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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
20 March 2003 (20.03.2003)

PCT

(10) International Publication Number
WO 03/022275 A1

(51) International Patent Classification[7]: A61K 31/437, 9/14, 9/72, A61P 11/00, 11/06

(21) International Application Number: PCT/IB02/03599

(22) International Filing Date:
2 September 2002 (02.09.2002)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
0122031.8 12 September 2001 (12.09.2001) GB

(71) Applicant *(for GB only)*: **PFIZER LIMITED** [GB/GB]; Ramsgate Road, Sandwich, Kent CT13 9NJ (GB).

(71) Applicant *(for all designated States except GB, US)*: **PFIZER INC.** [US/US]; 235 East 42nd Street, New York, NY 10017 (US).

(72) Inventors; and
(75) Inventors/Applicants *(for US only)*: **HUMPHREY, Michael, John** [GB/GB]; Pfizer Global Research and Development, Ramsgate Road, Sandwich, Kent CT13 9NJ (GB). **MILLER, Paul, Robert** [GB/GB]; Pfizer Global Research and Development, Ramsgate Road, Sandwich, Kent CT13 9NJ (GB). **SHEPHERD, Michael, Trevor** [GB/GB]; Pfizer Global Research and Development, Ramsgate Road, Sandwich, Kent CT13 9NJ (GB).

(74) Agents: **RUDDOCK, Keith, S.** et al.; Pfizer Limited, Ramsgate Road, Sandwich, Kent CT13 9NJ (GB).

(81) Designated States *(national)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW.

(84) Designated States *(regional)*: ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:
— *with international search report*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

WO 03/022275 A1

(54) Title: INHALATION COMPOSITIONS COMPRISING TRICYCLIC 5,6-DIHYDRO-9H-PYRAZOLO (3,4-C)-1,2,4-TRIAZOLO (4,3-ALPHA) PYRIDINES

(57) Abstract: The present invention relates to an inhaled formulation comprising a compound selected from a particular class of 5,6-dihydro-9*H*-pyrazolo[3,4-c]-1,2,4- triazolo[4,3-a]pyridines which is capable of delivering the compound as fine, solid particles to the lung and the use of such a formulation in the treatment of certain diseases such as respiratory diseases. By the use of such formulations, it is possible to eliminate the unwanted cough response associated with the use of these compounds in solution metered dose inhalers, which response can prevent the administration of a therapeutically effective dose and, in the long term, undermine patient compliance.