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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
20 June 2013 (20.06.2013)

WIPO | PCT

(10) International Publication Number
WO 2013/087660 A1

(51) International Patent Classification:
*A61K 38/17* (2006.01) *A61K 9/00* (2006.01)

(21) International Application Number:
PCT/EP2012/075146

(22) International Filing Date:
12 December 2012 (12.12.2012)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
61/570,018 13 December 2011 (13.12.2011) US

(71) Applicant: **PIERIS AG** [DE/DE]; Lise-Meitner-Strasse 30, 85354 Freising-Weihenstephan (DE).

(72) Inventors: **HOHLBAUM, Andreas**; Schuckelbergstr. 5, 85307 Paunzhausen (DE). **AUDOLY, Laurent**; 2279 Nash Court, Mahwah, New Jersey 07430 (US).

(74) Agents: **WEINZIERL, Gerhard** et al.; Schiweck Weinzierl Koch, European Patent Attorneys, Landsberger Str. 98, 80339 Munich (DE).

(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, PA, 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))*

— *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))*

WO 2013/087660 A1

(54) **Title**: METHODS FOR PREVENTING OR TREATING CERTAIN DISORDERS BY INHIBITING BINDING OF IL-4 AND/OR IL-13 TO THEIR RESPECTIVE RECEPTORS

(57) **Abstract**: The present disclosure relates to methods of treating, ameliorating or preventing a disorder comprising administering a therapeutically effective amount of a composition comprising a protein which inhibits IL-4 and/or IL-13 from binding to their respective receptors to a subject in need thereof. In some embodiments, the disorder is preferably associated with an increase of the Th2 immune response. In some embodiments, administration is preferably locally to the lung in order to treat, ameliorate or prevent allergic asthma, rhinitis, conjunctivitis, lung fibrosis, cystic fibrosis, chronic obstructive pulmonary disease, pulmonary alveolar proteinosis or adult respiratory distress syndrome.