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(54) Title: AAV CAPSID LIBRARY AND AAV CAPSID PROTEINS

(57) Abstract: Recombinant adeno-associated viral (AAV) capsid proteins are provided. Methods for generating the recombinant adeno-associated viral capsid proteins and a library from which the capsids are selected are also provided.

INTERNATIONAL SEARCH REPORT

International application No
PCT/US2007/008314

A. CLASSIFICATION OF SUBJECT MATTER
INV. C07K14/005 C12N15/864

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)
C12N C07K

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, Sequence Search, BIOSIS, WPI Data, EMBASE

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>DATABASE UniProt [Online] 11 October 2004 (2004-10-11), "Capsid protein VP1." XP002462125 retrieved from EBI accession no. UNIPROT:Q670R0 Database accession no. Q670R0 the whole document</p>	4-9
X	<p>-& CHEN CHUN-LIANG ET AL: "Molecular characterization of adeno-associated viruses infecting children" JOURNAL OF VIROLOGY, vol. 79, no. 23, December 2005 (2005-12), pages 14781-14792, XP002462123 ISSN: 0022-538X figure 2</p>	4-10,13

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 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

12 December 2007

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Name and mailing address of the ISA/

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INTERNATIONAL SEARCH REPORT

International application No
PCT/US2007/008314

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	BOWLES D E ET AL: "Marker rescue of adeno-associated virus (AAV) capsid mutants: a novel approach for chimeric AAV production" JOURNAL OF VIROLOGY, THE AMERICAN SOCIETY FOR MICROBIOLOGY, US, vol. 77, no. 1, January 2003 (2003-01), pages 423-432, XP002975999 ISSN: 0022-538X figures 4,5 -----	4-6,10
X	WO 2005/072364 A (UNIV FLORIDA [US]; ZOLOTUKHIN SERGEI [US]; MUZYCZKA NICHOLAS [US]; KOH) 11 August 2005 (2005-08-11) paragraphs [0127] - [0130]; figure 8 -----	4-7,10
X	US 2002/192823 A1 (BARTLETT JEFFREY S [US]) 19 December 2002 (2002-12-19) claims 1,27; sequences 12,13 -----	1-3, 10-13
A	CHOI VIVIAN W ET AL: "AAV hybrid serotypes: Improved vectors for gene delivery" CURRENT GENE THERAPY, vol. 5, no. 3, June 2005 (2005-06), pages 299-310, XP002462124 ISSN: 1566-5232 -----	

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2007/008314

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.:
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:

see additional sheet

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 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.:

1-13

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

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-13

A capsid protein amino acid sequence comprised of a first sequence of amino acid residues from a first AAV serotype and at least a second sequence of amino acid residues from a second AAV serotype.

2. claims: 14-21

A method of generating a library of recombinant AAV plasmids

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2007/008314

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 2005072364	A	11-08-2005	NONE	
US 2002192823	A1	19-12-2002	US 2005287122 A1	29-12-2005