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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
6 January 2011 (06.01.2011)

PCT

(10) International Publication Number
WO 2011/001425 A1

(51) International Patent Classification:
A61K 9/00 (2006.01) *A61K 9/70* (2006.01)
A61K 9/16 (2006.01) *A61K 31/192* (2006.01)

(21) International Application Number:
PCT/IL2010/000509

(22) International Filing Date:
24 June 2010 (24.06.2010)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
61/222,203 1 July 2009 (01.07.2009) US

(71) Applicant *(for all designated States except US)*: **DEXCEL PHARMA TECHNOLOGIES LTD.** [IL/IL]; 1 Dexcel Street, 30600 OrAkiva (IL).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **PENHASI, Adel** [IL/IL]; 53/15 Rabinovitch Street, 58671 Holon (IL). **REUVENI, Albert** [IL/IL]; 503/51 Shevo Street, 93845 Jerusalem (IL). **SHOSHANI, Eyal** [IL/IL]; 9/4 David Gotien Street, 97782 Jerusalem (IL).

(74) Agent: **REINHOLD COHN & PARTNERS**; P.O.B. 13239, 61131 Tel-Aviv (IL).

(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, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

— *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*

— *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

— *of inventorship (Rule 4.17(iv))*

Published:

— *with international search report (Art. 21(3))*

[Continued on next page]

(54) **Title**: LOCAL THERAPEUTIC RELEASE DEVICE

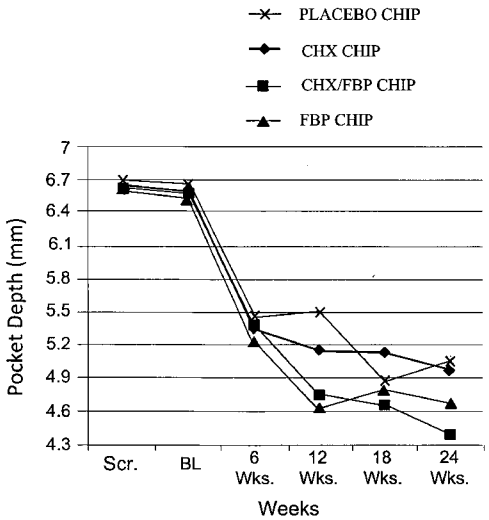


FIG. 3

(57) **Abstract**: An oral delivery device for the treatment of periodontal disease, the device being in a solid unit dosage form configured for insertion into a periodontal pocket of a patient. The device consists of: (a) a biodegradable pharmaceutically acceptable water-insoluble polymer in the form of a matrix; (b) a therapeutically effective amount of at least one anti-inflammatory agent dispersed within the matrix; (c) optionally a plasticizing agent; (d) optionally at least one of a wetting agent, a suspending agent and a dispersing agent; and (e) optionally an enzymatically biodegradable pharmaceutically acceptable water soluble polymer dispersed within the matrix. The biodegradable water-insoluble polymer is degradable by enzymatic degradation, physical disintegration or a combination thereof. Also disclosed is a periodontal implant comprising the device and a method for the treatment of periodontal disease comprising administering to a periodontal pocket of a patient in need of such treatment the delivery device.

WO 2011/001425 A1

— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*