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23 April 2009

(54) Title: CALCIUM PHOSPHATE BASED DELIVERY OF GROWTH AND DIFFERENTIATION FACTORS TO COMPROMISED BONE

(57) Abstract: Resorbable calciumphosphate (CaP) based compositions comprising growth and differentiation factors (GDF) and their uses in bone regeneration and preventive treatment, in particular of osteoporotic bone, are disclosed.



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# INTERNATIONAL SEARCH REPORT

International application No  
PCT/EP2008/007248

**A. CLASSIFICATION OF SUBJECT MATTER**

INV. A61F2/28      A61L27/42      A61L27/54      C07K14/495      A61L27/58

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)

A61L A61K A61F C07K

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 practical, search terms used)

EPO-Internal, PAJ, 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	DE 196 47 853 A1 (BIOPH BIOTECH ENTW PHARM GMBH [DE]; GERONTOCARE GMBH BIOMATERIALS [DE]) 20 May 1998 (1998-05-20) page 2 - page 10 -----	1-16, 26-28, 32-46
X	EP 1 604 693 A (SCIL TECHNOLOGY GMBH [DE]) 14 December 2005 (2005-12-14)  pages 3,4 pages 14,17 examples 2,3  -----  -/--	1-3,6,7, 14-16, 32,34, 36, 39-41,46

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 document 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.
- \*Z\* document member of the same patent family

Date of the actual completion of the international search

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Date of mailing of the international search report

03/03/2009

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## INTERNATIONAL SEARCH REPORT

International application No

PCT/EP2008/007248

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2005/170012 A1 (DALAL PARESH S [US] ET AL) 4 August 2005 (2005-08-04)  page 6, paragraphs 63,65 page 7, paragraphs 71,72,80,81 page 9, paragraph 99 page 1, paragraph 8 page 17, paragraph 161 page 16, paragraphs 152,155 page 5, paragraph 61  -----	8-15, 17-26, 33,38-46

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/EP2008/007248

## 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 allsearchable 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.:  
1-28, 32-46
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: Claims 1-7, 27, 28, (partially:) 14, 15, 32, 39-46

A composition for formation of bone comprising CaP and GDF-5.

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2. claims: Claims 8-13, 26, 33, 38, (partially:) 14, 15, 39-46

A composition for formation of bone, comprising CaP and GDF-5 and/or GDF-3 having phases with controlled resorption rates.

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3. claims: Claims 29-31

Medical tools for kyphoplasty or vertebroplasty or a porous pouch comprising a composition containing GDF-5 and/or GDF-3 and CaP.

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4. claims: Claims 17-25, (partially:) 39-46

A composition comprising microscaffolds.

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5. claims: Claims 16, 34-37, (partially:) 32, 39-46

A porous CaP-GDF3/5 composition having different pore shapes and/or sizes.

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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
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