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- (81) **Designated States** (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT,

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(54) **Title:** NOVEL FORMULATIONS OF PTHrP ANALOGUE

(57) **Abstract:** The present invention provides a non-buffered, neutral pH, easily prepared, storage-stable composition containing a parathyroid hormone-related protein (PTHrP) analogue and methods of using a PTHrP analogue and the PTHrP compositions described herein to treat osteoporosis, to increase bone mass or to increase bone quality. The composition has a non-buffered neutral pH which avoids injection site reactions and is easy to prepare and storage stable, in sterile form, and in general may be stored at room temperature for at least several weeks to allow convenient parenteral administration to human patients.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US16/41016

Box No. I Nucleotide and/or amino acid sequence(s) (Continuation of item 1.c of the first sheet)

1. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international search was carried out on the basis of a sequence listing:
- a. forming part of the international application as filed:
 - in the form of an Annex C/ST.25 text file.
 - on paper or in the form of an image file.
 - b. furnished together with the international application under PCT Rule 13ter. 1(a) for the purposes of international search only in the form of an Annex C/ST.25 text file.
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2. In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that forming part of the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
3. Additional comments:

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US16/41016

A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - A61K 38/29; A61P 19/00, 19/10; C07K 1/02, 14/635 (2017.01)

CPC - A61K 38/29; C07K 1/02, 14/635

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(8): A61K 38/29; A61P 5/00, 19/00, 19/10; C07K 1/02, 14/635 (2016.01)

CPC: A61K 38/29; C07K 1/02, 14/635

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)

PatSeer (US, EP, WO, JP, DE, GB, CN, FR, KR, ES, AU, IN, CA, INPADOC Data); EBSCO Discovery; PubMed; Google Scholar; The Lens; ENA; NCBI Blast; KEYWORDS: pthrp, analogue, osteoporosis, composition, treat, osteoporosis, buffer

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2002/0025929 A1 (SATO, M) February 28, 2002; paragraphs [0015], [0020], [0045]; claims 1, 12	1-9, 10/1-9, 11/10/1-9, 12/11/10/1-9, 13-22
A	US 2009/0197837 A1 (DESAI, V et al.) August 6, 2009; paragraphs [0006], [0008]; claims 1, 19	1-9, 10/1-9, 11/10/1-9, 12/11/10/1-9, 13-22
A	WO 2000/061111 A1 (ASTRAZENECA AB) October 19, 2000; abstract; page 13, lines 23-25	1-9, 10/1-9, 11/10/1-9, 12/11/10/1-9, 13-22

 Further documents are listed in the continuation of Box C. See patent family annex.

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"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

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Date of the actual completion of the international search

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