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

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date 10 June 2010 (10.06.2010)

(10) International Publication Number WO 2010/065730 A3

(51) International Patent Classification: A61K 9/00 (2006.01) A61K 47/10 (2006.01) A61K 9/10 (2006.01)

(21) International Application Number:

PCT/US2009/066570

(22) International Filing Date:

3 December 2009 (03.12.2009)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

5 December 2008 (05.12.2008) 61/120,081

US

- (71) Applicant (for all designated States except US): ALCON RESEARCH, LTD. [US/US]; 6201 South Freeway, Mail Code TB4-8, Fort Worth, Texas 76134-2099 (US).
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): KABRA, Bhagwati Published: P. [US/US]; 2205 Eagles Nest Drive, Euless, Texas 76039 (US).
- (74) Agents: SCOTT A. CHAPPLE et al.; Alcon Research, LTD., IP Legal, Mail Code TB4-8, 6201 South Freeway, Fort Worth, Texas 76134-2099 (US).
- (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, 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).

- 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:

14 April 2011



(54) Title: PHARMACEUTICAL SUSPENSION

(57) Abstract: The present invention is directed to the provision of a pharmaceutical suspension. The suspension includes high molecular weight polyethylene glycol as a suspending agent. The suspension also typically includes an antimicrobial agent (e.g., polymeric quaternary ammonium compound), an antimicrobial system (e.g., borate/polyol complex system) or both. The suspension has been found particularly useful as an ophthalmic suspension, but can be used in other instances as well.

INTERNATIONAL SEARCH REPORT

International application No PCT/US2009/066570

A. CLASSIFICATION OF SUBJECT MATTER INV. A61K9/00 A61K9/10 A61K47/10 ADD.

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

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

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

EPO-Internal, WPI Data, BIOSIS, EMBASE

C. DOCUMENTS CONSIDERED TO BE RELEVANT						
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.				
X	US 2006/172969 A1 (SUZUKI HIDEKAZU [JP] ET AL) 3 August 2006 (2006-08-03) page 3, right-hand column page 4, right-hand column, line 3 - line 4 examples	1-23				
X	US 2007/173538 A1 (HAN WESLEY W [US] ET AL) 26 July 2007 (2007-07-26) paragraph [0018] examples	1-23				
X	US 2003/165568 A1 (COLOMBO GIUSEPPE [IT] ET AL) 4 September 2003 (2003-09-04) examples 	1,8,9, 14,16, 21,23				

Further documents are listed in the continuation of Box C.	X See patent family annex.
"A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier document but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art. "&" document member of the same patent family
Date of the actual completion of the international search 18 February 2011	Date of mailing of the international search report $25/02/2011$
Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016	Authorized officer Palma, Vera

2

INTERNATIONAL SEARCH REPORT

International application No
PCT/US2009/066570

C(Continua	#iom) DOCUMENTO CONCIDEDED TO DE DEL EVANT	PC1/052009/0665/0
Category*	tion). DOCUMENTS CONSIDERED TO BE RELEVANT Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 624 962 A (TAKEUCHI MASANOBU [JP] ET	1,16
	AL) 29 April 1997 (1997-04-29) table 1 	
X	US 4 409 205 A (SHIVELY CHARLES D [US]) 11 October 1983 (1983-10-11) column 4, line 58 - column 5, line 2 table 5	1,16
Х	US 3 856 919 A (RANKIN B) 24 December 1974 (1974-12-24) example IV	1,16
Α	WO 2006/121964 A2 (ALCON INC [CH]; OWEN GEOFFREY ROBERT [US]; BROOKS AMY C [US]; GRAFF GU) 16 November 2006 (2006-11-16) table 1, formulation C page 12, line 6 - line 8	1-23

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No
PCT/US2009/066570

Patent document cited in search repo		Publication date		Patent family member(s)		Publication date
US 20061729	69 A1	03-08-2006	AT AU CA CN DE EP HU WO JP JP NO US	7869601 2421787 1446092 60131088 1312366 0302690 0211734 3450805	A1 A2 A1 A2 A1 B2 A	15-11-2007 18-02-2002 04-02-2003 01-10-2003 31-07-2008 21-05-2003 28-11-2003 14-02-2002 29-09-2003 03-06-2003 26-02-2003 16-10-2003
US 20071735	38 A1	26-07-2007	NONE			
US 20031655	68 A1	04-09-2003	NONE			
US 5624962	А	29-04-1997	AT AU CA CN DE DK EP ES FI HK HU IL WO NO RU	69327878 69327878 694310 0694310 2141775	B2 A A1 A D1 T2 T3 A1 T3 A A1 A2 A A1 A	15-03-2000 02-05-1996 08-11-1994 27-10-1995 23-03-2000 15-06-2000 05-06-2000 31-01-1996 01-04-2000 26-07-1995 14-07-2000 29-01-1996 30-09-1997 27-10-1994 14-08-1998
US 4409205	Α	11-10-1983	NONE			
US 3856919	A	24-12-1974	NONE			
WO 20061219	64 A2	16-11-2006	ΑU	412402 2006244245 PI0608774 2607014 101175476 1906916 1906916	A1 A2 A1 A T3	16-11-2006 26-01-2010 16-11-2006 07-05-2008
WO 20061219	64 A2		PT	2313670 2008540533 20080011311 1906916 1906916 200709296	T A E T1	01-02-2008 10-12-2008