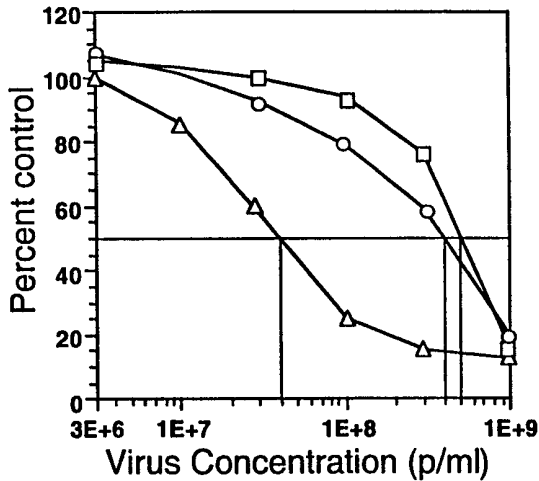




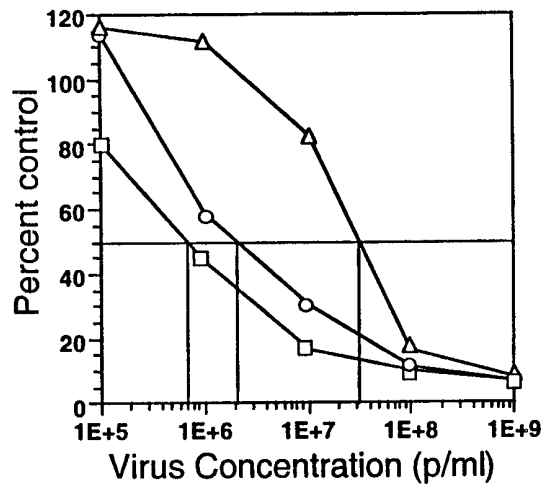
INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

<p>(51) International Patent Classification ⁷ : C12N 15/34, 15/62, 15/861, C07K 14/075, 14/47, A61P 35/00, A61K 48/00</p>	<p>A3</p>	<p>(11) International Publication Number: WO 00/22137 (43) International Publication Date: 20 April 2000 (20.04.00)</p>
<p>(21) International Application Number: PCT/US99/21452 (22) International Filing Date: 14 October 1999 (14.10.99) (30) Priority Data: 09/172,686 15 October 1998 (15.10.98) US (71) Applicant: CANJI, INC. [US/US]; 3525 John Hopkins Court, San Diego, CA 92121 (US). (72) Inventors: RAMACHANDRA, Muralidhara; 14536 North Church Square, San Diego, CA 92128 (US). SHABRAM, Paul, W.; 149 Peppertree Lane, Olivenhain, CA 92024 (US). (74) Agents: MURPHY, Richard, B. et al.; Schering-Plough Corporation, Patent Dept., K-6-1, 1990, 2000 Galloping Hill Road, Kenilworth, NJ 07033-0530 (US).</p>	<p>(81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, HR, HU, ID, IL, IN, IS, JP, KG, KR, KZ, LC, LK, LR, LT, LU, LV, MA, MD, MG, MK, MN, MX, NO, NZ, PL, PT, RO, RU, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UZ, VN, YU, ZA, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG). Published <i>With international search report.</i> (88) Date of publication of the international search report: 3 August 2000 (03.08.00)</p>	

(54) Title: SELECTIVELY REPLICATING VIRAL VECTORS



A



B

(57) Abstract

The present invention provides recombinant viruses which replicate the viral genome selectively in response to the intracellular conditions of the target cell through the use of a pathway-responsive promoter which substantially inhibits viral replication in the host cell based on the phenotype or genotype of the infected cell. In the target cell, the promoter element of the pathway-responsive promoter is inactive and thus the virus is permitted to replicate. This result in: (1) killing the cells by natural lytic nature of the virus, and/or (2) provides a therapeutic dose of a transgene product (amplified in comparison to replication incompetent vectors) to the target cell, and (3) producing a localized concentration of the virus facilitating the infection of surrounding cells by the recombinant virus. The invention further provides therapeutic and diagnostic methods of use of the vectors, pharmaceutical formulations comprising the vectors, methods of making the vectors and transformed cells comprising the vectors.

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INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 99/21452

A. CLASSIFICATION OF SUBJECT MATTER
 IPC 7 C12N15/34 C12N15/62 C12N15/861 C07K14/075 C07K14/47
 A61P35/00 A61K48/00

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)
 IPC 7 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)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	ZHANG W ET AL.: "The requirement of the carboxyl terminus of p53 for DNA binding and transcriptional activation depends on the specific p53 binding DNA element" ONCOGENE, vol. 9, no. 9, September 1994 (1994-09), pages 2513-2521, XP000891651 abstract page 2513, right-hand column, line 16-34 table 1 --- -/--	23

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

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- *&* document member of the same patent family

Date of the actual completion of the international search 18 April 2000	Date of mailing of the international search report 03/05/2000
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Name and mailing address of the ISA 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	Authorized officer van de Kamp, M
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INTERNATIONAL SEARCH REPORT

Internal Application No
PCT/US 99/21452

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International Application No
PCT/US 99/21452

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 99/21452

Box I Observations where certain claims were found unsearchable (Continuation of Item 1 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:
Remark: Although claims 18 and 19 (as far as they concern in vivo methods) 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. 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 II Observations where unity of invention is lacking (Continuation of Item 2 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.
- No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 99/21452

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