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- 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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(54) Title: POLYPEPTIDES

(57) Abstract: The invention relates to polypeptides comprising an amino acid sequence which is an analogue of pramlintide, pharmaceutical compositions comprising these polypeptides, and these polypeptides for use as medicaments.



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INTERNATIONAL SEARCH REPORT

International application No
PCT/EP2012/060899

A. CLASSIFICATION OF SUBJECT MATTER

INV. C07K14/575 A61K47/48 C07K14/62
ADD.

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)

C07K A61K

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)

EPO-Internal, BIOSIS, Sequence Search, EMBASE, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 2007/104789 A2 (NOVO NORDISK AS [DK]; HANSEN THOMAS KRUSE [DK]; SCHAEFFER LAUGE [DK];) 20 September 2007 (2007-09-20) page 9, line 34 - page 10, line 2 page 23, line 4 page 28, lines 11-14 sequence 17 claims 1,5 -----	1-14



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

3 December 2012

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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 2007104789 A2	20-09-2007	CN 101400698 A	01-04-2009
		EP 1996617 A2	03-12-2008
		JP 2009530250 A	27-08-2009
		US 2009099085 A1	16-04-2009
		WO 2007104789 A2	20-09-2007

INTERNATIONAL SEARCH REPORT

International application No.

PCT/EP2012/060899

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 and necessary to the claimed invention, the international search was carried out on the basis of:
 - a. (means)
☐ on paper
☒ in electronic form
 - b. (time)
☒ in the international application as filed
☐ together with the international application in electronic form
☐ subsequently to this Authority for the purpose of search
2. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in 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/EP2012/060899

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.:
because they relate to subject matter not required to be searched by this Authority, namely:
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:

see additional sheet

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 fees, this Authority did not invite payment of additional fees.
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.:
1-5(completely); 6-14(partially)
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.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 3, 5(completely); 1, 2, 4, 6-14(partially)

A polypeptide comprising an amino acid sequence which is an analogue of SEQ ID No: 2 wherein: said analogue comprises an amino acid residue at position 17 which is His or Arg and an amino acid residue at position 35 which is His or Arg or Lys or Asp or Glu or Gln; and optionally a proline residue at position 37 and/or a glutamic acid residue at position 14; wherein the amino acid sequence numbering of the analogue corresponds to the amino acid numbering sequence of SEQ ID No: 2; and optionally the polypeptide has at least one substituent attached to at least one of its amino acid residues; said polypeptide for use as a medicament; said polypeptide for use in treating a number of defined diseases; a pharmaceutical composition comprising said polypeptide; and, a process for preparing said pharmaceutical composition.

2. claims: 1, 2, 4-14(all partially)

A polypeptide comprising an amino acid sequence which is an analogue of SEQ ID No: 2 wherein said analogue comprises an amino acid residue at position 35 which is His; and optionally a proline residue at position 37 and/or a glutamic acid residue at position 14; wherein the amino acid sequence numbering of the analogue corresponds to the amino acid numbering sequence of SEQ ID No: 2; and optionally the polypeptide has at least one substituent attached to at least one of its amino acid residues; said polypeptide for use as a medicament; said polypeptide for use in treating a number of defined diseases; a pharmaceutical composition comprising said polypeptide; and, a process for preparing said pharmaceutical composition.

3. claims: 1, 2, 4-14(all partially)

Idem as invention 2 but wherein the amino acid at position 35 is Arg.

4. claims: 1, 2, 4-14(all partially)

Idem as invention 2 but wherein the amino acid at position 35 is Lys.

5. claims: 1, 2, 4-14(all partially)

Idem as invention 2 but wherein the amino acid at position 35 is Glu.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

6. claims: 1, 2, 4-14(all partially)

Idem as invention 2 but wherein the amino acid at position
35 is Gln.
