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61/251,475 14 October 2009 (14.10.2009) US(71) Applicant (for all designated States except US): **RIB-X PHARMACEUTICALS, INC.** [—/US]; 300 George Street, Suite 301, New Haven, CT 06511 (US).

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Declarations under Rule 4.17:

— of inventorship (Rule 4.17(iv))

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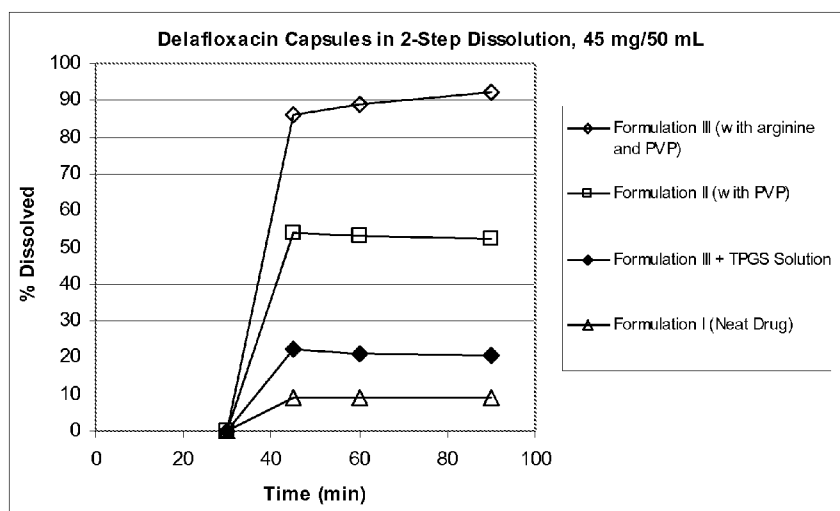
— with international search report (Art. 21(3))

— 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))

[Continued on next page]

(54) Title: ANTIMICROBIAL COMPOSITIONS

Figure 3



(57) Abstract: The present invention relates to pharmaceutical compositions comprising a quinolone carboxylic acid compound and an absorption enhancer. In further embodiments, the compositions further comprise a basifier or a crystallization inhibitor, or both a basifier and a crystallization inhibitor. These compositions are useful for treating, preventing, or reducing the risk of infection.



(88) Date of publication of the international search report:
16 December 2010

A. CLASSIFICATION OF SUBJECT MATTER**A61K 31/4725(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 31/4725; A61K 31/497; A61K 31/551; A61K 38/05; A61K 31/553; C07D 401/04; A61K 31/40

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

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

eKOMPASS(KIPO internal) & Keywords: quinolone carboxylic acid, delafloxacin meglumine, absorption enhancer, vitamin E TPGS, basifier, crystallization inhibitor, PEG, polyvinylpyrrolidone K30, antimicrobial composition

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	Tomioka H, et al., Comparative antimicrobial activities of the newly synthesized quinolone WQ-3034, levofloxacin, sparfloxacin, and ciprofloxacin against Mycobacterium tuberculosis and Mycobacterium avium complex. Antimicrob. Agents Chemother. 44(2): 283-286 (Feb. 2000) See figure 1 & result	1-10,29-40
Y	Collnot EM, et al., Influence of vitamin E TPGS poly(ethylene glycol) chain length on apical efflux transporters in Caco-2 cell monolayers. J. Control. Release. 111(1-2): 35-40 (Epub. 10 Jan. 2006) See figures 2-4	1-10,29-40
A	Khougaz K, Clas SD. Crystallization inhibition in solid dispersions of MK-0591 and poly(vinylpyrrolidone) polymers. J. Pharm. Sci. 89(10): 1325-1334 (Oct. 2000) See introduction (page 1325)	1-10,29-40
A	US 2002-0182255 A1 (SAMIR ROY et al.) 05 Dec.2002 See paragraph [0071]	1-10,29-40
A	US 2003-0032600 A1 (STEPHEN A. ULRICH et al.) 13 Feb.2003 See paragraph [0033]	1-10,29-40



Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent 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 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

20 OCTOBER 2010 (20.10.2010)

Date of mailing of the international search report

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Name and mailing address of the ISA/KR

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US2010/024576

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EP 0549857 A1 (KOREA RESEARCH INSTITUTE OF CHEMICAL TECHNOLOGY) 07 Jul.1993 See claims 1, 8	1-10,29-40

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/US2010/024576

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2002-0182255 A1	05.12.2002	AU 2000-39203 A1	16.10.2000
		AU 2000-39203 B2	22.04.2004
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		WO 93-13090 A1	08.07.1993

INTERNATIONAL SEARCH REPORTInternational application No.
PCT/US2010/024576**Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)**

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.: 42
because they relate to subject matter not required to be searched by this Authority, namely:
Claim 42 pertains to methods for treatment of the human body by surgery or therapy, as well as diagnostic methods, and thus relate to a subject matter which this International Searching Authority is not required, under Article 17(2)(a)(i) of the PCT and Rule 39.1(iv) of the Regulations under the PCT, to search.
2. ☒ Claims Nos.: 14, 15, 19-23, 25, 27, 28
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
Claims 14, 15, 19-23, 25, 27, 28 are unclear, since they ultimately refer to claim 13, 18, 24 or 26, which is not searchable due to not being drafted in accordance with the third sentence of Rule 6.4(a).
3. ☒ Claims Nos.: 11-13, 16-18, 24, 26, 41, 42
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- ☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- ☐ No protest accompanied the payment of additional search fees.