

(71) Applicant *(for AL, AT, BE, BG, CH, CN, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IN, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR only)*: **F. HOFFMANN-LA ROCHE AG** [CH/CH]; Grenzacherstrasse 124, CH-4070 Basel (CH).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **ARRON, Joseph R.** [US/US]; c/o Genentech, Inc., 1 DNA Way, South San Francisco, California 94080 (US). **ERICKSON, Richard W.** [US/US]; c/o Genentech, Inc., 1 DNA Way, South San Francisco, California 94080 (US). **FREEMER, Michelle** [US/US]; c/o Genentech, Inc., 1 DNA Way, South San Francisco, California 94080 (US). **HAZEN, Meredith** [US/US]; c/o Genentech, Inc., 1 DNA Way, South San Francisco, California 94080 (US). **JIA, Guiquan** [US/US]; c/o Genentech, Inc., 1 DNA Way, South San Francisco, California 94080 (US). **MATTHEWS, John G.** [GB/US]; c/o Genentech, Inc., 1 DNA Way, South San Francisco, California 94080 (US). **PUTNAM, Wendy** [US/US]; c/o Genentech, Inc., 1 DNA Way, South San Francisco, California 94080 (US). **SCHEERENS, Heleen** [NL/US]; c/o Genentech, Inc., 1 DNA Way, South San Francisco, California 94080 (US). **ZHENG, Yanan** [CN/US]; c/o Genentech, Inc., 1 DNA Way, South San Francisco, California 94080 (US).

(74) Agents: **DAVIS, Jennifer L.** 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, 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,

*[Continued on next page]*

(54) Title: DIAGNOSIS AND TREATMENTS RELATING TO TH2 INHIBITION

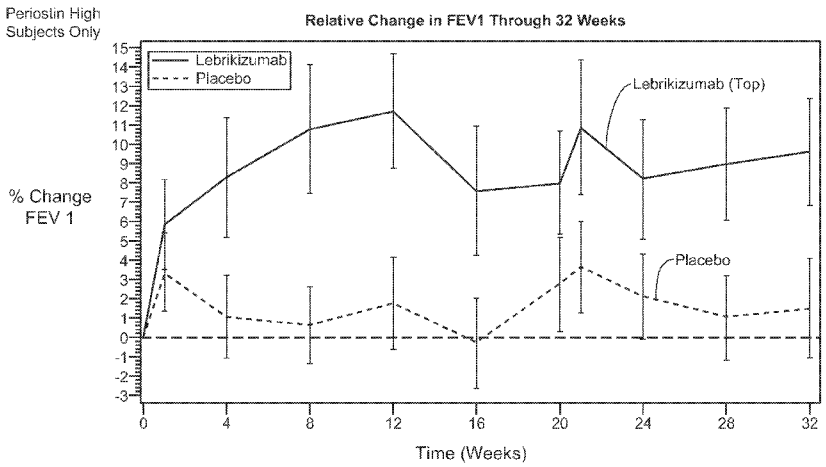



FIG. 8B

(57) Abstract: Methods of diagnosing and treating disorders related to TH2 inhibition, including but not limited to asthma, are provided. Also provided are methods of selecting or identifying patients for treatment with certain therapeutic agents that are TH2 pathway inhibitors.

WO 2012/083132 A3

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, 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))*

**(88) Date of publication of the international search report**:
30 August 2012