

INTERNATIONAL SEARCH REPORT

International application No.

PCT/KR2017/013749

A. CLASSIFICATION OF SUBJECT MATTER

A61K 38/29(2006.01)i, A61K 38/08(2006.01)i, A61K 38/10(2006.01)i, A61L 27/36(2006.01)i, A61L 27/54(2006.01)i, A61L 27/12(2006.01)i, A61L 27/06(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 38/29; A61K 39/395; A61K 38/46; C12N 9/52; C07K 14/195; A61K 38/08; A61K 38/10; A61L 27/36; A61L 27/54; A61L 27/12; A61L 27/06

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: IPC as above
Japanese Utility models and applications for Utility models: IPC as above

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

eKOMPASS (KIPO internal) & Keywords: parathyroid hormone, bone sialoprotein, collagen-bound peptide, bone disease, bone generation, fusion protein, implant

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2010-0129341 A1 (SAKON, Joshua et al.) 27 May 2010 See abstract, paragraphs [0007], [0031], [0055], [0062], [0085], [0090], [0092], [0094], [0099], [0138], [0149], [0182]; claim 65; and SEQ ID NO: 7.	1-4,6-15,17-22
Y		5,16
Y	GenBank: AAV38943.1: Secreted Phosphoprotein 1 (Osteopontin, Bone Sialoprotein I, Early T-lymphocyte Activation 1), Partial [Synthetic Construct] (26 July 2016) See the entire document.	5,16
X	US 2017-0204390 A1 (THE BOARD OF TRUSTEES OF THE UNIVERSITY OF ARKANSAS et al.) 20 July 2017 See paragraphs [0047], [0048], [0054], [0064]; claims 1, 7, 11, 12, 14; and SEQ ID NO: 7.	1-4,7-15,17-22
X	PONNAPAKKAM, Tulasi et al., "Monthly Administration of a Novel PTH-collagen Binding Domain Fusion Protein Is Anabolic in Mice", Calcified Tissue International, 2011, vol. 88, pages 511-520 See pages 511, 513, 518.	1-2,7-11



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 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

14 JUNE 2018 (14.06.2018)

Date of mailing of the international search report

14 JUNE 2018 (14.06.2018)

Name and mailing address of the ISA/KR



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PCT/KR2017/013749

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WU, Xiao-Cheng et al., "Collagen-targeting Parathyroid Hormone-related Peptide Promotes Collagen Binding and in Vitro Chondrogenesis in Bone Marrow-derived MSCs", International Journal of Molecular Medicine, 2013, vol. 31, pages 430-436 See abstract, and page 435.	1-2,7-11

INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.

PCT/KR2017/013749

Patent document cited in search report	Publication date	Patent family member	Publication date
US 2010-0129341 A1	27/05/2010	CA 2683862 A1	16/10/2008
		CA 2683862 C	02/08/2016
		CA 2930681 A1	16/10/2008
		DK 2155874 T3	01/08/2016
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		EP 2155874 A4	01/09/2010
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		EP 2790717 A4	09/03/2016
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		US 9526765 B2	27/12/2016
		US 9579273 B2	28/02/2017
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