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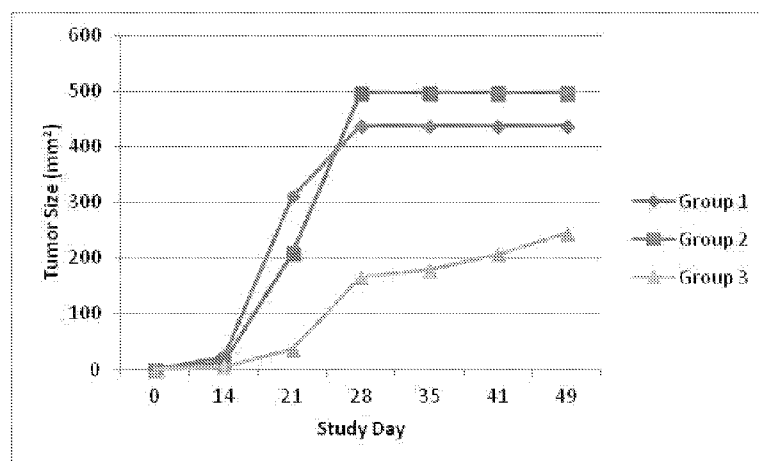
- with international search report (Art. 21(3))
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))

(88) Date of publication of the international search report:

25 February 2016

(54) Title: HYDROGELS FOR TREATING AND AMELIORATING CANCERS AND POTENTIATING THE IMMUNE SYSTEM AND METHODS OF MAKING AND USING THEM

Fig. 8



(57) Abstract: In alternative embodiments, provided are pharmaceutical compositions, formulations, kits and other products of manufacture, comprising a sterile hydrogel comprising a hydrogel material and active ingredients including one or a plurality of compositions or compounds, which may comprise: a biologic, a drug or an immunostimulating agent or reagent; an antigen or an immunogen, or a plurality of antigens or immunogens; an anticancer agent or reagent, or any combination thereof.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US15/38849

A. CLASSIFICATION OF SUBJECT MATTER IPC(8) - A61K 49/00, 47/00, 9/00; C08G 79/00; A61L 27/52; C01B 33/152 (2015.01) CPC - C08J 3/24; C08L 5/00, 53/00; C08B 15/005; C11D 3/3726; C08G 18/75 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) IPC (8): A61K 49/00, 9/00, 47/00; C08G 79/00; A61L 27/52; C01B 33/152 (2015.01) CPC: C08J 3/24; C08L 5/00, 53/00; C08B 15/005; C11D 3/3726; C08G 18/75, 18/3206, 18/4833, 81/00 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) PatSeer (US, EP, WO, JP, DE, GB, CN, FR, KR, ES, AU, IN, CA, INPADOC Data); Dialog ProQuest; PubMed; Google; Google Scholar *gel*, 'jelly gelat*', 'colloid*', 'carrier, vehic*', 'steril*', 'set, stiffen, solidify, thicken, harden, phase, shape, form, state, congeal, viscous, drug, agent, medi*', 'pharmaceutical, remedy, antidote, anticancer, polymer*', 'extracellular matrix,' hydrogel, immune, response		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 2012/002986 A1 (THE REAGENTS OF THE UNIVERSITY OF CALIFORNIA) January 05, 2012; abstract; paragraphs [0009]-[0011], [0013], [0014], [0018], [0023], [0026], [0038], [0039], [0045], [0049], [0063-0066], [0093], and [00107]; Figure 6;	1-3
A	US 20130338084 A1 (ULIJIN, R et al.) December 19, 2013; Abstract; paragraphs [0047], [0149-0151], and [0154];	1-3
A	WO 2012162637 A2 (KANSAS STATE RESEARCH FOUNDATION) February 28, 2013; abstract	1-3
<input type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/> 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 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 12 November 2015 (12.11.2015)		Date of mailing of the international search report 14 DEC 2015
Name and mailing address of the ISA/ Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-8300		Authorized officer Shane Thomas PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US15/38849

Box No. 1 Nucleotide and/or amino acid sequence(s) (Continuation of item 1.c of the first sheet)

1. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international search was carried out on the basis of a sequence listing:
- a. forming part of the international application as filed:
 - in the form of an Annex C/ST.25 text file.
 - on paper or in the form of an image file.
 - b. furnished together with the international application under PCT Rule 13ter.1(a) for the purposes of international search only in the form of an Annex C/ST.25 text file.
 - c. furnished subsequent to the international filing date for the purposes of international search only:
 - in the form of an Annex C/ST.25 text file (Rule 13ter.1(a)).
 - on paper or in the form of an image file (Rule 13ter.1(b) and Administrative Instructions, Section 713).
2. In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that forming part of the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

3. Additional comments:

INTERNATIONAL SEARCH REPORT

International application No.

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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.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. Claims Nos.:
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:

3. Claims Nos.: 4-31
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 additional fees, this Authority did not invite payment of additional fees.
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.