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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
19 January 2006 (19.01.2006)

PCT

(10) International Publication Number
WO 2006/007592 A2

(51) International Patent Classification:
A61M 5/00 (2006.01)

(21) International Application Number:
PCT/US2005/023754

(22) International Filing Date: 30 June 2005 (30.06.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/584,893 1 July 2004 (01.07.2004) US

(71) Applicant *(for all designated States except US)*: **WEST PHARMACEUTICAL SERVICES, INC.** [US/US]; 101 Gordon Drive, Lionville, PA 19341 (US).

(72) Inventor: **NORTON, Paul, H.**; P.O. Box 3, Trumbauersville, PA 18970 (US).

(74) Agents: **BELISARIO, Martin, G.** et al.; Akin, Gump, Strauss, Hauer & Feld, L.L.P., One Commerce Square, Suite 2200, 2005 Market Street, Philadelphia, PA 19103-7086 (US).

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

(84) Designated States *(unless otherwise indicated, for every kind of regional protection available)*: ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, 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*

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 2006/007592 A2

(54) Title: SYRINGE DEVICE HAVING VENTING SYSTEM

(57) Abstract: A syringe device includes a syringe tube having a distal end with a passageway in fluid communication with a cavity thereof. A plunger rod slidingly and sealingly engages within the cavity of the syringe tube. The plunger rod includes at least one aperture in fluid communication with a hollow interior of the plunger rod. A plunger tip is engaged with a distal end of the plunger rod and interacts with an inner surface of the side wall of the syringe tube to separate the cavity into first and second areas. The at least one aperture fluidly connects the hollow interior of the plunger rod and the first area of the syringe tube cavity, such that the generally hollow plunger rod interior allows air to move between an outside of the syringe device and the first area of the cavity during sliding movement of the plunger rod within the syringe tube.