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A61K 9/20 (2006.01) A61K 31/14 (2006.01)

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(54) Title: METHODS OF TREATING VIRAL INFECTIONS

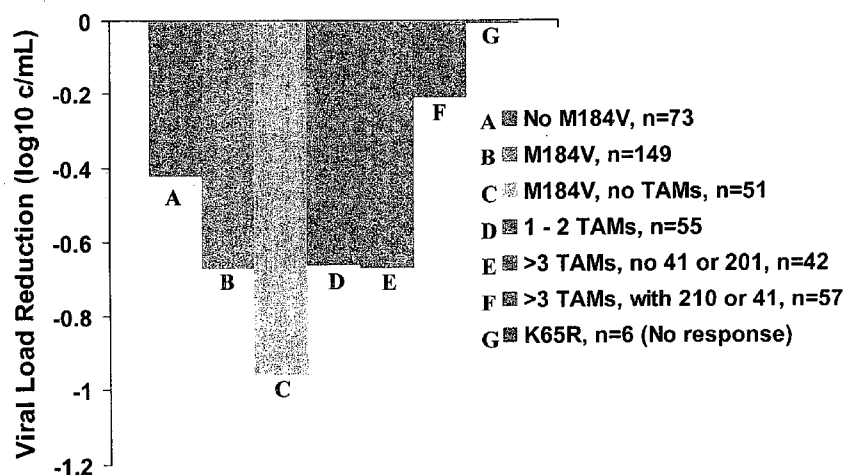


Figure 1

(57) Abstract: The present invention provides methods of treating human immunodeficiency virus (HIV) and/or hepatitis B virus (HBV) infection, including administering a compound described in the invention in an amount effective to treat HIV and/or HBV infection and at least substantially inhibit the development of resistance to said antiviral compounds in the subject. Pharmaceutical compositions are also provided.

INTERNATIONAL SEARCH REPORTInternational application No.
PCT/US2009/000448**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.: 1-25,34-48,52-64
because they relate to subject matter not required to be searched by this Authority, namely:
Claims 1-25, 34-48, 52-64 pertain to methods for treatment of the human body by therapy, as well as diagnostic methods, and thus relate to a subject matter which this International Searching Authority is not required, under Article 17(2)(a)(i) of PCT and Rule 39.1(iv) of the Regulations under the PCT, to search.
2. ☒ Claims Nos.: 32,46
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:
Claims 32, 46 refer to claims which are not searchable due to not being drafted in accordance with the third sentence of Rule 6.4(a). As a result these claims are too unclear to make meaningful search possible.
3. ☒ Claims Nos.: 5-13,17-25,30-31,33,38-45,47-51,55-64,68-73,77-84
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 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 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.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2009/000448**A. CLASSIFICATION OF SUBJECT MATTER***A61K 31/675(2006.01)i, A61P 31/18(2006.01)i, A61P 1/16(2006.01)i, A61K 9/20(2006.01)i, A61K 9/48(2006.01)i, A61K 9/14(2006.01)i, C07H 19/00(2006.01)i, A61K 31/14(2006.01)i*

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 A61K 31/675, A61P 31/18, A61P 1/16, A61K 9/20, A61K 9/48, A61K 9/14, C07H 19/00, A61K 31/14

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)

KOMPASS, PubMed, JPO, USPTO, Google

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X Y	WO 2005/087788 A2 (THE REGENTS OF THE UNIVERSITY OF CALIFORNIA) 22 September 2005 See Abstract, Page 3, Claims 13, 28.	26-29 65-67,74-76
Y A	WO 2006/130217 A2 (THE REGENTS OF THE UNIVERSITY OF CALIFORNIA) 7 December 2006 See Abstract; Page 56, Lines 9-12; Page 61, Lines 16-18.	65-67 26-29,74-76
Y A	US 2005/0267217 A1 (SAMUEL BARON ET AL.) 1 December 2005 See Abstract, Paragraph [0014], Claims 4, 7, 8.	74-76 26-29,65-67

☐ 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 but published on or after the international filing date

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"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

29 JULY 2009 (29.07.2009)

Date of mailing of the international search report

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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/US2009/000448

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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