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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
30 June 2011 (30.06.2011)

PCT

(10) International Publication Number
WO 2011/076842 A2

(51) **International Patent Classification**:
A61K 9/00 (2006.01) ***A61K 31/40*** (2006.01)

(21) **International Application Number**:
PCT/EP2010/070478

(22) **International Filing Date**:
22 December 2010 (22.12.2010)

(25) **Filing Language**: English

(26) **Publication Language**: English

(30) **Priority Data**:
09015980.7 23 December 2009 (23.12.2009) EP

(71) **Applicant** *(for all designated States except US)*: **CHIESI FARMACEUTICI S.P.A.** [IT/IT]; Via Palermo, 26/A, I-43100 Parma (IT).

(72) **Inventors; and**
(75) **Inventors/Applicants** *(for US only)*: **BONELLI, Sauro** [IT/IT]; Chiesi Farmaceutici S.P.A., Via Palermo, 26/A, I-43100 Parma (IT). **USBERTI, Francesca** [IT/IT]; Chiesi Farmaceutici S.P.A., Via Palermo, 26/A, I-43100 Parma (IT). **ZAMBELLI, Enrico** [IT/IT]; Chiesi Farmaceutici S.P.A., Via Palermo, 26/A, I-43100 Parma (IT).

(74) **Agent**: **MINOJA, Fabrizio**; Bianchetti Bracco Minoja S.R.L., Via Plinio, 63, I-20129 Milano (IT).

(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, RO, RS, RU, 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, 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:

— *without international search report and to be republished upon receipt of that report (Rule 48.2(g))*

WO 2011/076842 A2

(54) **Title**: AEROSOL FORMULATION FOR COPD

(57) **Abstract**: The invention concerns stable aerosol solution formulations comprising glycopyrronium bromide for administration to patients with COPD and other respiratory conditions.