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12 September 2008

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(54) Title: NANOSHELLS FOR DRUG DELIVERY

(57) Abstract: Nano-constructs comprising nanoshells and methods of using the nano-constructs for treating or ameliorating a medical condition are provided.

INTERNATIONAL SEARCH REPORT

International application No
PCT/US2007/014079

A. CLASSIFICATION OF SUBJECT MATTER
INV. A61K9/51 A61K9/127 A61K41/00

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, EMBASE, BIOSIS, INSPEC, COMPENDEX

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6 530 944 B2 (WEST JENNIFER L [US] ET AL) 11 March 2003 (2003-03-11) cited in the application column 4, lines 55-63 column 8, line 60 - column 9, line 50 column 14, lines 4-9,62 - column 15, line 6 column 17, line 5 - column 18, line 37 column 21, line 41 - column 23, line 23; claims 1,2,8,9,33	1-10, 12-18, 32-42
Y		26-31

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[X] Further documents are listed in the continuation of Box C.

[X] 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 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	Date of mailing of the international search report
10 July 2008	21/07/2008

Name and mailing address of the ISA/	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL – 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Marttin, Emmeline

Form PCT/ISA/210 (second sheet) (April 2005)

INTERNATIONAL SEARCH REPORT

International application No
PCT/US2007/014079

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 2005/044224 A (UNIV CASE WESTERN RESERVE [US]; GAO JINMING [US]; AI HUA [US]) 19 May 2005 (2005-05-19) page 3, line 13 - page 4, line 13 page 5, lines 10,11; figure 10 page 6, lines 15-30 page 9, lines 10-20 page 23, lines 21-28 page 25, lines 9-13; example II	1,11,13, 15-18
X	REMITA S ET AL: "Radiation induced synthesis of silver nanoshells formed onto organic micelles" EUROPEAN PHYSICAL JOURNAL D EDP SCIENCES; SPRINGER-VERLAG FRANCE, vol. 34, no. 1-3, July 2005 (2005-07), pages 231-233, XP002487609 ISSN: 1434-6060	1,19-25
Y	page 231, right-hand column, paragraphs 1,2 page 233, right-hand column, paragraph 2	26-31

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2007/014079

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. [X] Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

Although claims 32-42 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.

2. [X] 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:

see FURTHER INFORMATION sheet PCT/ISA/210

3. [ ] Claims Nos.:
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 allsearchable claims.

2. [ ] As all searchable claims could be searched without effort justifying an 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 reportcovers 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.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box II.1

Although claims 32-42 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.

Continuation of Box II.2

Claims Nos.: -

Present claims 1-17, 19-30, 32-42 relate to compound which has a given desired property or effect, namely "a bioactive agent". However, the description provides support and disclosure in the sense of Article 6 and 5 PCT for only a limited number of compounds having the said property or effect and there is no common general knowledge of this kind available to the person skilled in the art, since it is not clear what the term bioactive encompasses (Article 6 PCT). This non-compliance with the substantive provisions is to such an extent, that the search was performed taking into consideration the non-compliance in determining the extent of the search of the claim (PCT Guidelines 9.19 and 9.20).

The search of claims 1-17, 19-30, 32-42 was consequently restricted to the specifically disclosed compoundshaving the desired property or effect, see claims 18, 31 and 42, and to the broad concept of a bioactive agent having the desired property or effect.

The applicant's attention is drawn to the fact that claims relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure. If the application proceeds into the regional phase before the EPO, the applicant is reminded that a search may be carried out during examination before the EPO (see EPO Guideline C-VI, 8.2), should the problems which led to the Article 17(2)PCT declaration be overcome.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No
PCT/US2007/014079

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 6530944 B2	11-03-2003	US 2002103517 A1	01-08-2002
WO 2005044224 A	19-05-2005	NONE	