

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
14 December 2006 (14.12.2006)

PCT

(10) International Publication Number
WO 2006/133135 A3

- (51) **International Patent Classification:**
A61K 48/00 (2006.01) *C12N 15/86* (2006.01)
- (21) **International Application Number:**
PCT/US2006/021824
- (22) **International Filing Date:** 5 June 2006 (05.06.2006)
- (25) **Filing Language:** English
- (26) **Publication Language:** English
- (30) **Priority Data:**
60/687,360 3 June 2005 (03.06.2005) US
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- (81) **Designated States (unless otherwise indicated, for every kind of national protection available):** AE, AG, AL, AM,

AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

- (84) **Designated States (unless otherwise indicated, for every kind of regional protection available):** ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

- (88) **Date of publication of the international search report:**
14 August 2008

(54) **Title:** HERPES VIRUS-BASED COMPOSITIONS AND METHODS OF USE

(57) **Abstract:** This disclosure features vectors, targeting vectors, modified artificial chromosomes, herpes virus particles in which such chromosomes are packaged, and methods of using the herpes virus particles to identify therapeutic agents and targets for therapeutic intervention.



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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US06/21824

A. CLASSIFICATION OF SUBJECT MATTER

IPC: A61K 48/00(2006.01);C12N 15/86(2006.01)

USPC: 424/93.2;435/456

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)

U.S. : 424/93.2;435/456

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)

Please See Continuation Sheet

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X --- Y	XING. W. HSV-1 amplicon-mediated transfer of 128-kb BMP-2 genomic locus stimulates osteoblast differentiation in vitro. Biochem Biophys Res Commun. July 2004, Vol 319, No. 3, pages 781-786, see page 783, figure 1A and pages 784.	1-3, 18-21, 79-80, 102-103 ----- 16-17, 81
X --- Y	WADE-MARTINS. R. Infectious delivery of a 135-kb LDLR genomic locus leads to regulated complementation of low-density lipoprotein receptor deficiency in human cells. Mol Ther. May 2003 Vol. 5, No. 1, pages 604-612.	1-3, 18-21, 79-81, 102-103 ----- 102-103
Y	CN 1263159 A(CAO et al) 16 August 2000 (16.08.2000), abstract	16-17
Y	LAUTH. M. Stable and efficient cassette exchange under non-selectable conditions by combined use of two site-specific recombinases. Nucleic Acids Res. 2002 November, Vol. 30 No. 21, e115.	2-3, 16-17, 20

☒ 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 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

20 May 2008 (20.05.2008)

Date of mailing of the international search report

24 JUN 2008

Name and mailing address of the ISA/US

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US06/21824

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WADE-MARTINS. R. An infectious transfer and expression system for genomic DNA loci in human and mouse cells. Nature Biotechnology 2001 November, Vol. 19 No. 11, pages 1067-1070. See page 1067, figure 1 and page 1070, col. 1.	1-3, 16-21, 79-81, 102-103
A	WO02/053576 (CHIOCCA et al) 11 July 2002 (11.07.2002)	1-3, 16-21, 79-81, 102-103
A	SAEKI et al Herpes simplex virus type 1 DNA amplified as bacterial artificial chromosome in Escherichia coli: rescue of replication-competent virus progeny and packaging of amplicon vectors. Human Gene Therapy, December 1998, Vol. 9. No. 18, 2787-2794	1-3, 16-21, 79-81, 102-103

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US06/21824

Continuation of B. FIELDS SEARCHED Item 3:
EAST: USPAT, PG-PUB, JPO, EPO, DERWENT
STN: CAPLUS, MEDLINE, EMBASE, BIOSIS

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US06/21824

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.: 4-15; 22-78; 82-101; 104-106
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 any 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.