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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
3 April 2003 (03.04.2003)

PCT

(10) International Publication Number
WO 03/026611 A2

(51) International Patent Classification[7]: A61K 9/00

(21) International Application Number: PCT/US02/30447

(22) International Filing Date:
25 September 2002 (25.09.2002)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
09/964,273 26 September 2001 (26.09.2001) US
10/183,035 26 June 2002 (26.06.2002) US

(71) Applicant: **BAXTER INTERNATIONAL INC.** [US/US]; One Baxter Parkway, Deerfield, IL 60015 (US).

(72) Inventors: **BRYNJELSEN, Sean**; 4 Walnut Grove Ct., Lake-In-The-Hills, IL 60156 (US). **STERNBERG, Shmuel**; 709 E. Lenox Lane, Palatine, IL 60067 (US). **DUNHAM, Andrew, J.**; 1939 West Bluff Court, Round Lake, IL 60073 (US). **DOTY, Mark, J.**; 610 Kenilworth, Grayslake, IL 60030 (US). **KIPP, James, E.**; 609 Hermosa Avenue, Wauconda, IL 60084 (US). **JAYSWAL, Nailesh**; 29 Meigs Court, Bensenville, IL 60106 (US). **NARAYANAN, Krishnaswamy**; 2721 Minot Lane, Waukesha, WI 53188 (US).

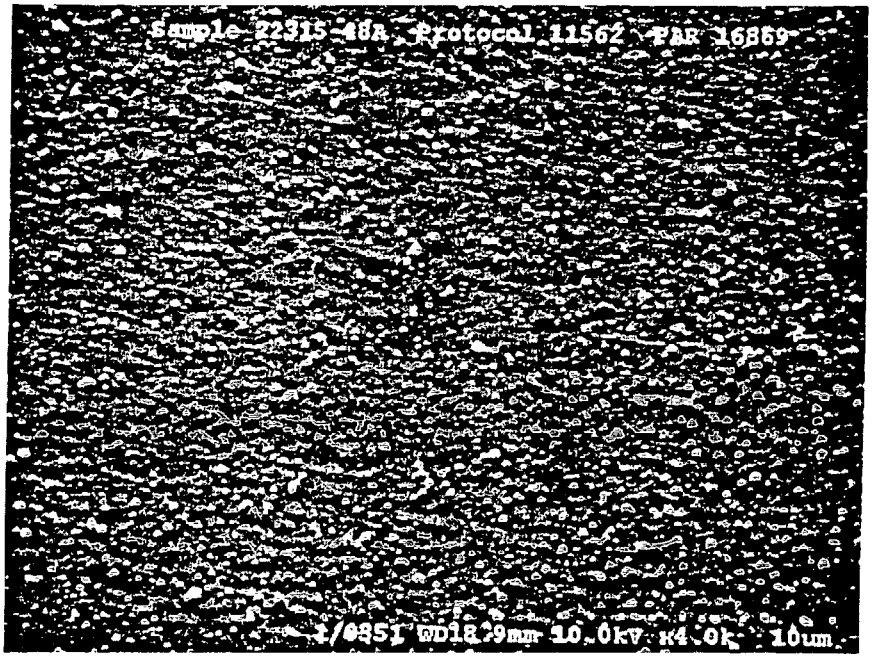
(74) Agents: **BUONAIUTO, Mark, J.** et al.; Baxter International Inc., One Baxter Parkway, Deerfield, IL 60015 (US).

(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, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States *(regional)*: 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).

[Continued on next page]

(54) Title: PREPARATION OF SUBMICRON SIZED NANOPARTICLES VIA DISPERSION AND SOLVENT OR LIQUID PHASE REMOVAL



(57) Abstract: The present invention relates to a process for preparing submicron sized nanoparticles of a poorly water soluble compound by sonicating to evaporate a portion of the organic phase or by lyophilizing a dispersion or microdispersion of a multiphase system having an organic phase and an aqueous phase, the organic phase havingthe poorly water soluble organic compound therein. The method is preferably used to prepare nanoparticles of a poorly water soluble, pharmaceutically active compound suitable for in vivo delivery, particularly by parenteral routes.

WO 03/026611 A2

Published:
— *without international search report and to be republished upon receipt of that 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.