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— *with international search report (Art. 21(3))*

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8 December 2011

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(54) Title: COMPOSITIONS AND METHODS FOR INHIBITING MMSET

(57) Abstract: The present invention relates to agents that find use in the treatment, management, and/or study of cancer. In particular, the present invention relates to agents (e.g., small molecules, nucleic acids) that affect MMSET expression or activity.

INTERNATIONAL SEARCH REPORT

International application No.
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A. CLASSIFICATION OF SUBJECT MATTER

A61K 39/395(2006.01)i, A61K 31/498(2006.01)i, A61K 31/495(2006.01)i, A61P 35/00(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)

A61K 39/395; C07H 21/04; A61K 31/7105; A61K 31/35; G01N 33/567; G01N 33/53; C12Q 1/68; G01N 33/574

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)

eKOMPASS(KIPO internal) & Keywords: MMSET, WHSC1, NSD2, cancer, 3-hydrazinylquinoxaline-2-thiol

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	JOSH LAURING et al., The multiple myeloma-associated MMSET gene contributes to cellular adhesion, clonogenic growth, and tumorigenicity. Blood, 111: 856-864 (2008)	13-16
A	see abstract; results.	17
X	JIE LI et al., Identification of a novel proliferation-related protein, WHSC1 4a, in human gliomas. Neuro-Oncology, 10: 45-51 (2008)	13-16
A	see abstract; results.	17
X	US 2006/0019256 A1 (MICHAEL F. CLARKE and RUI LIU) 26 January 2006 see abstract; claims 1, 10-12, 15, 16; paragraphs [0050] and [0113];	13-16
A	p. 13, table 4.	17
X	US 2007/0050146 A1 (ITZHAK BENTWICH et al.) 01 March 2007	13-16
A	see abstract; claims 1-3, 13, 17; paragraphs [0029], [0123]; p. 63, table 9.	17

☒ 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
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of 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
14 OCTOBER 2011 (14.10.2011)	**14 OCTOBER 2011 (14.10.2011)**

Name and mailing address of the ISA/KR
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INTERNATIONAL SEARCH REPORT

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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2004/0241756 A1 (TONY KOUZARIDES and HELENA SANTOS-ROSA) 02 December 2004 see abstract; claims 2-4, 23, 27; paragraphs [0030], [0086], [0097], [0099].	13-17
A	US 2009/0012031 A1 (ARUL M. CHINNAIYAN et al.) 08 January 2009 see abstract; claims 1, 3-7; paragraph [0166]; p. 17, table 1.	13-17

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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.: 1-12
because they relate to subject matter not required to be searched by this Authority, namely:
Claims 1-12 pertain to methods for treatment of the human body by surgery or 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 the PCT and Rule 39.1(iv) of the Regulations under the PCT, to search.

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:

1. ☐ As all required addtional 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

Information on patent family members

International application No.

PCT/US2011/024436

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International application No.

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