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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
21 November 2013 (21.11.2013)

WIPO | PCT

(10) International Publication Number
WO 2013/171156 A1

(51) International Patent Classification:
C07K 16/24 (2006.01) *C12N 15/70* (2006.01)

(21) International Application Number:
PCT/EP2013/059803

(22) International Filing Date:
13 May 2013 (13.05.2013)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
1208367.1 14 May 2012 (14.05.2012) GB

(71) Applicant: **UCB PHARMA S.A.** [BE/BE]; 60 Allée de la Recherche, B-1070 Brussels (BE).

(72) Inventors: **BASSETT, Philip Jonathan**; c/o IPD, UCB Celltech, 208 Bath Road, Slough Berkshire SL1 3WE (GB). **HUMPHREYS, David Paul**; c/o IPD, UCB Celltech, 208 Bath Road, Slough Berkshire SL1 3WE (GB). **PATEL, Pareshkumar Manjibhai**; c/o IPD, UCB Celltech, 208 Bath Road, Slough Berkshire SL1 3WE (GB).

(74) Agent: **THOMPSON, John**; UCB Celltech, 208 Bath Road, Slough Berkshire SL1 3WE (GB).

(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).

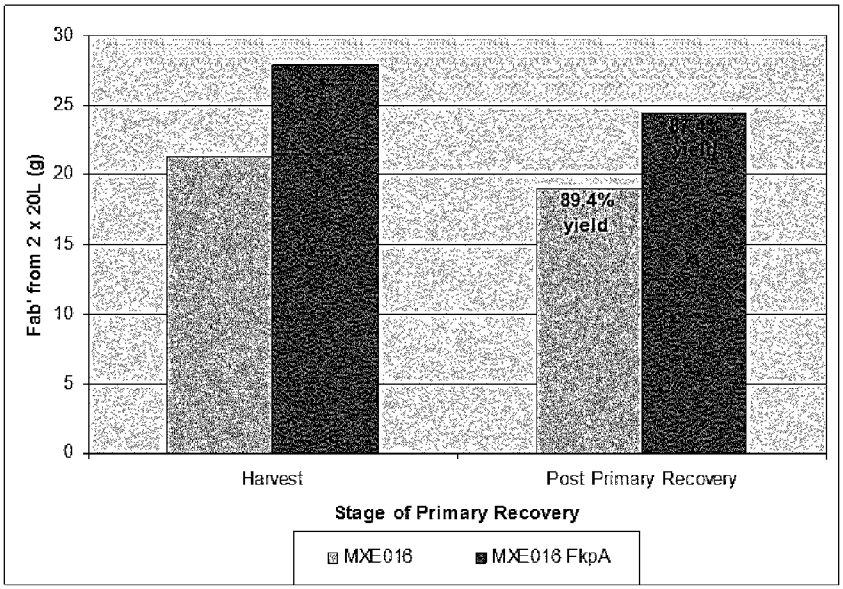
Published:

— *with international search report (Art. 21(3))*

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

(54) Title: RECOMBINANT BACTERIAL HOST CELL FOR PROTEIN EXPRESSION

Figure 4 **Harvest from 20 Litre Pilot Scale Productions and Primary Recovery for "MXE016" Cell Lines**



(57) Abstract: The present disclosure relates to a recombinant gram-negative bacterial cell comprising: a.) a mutant spr gene encoding a spr protein having a mutation at one or more amino acids selected from D133, H145, H157, N31, R62, I70, Q73, C94, S95, V98, Q99, R100, L108, Y115, V135, L136, G140, R144 and G147 and b.) a gene capable of expressing or overexpressing one or more proteins capable of facilitating protein folding, such as FkpA, Skp, SurA, PPiA and PPiD, wherein the cell has reduced Tsp protein activity compared to a wild-type cell, methods employing the cells, use of the cells in the expression of proteins in particular antibodies, such as anti Fc Rn antibodies and proteins made by the methods described herein.

WO 2013/171156 A1