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8 March 2012

(54) Title: POLYMER-BASED THERAPEUTIC AGENTS

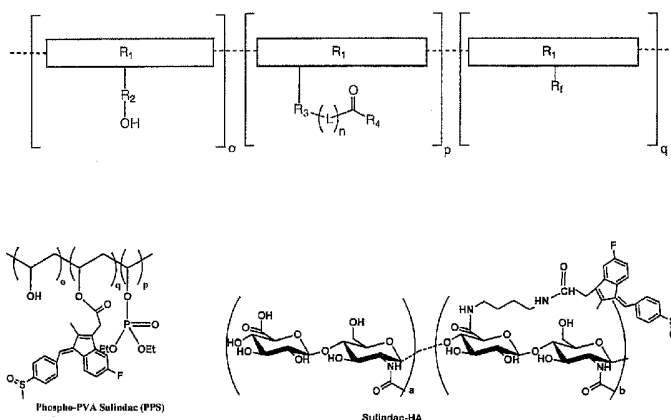


Figure 2.

(57) Abstract: This invention relates to compounds having the structure wherein  $R_1$  is a polyvinyl alcohol or disaccharide repeating unit, and  $L$ ,  $R_2$ ,  $R_3$ ,  $R_4$ , and  $R_f$  are further described herein.

## INTERNATIONAL SEARCH REPORT

International application No.  
**PCT/US2011/032431****A. CLASSIFICATION OF SUBJECT MATTER***C08F 16/06(2006.01)i, C08F 20/10(2006.01)i, C08B 37/00(2006.01)i, A61K 31/045(2006.01)i, A61P 35/00(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)

C08F 16/06; A61K 31/726; A61P 19/02; A61K 31/415; A61K 31/40

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 practicable, search terms used)  
eKOMPASS(KIPO internal) & Keywords: NSAID-polymer conjugate, phosphorylated polymer, phosphorylated PVA, phosphorylated PVA-NSAID conjugate, polysaccharide-NSAID conjugate**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X A	US 2008-0221062 A1 (MIYAMOTO, K. et al.) 11 September 2008 See paragraph [0012].	1-6, 11, 12, 15-18 7-10, 13, 14, 19-31
A	SEGAL, E. et al. 'Design and Development of Polymer Conjugates as Anti-angiogenic Agents.' In: Adv. Drug. Deliv. Rev., 2009, Vol. 61, pp. 1159-1176. See page 1170.	1-31
A	US 2007-0281028 A1 (LEWIS, A. L. et al.) 06 December 2007 See the whole document.	1-31
A	US 2003-0181417 A1 (BENEDINI, F. et al.) 25 September 2003 See the whole document.	1-31



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

"&amp;" document member of the same patent family

Date of the actual completion of the international search

19 DECEMBER 2011 (19.12.2011)

Date of mailing of the international search report

**19 DECEMBER 2011 (19.12.2011)**

Name and mailing address of the ISA/KR

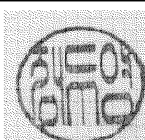
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**INTERNATIONAL SEARCH REPORT**

International application No.

**PCT/US2011/032431****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.: 33-36  
because they relate to subject matter not required to be searched by this Authority, namely:  
Claims 33 to 36 pertain to methods for treatment of the human body by therapy 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.: 34  
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:  
Claim 34 is in reference to multiple dependent claim 32, which is not subjected to the meaningful search in accordance with the second and the third sentence of Rule 6.4(a).
3. ☒ Claims Nos.: 32, 33, 35, 36  
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.

**INTERNATIONAL SEARCH REPORT**

Information on patent family members

International application No.

**PCT/US2011/032431**

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2008-0221062 A1	11.09.2008	AU 2005-203988 A1 AU 2005-203988 B2 CA 2555759 A1 CA 2750725 A1 CN 101921347 A CN 1930190 A CN 1930190 B CN 1930190 C0 EP 1710257 A1 EP 1710257 A4 JP 04792294 B2 JP W02005-066214 A1 KR 10-2007-0031274 A NZ 549010 A RU 2006128737 A RU 2390529 C2 US 2011-0083991 A1 US 7879817 B2 WO 2005-066214 A1	21.07.2005 11.11.2010 21.07.2005 21.07.2005 22.12.2010 14.03.2007 20.04.2011 14.03.2007 11.10.2006 23.03.2011 29.07.2011 21.07.2005 19.03.2007 30.07.2010 20.02.2008 27.05.2010 14.04.2011 01.02.2011 21.07.2005
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