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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
10 January 2013 (10.01.2013)

WIPO | PCT

(10) International Publication Number
WO 2013/006454 A1

(51) **International Patent Classification**:
A61K 38/17 (2006.01) *C07K 16/24* (2006.01)
A61K 47/02 (2006.01)

(21) **International Application Number**:
PCT/US2012/044988

(22) **International Filing Date**:
29 June 2012 (29.06.2012)

(25) **Filing Language**: English

(26) **Publication Language**: English

(30) **Priority Data**:
61/504,110 1 July 2011 (01.07.2011) US

(71) **Applicant** *(for all designated States except US)*: **BIOGEN IDEC MA INC.** [US/US]; 14 Cambridge Center, Cambridge, MA 02142 (US).

(72) **Inventors; and**
(71) **Applicants** : **MALONEY, Kevin** [US/US]; 10 Adella Drive, Nashua, NH 03063 (US). **GONG, Ke** [CN/US]; 12304 Main Campus Drive, Lexington, MA 02421 (US). **ALSTON, Roy** [US/US]; 109 Spruce Street, Framingham, MA 01701 (US).

(74) **Agent**: **WALLER, Patrick, R.H.**; Wolf, Greenfield & Sacks, P.C., 600 Atlantic Avenue, Boston, MA 02210-2206 (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, 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))*

WO 2013/006454 A1

(54) **Title**: ARGININE - FREE TNFR : FC- FUSION POLYPEPTIDE COMPOSITIONS AND METHODS OF USE

(57) **Abstract**: Aspects of the invention are directed to arginine-free polypeptide-containing compositions and methods for treating disorders associated with inflammation or the autoimmune response. In particular, the polypeptide is etanercept.