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Declarations under Rule 4.17:

[Continued on next page]

(54) Title: TUMOR SUPPRESSION COMPOSITIONS

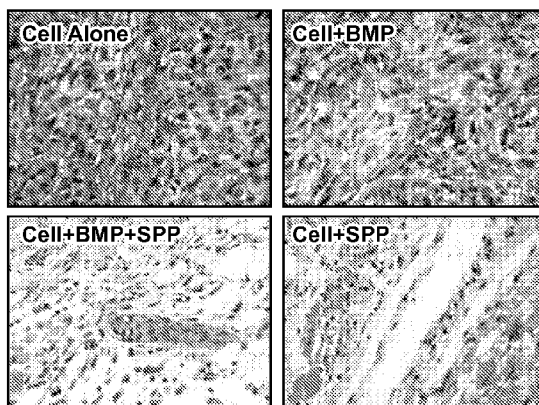


FIG. 10

(57) Abstract: Provided herein is tumor suppression composition and methods of making and using the same.

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— *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))* — *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*

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

(88) Date of publication of the international search report:

19 April 2012

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2011/037952**A. CLASSIFICATION OF SUBJECT MATTER***A61K 38/16(2006.01)i, A61K 38/18(2006.01)i, A61K 38/19(2006.01)i, A61K 31/485(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 38/16; C12N 15/12; C12N 7/01

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Korean utility models and applications for utility models
Japanese utility models and applications for utility models

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

eKOMPASS(KIPO internal), NCBI database, google, google scholar
& Keywords: spp24, BMP, TGF-beta, tumor**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	Feeley, B. et al., 'Mixed Metastatic Lung Cancer Lesions in Bone Are Inhibited by Noggin Overexpression and Rank:Fc Administration', Journal of Bone and Mineral Research, October 2006, Vol. 21, Issue 10, pages 1571-1580.	1,24
A	See abstract, page 1572 left column and discussion.	2-12
A	BROCHMANN, E. et al., 'Carboxy terminus of secreted phosphoprotein-24 kDa (spp24) is essential for full inhibition of BMP-2 activity', Journal of Orthopaedic Research, Epub 16 February 2010, Vol. 28, No. 9, pages 1200-1207. See abstract, pages 1200, 2010-11.	1-12,24-25
PX	LEE, K. et al., 'Effects of the bone morphogenetic protein binding protein spp24 (secreted phosphoprotein 24kDa) on the growth of human lung cancer cells', Journal of Orthopaedic Research, Epub 20 April 2011, Vol. 29, No. 11, pages 1712-1718. See abstract.	1-12,24-25
X	WO 96-21006 A1 (THE REGENTS OF THE UNIVERSITY OF CALIFORNIA) 11 July 1996 See abstract.	25

 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

29 FEBRUARY 2012 (29.02.2012)

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Name and mailing address of the ISA/KR

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US2011/037952**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.: 13-23
because they relate to subject matter not required to be searched by this Authority, namely:
Claims 13-23 pertain to methods for treatment of the human body by therapy, 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.: 26-28
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 26-28, dependent on claim 24, relate to the method of producing recombinant spp24 in an expression system. However, claim 24 relates to a method of making composition comprising bioactive agents and BMP or TGF-beta. As claims 26-28 do not clearly define the matter for which protection is sought, these claims do not meet the requirement of PCT Article 6.
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 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

Information on patent family members

International application No.

PCT/US2011/037952

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 96-21006 A1	11.07.1996	WO 96-21006A1	11.07.1996