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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
9 December 2010 (09.12.2010)

PCT

(10) International Publication Number
WO 2010/140061 A3

(51) International Patent Classification:
A61K 9/127 (2006.01) *A61P 19/02* (2006.01)

(21) International Application Number:
PCT/IB2010/001557

(22) International Filing Date:
3 June 2010 (03.06.2010)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

61/183,956	3 June 2009 (03.06.2009)	US
61/314,478	16 March 2010 (16.03.2010)	US
61/320,148	1 April 2010 (01.04.2010)	US

(72) Inventors; and
(71) Applicants : **MAYO, John, Charles** [GB/GB]; Leverton House, 13 Bedford Square, London WC1B 3RA (GB). **ILIFFE, George, Langton** [GB/GB]; Leverton House, 13 Bedford Square, London WC1B 3RA (GB). **VIERL, Ulrich** [DE/DE]; Friedenstrasse 3, Groebenzell (DE). **ROTHER, Matthias** [DE/DE]; Larchenstrabe 3, 82166 Grafelfing (DE).

(74) Agent: **JONES DAY**; Weber, Martin, Prinzregentenstraße 11, 80538 München (DE).

(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).

Published:

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

— *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))*

(88) Date of publication of the international search report:
28 July 2011

WO 2010/140061 A3

(54) Title: FORMULATIONS FOR THE TREATMENT OF DEEP TISSUE PAIN

(57) Abstract: Disclosed herein are vesicular formulations comprising one or more phospholipids and one or more nonionic surfactants that are effective in the treatment of pain or inflammation or osteoarthritis, more specifically in the treatment of deep tissue pain, for example osteoarthritis and other joint or muscle pain, as well as methods of treating pain or inflammation or osteoarthritis, more specifically in the treatment of deep tissue pain, for example osteoarthritis and other joint or muscle pain using same.