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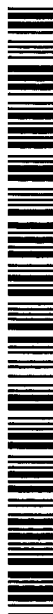
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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: COMPOSITION FOR ENHANCING FUNCTIONAL RECOVERY OF A MAMMAL FROM CENTRAL AND/OR PERIPHERAL NERVOUS SYSTEM INJURY OF TRAUMATIC OR PATHOLOGICAL ORIGIN

(57) Abstract: Functional recovery of a mammal from central and/or peripheral nervous system injury of traumatic or pathological origin and including cerebral ischemia and stroke is enhanced by administration of a composition comprising a therapeutically effective amount of a natural protein mixture derived from bone, cartilage and/or tendon/ligament tissue and having bone morphogenic and/or osteoinductive characteristics. This natural protein mixture is preferably the mixture known as BP (Bome Protein) which mixture is derived from bovine bone material by extracting proteins from demineralized bone particles and purifying the extract by ultrafiltration, anion exchange, cation exchange and reverse phase high resolution liquid chromatography. In the rat model it is shown that the enhancement regarding BP-treated animals compared with sham-treated animals includes acceleration of recovery for reversible and irreversible cases of spinal cord lesions and a higher recovery level, i.e. a smaller irreversible functional loss for irreversible cases. Recovery is believed to be due to the beneficial effect of the natural protein mixture on cell survival after injury, on cell protection against exitotoxicity (e.g. glutamate intoxication) as well as on injury site conditions favoring axon regeneration. Compared with known administration of single species of recombinantly produced bone morphogenic proteins for similar aims, the natural protein mixture is effective in considerably lower doses.



WO 00/64460 A3

INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 A61K35/32 A61P25/00 A61K38/18

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 7 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 practical, search terms used)

EPO-Internal, BIOSIS, WPI Data, PAJ, MEDLINE, CHEM ABS Data, SCISEARCH

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 5 756 457 A (TORIUMI DEAN M ET AL) 26 May 1998 (1998-05-26) cited in the application the whole document ---	1-3, 5-11, 14-26
Y	LEVINE J P ET AL: "Bone morphogenetic protein promotes vascularization and osteoinduction in preformed hydroxyapatite in the rabbit" ANNALS OF PLASTIC SURGERY,US,LITTLE, BROWN AND CO, vol. 39, no. 2, August 1997 (1997-08), pages 158-168, XP002115397 ISSN: 0148-7043 page 159, column 2, line 26 -page 160, column 1, line 22 --- -/--	1-3, 5-11, 14-26

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>US 5 290 763 A (POSER JAMES W ET AL) 1 March 1994 (1994-03-01) cited in the application the whole document</p> <p style="text-align: center;">---</p>	<p>1,2, 5-11, 14-26</p>
A	<p>PERIDES G ET AL: "NEUROPROTECTIVE EFFECT OF HUMAN OSTEOGENIC PROTEIN-1 IN A RAT MODEL OF CEREBRAL HYPOXIA/ISCHEMIA" NEUROSCIENCE LETTERS, IE, LIMERICK, vol. 187, 1995, pages 21-24, XP002037656 ISSN: 0304-3940 cited in the application the whole document</p> <p style="text-align: center;">---</p>	<p>1-26</p>
A	<p>WO 92 15323 A (CREATIVE BIOMOLECULES INC) 17 September 1992 (1992-09-17) page 6, line 4 -page 7, line 8 page 10, line 29 - line 35 page 14, line 13 - line 25 page 29, line 4 - line 30 page 65, line 7 - line 20</p> <p style="text-align: center;">---</p>	<p>1-26</p>
A	<p>WO 94 05791 A (HARLAND RICHARD M ;KNECHT ANNE (US); LAMB TERESA (US); CUDNY HENRY) 17 March 1994 (1994-03-17) page 10, line 25 -page 11, line 13 page 16, line 18 - line 26 page 21, line 9 - line 22 claims 21,30</p> <p style="text-align: center;">---</p>	<p>13</p>
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