2005025119

25 APR 2005

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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
6 May 2004 (06.05.2004)

PCT

(10) International Publication Number
WO 2004/037229 A1

(51) International Patent Classification[7]: A61K 9/22, 9/70, 31/192, 31/245, 31/554, 31/137

(21) International Application Number: PCT/EP2003/004316

(22) International Filing Date: 25 April 2003 (25.04.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

10/278,912	24 October 2002 (24.10.2002)	US
60/438,501	8 January 2003 (08.01.2003)	US

(71) Applicant *(for all designated States except US)*: **COLUMBIA LABORATORIES (BERMUDA) LIMITED** [—/—]; Rosebank Center, 14 Bermudiana Road, Pembroke HM08 (BM).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **LEVINE, Howard, L.** [US/US]; 107 Balsam Street, Oceanside, NY 11572 (US). **BOLOGNA, William, J.** [US/FR]; 22, place de General Catroux, F-75017 Paris (FR).

(74) Agents: **KEEN, Celia, Mary** et al.; J.A. Kemp & Co., 14 South Square, Gray's Inn, London WC1R 5JJ (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, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, 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, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, 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.



162162



ACTION

WO 2004/037229 A1

(54) Title: EXTENDED, CONTROLLED RELEASE PHARMACEUTICAL COMPOSITIONS COMPRISING CHARGED POLYMERS

(57) Abstract: The present invention relates to a delivery system for pharmaceutical compositions relying in part on an ionic interaction to control and facilitate release of the treating agent. More specifically, the invention relates to an extended controlled-release system having an ionic treating agent and an ionic polymer, wherein the polymer is sufficiently ionized to release the treating agent in a controlled manner over an extended period of time and the composition does not require an emulsion system for administering the treating agent.