

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

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
20 May 2010 (20.05.2010)

(10) International Publication Number
WO 2010/056039 A3

PCT

(51) International Patent Classification:
A61K 31/192 (2006.01) *A61K 9/20* (2006.01)

(21) International Application Number:
PCT/KR2009/006619

(22) International Filing Date:
11 November 2009 (11.11.2009)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
10-2008-0112295
12 November 2008 (12.11.2008) KR

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(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, 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, 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, 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, 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:
29 July 2010

(54) Title: ORAL PHARMACEUTICAL FORMULATION OF PELUBIPROFEN WITH IMPROVED DISSOLUTION RATE AND STABILITY

(57) Abstract: Disclosed is an oral pharmaceutical formulation of pelubiprofen which is improved in dissolution rate and stability. As a result of an improvement in the dissolution rate of pelubiprofen, the oral pharmaceutical formulation can show high bioavailability and thus exert pharmacological effects thereof rapidly. It also can be stored with high stability as a result of the minimal generation of related compounds.



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INTERNATIONAL SEARCH REPORT

International application No.
PCT/KR2009/006619**A. CLASSIFICATION OF SUBJECT MATTER*****A61K 31/192(2006.01)i, A61K 9/20(2006.01)i***

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

A61K 31/192; A61K 31/415; A61K 31/60; A61K 9/00; A61K 9/51; A61P 15/00; A61P 15/08; A61P 3/00; F26B 5/06

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Korean utility models and applications for utility models

Japanese utility models and applications for utility models

(Chinese Patents and application for patent)

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

eKOMPASS(KIPO internal) & Keywords: pelubiprofen, size, dissolution, diluent, binder, disintegrator, lubricant

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 2007-129169 A2 (PFIZER LIMITED et al.) 15 November 2007 See pages 12, 31-34; claims 1, 21	1-8
A	WO 01-41760 A2 (PHARMACIA CORPORATION) 14 June 2001 See pages 32-36; claims 1, 2, 5	1-8
A	US 2008-0176822 A1 (CHEN, CHIEN-HUNG) 24 July 2008 See pages 2, 3; claims 1, 5, 22, 25	1-8
A	US 2007-0116729 A1 (PALEPU, N. R.) 24 May 2007 See pages 2, 4, 12, 19; claims 1, 20, 34-37, 44	1-8

☐ Further documents are listed in the continuation of Box C.☒ See patent family annex.

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Date of the actual completion of the international search

27 MAY 2010 (27.05.2010)

Date of mailing of the international search report

27 MAY 2010 (27.05.2010)

Name and mailing address of the ISA/KR

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gu, Daejeon 302-701, Republic of Korea

Facsimile No. 82-42-472-7140

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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/KR2009/006619

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 2007-129169 A2	15.11.2007	AR 060837A1 JP 2007-297385 A WO 2007-129169 A3	16.07.2008 15.11.2007 15.11.2007
WO 01-41760 A2	14.06.2001	AR 027897A1 AT 283048 T AU 2001-25868 B2 BG 65239B1 BR 0008058 A CA 2362673-A1 CN 1203852 C0 CO 5251445A1 CZ 20012875A3 DE 60016191 D1 DK 1175214T3 DZ 3140A1 EA 003464B1 ECSP 003807A EE 200100419A EP 1150959 A1 EP 1165072 A2 ES 2236007 T3 HK 1055297A1 HR 20010589A2 HU 0201450A3 IL 144760D0 IS 6042A JP 2003-516394 T KR 10-0645866 B1 KR 10-2002-0082473 A MXPA 01008058A NO 20013859A NZ 513960A OA 11831A PL 349223A1 PT 1150959E SK 11522001A3 SV 2002000235A TW 255180 B UA 74539C2 US 2002-0006951 A1 WO 01-41536A2 ZA 200107146A	16.04.2003 15.12.2004 14.04.2005 28.09.2007 26.03.2002 14.06.2001 01.06.2005 28.02.2003 13.02.2002 30.12.2004 17.07.2006 14.01.2001 26.06.2003 06.07.2005 16.12.2002 07.11.2001 02.01.2002 16.07.2005 16.12.2005 31.08.2002 28.02.2003 30.06.2002 08.08.2001 13.05.2003 15.11.2006 31.10.2002 05.04.2004 08.10.2001 27.02.2004 23.08.2005 01.07.2002 21.04.2008 09.05.2002 13.06.2002 21.05.2006 15.12.2004 17.01.2002 14.06.2001 29.08.2002
US 2008-0176822 A1	24.07.2008	AR 065837A1 AU 2008-206328 A1 CA 2675638-A1 EP 2118279 A1 WO 2008-089212 A1	08.07.2009 24.07.2008 24.07.2008 18.11.2009 24.07.2008

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/KR2009/006619

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2007-0116729 A1	24.05.2007	AU 2006-317563 A1	31.05.2007
		CA 2628178-A1	31.05.2007
		CN 101330905 A	24.12.2008
		EP 1954244 A1	13.08.2008
		JP 2009-515958 T	16.04.2009
		KR 20080067705A	21.07.2008
		WO 2007-061529 A1	31.05.2007