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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: COMPOSITIONS FOR TREATING OR PREVENTING ANGIOGENESIS-DEPENDENT SYMPTOMS

(57) Abstract: A method for enhancing the transfection efficiency of naked plasmid DNA in treating and/or preventing angiogenesis-dependent symptoms is provided by the present inventions. According to the present method, a suitable naked plasmid DNA is subjected for intramuscular injection under increased pressure inside the muscle or hyperbaric oxygen. Angiogenesis-dependent symptoms, including wounds, inflammatory diseases, critical limb ischemia, ischemic heart diseases, cerebral infarction, diabetic neuropathy, spinal canal stenosis, etc., may be treated by the present methods.

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INTERNATIONAL SEARCH REPORT

International Application No
PCT/JP 03/15400

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 A61K48/00 A61P9/10

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, WPI Data, PAJ, MEDLINE, BIOSIS

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DATABASE BIOSIS [Online] BIOSCIENCES INFORMATION SERVICE, PHILADELPHIA, PA, US; March 2002 (2002-03), TANIYAMA Y ET AL: "Development of safe and efficient novel nonviral gene transfer using ultrasound: Enhancement of transfection efficiency of naked plasmid DNA in skeletal muscle" XP002277365 Database accession no. PREV200200261758 cited in the application abstract & GENE THERAPY, vol. 9, no. 6, March 2002 (2002-03), pages 372-380, ISSN: 0969-7128 ----- -/--	1,2,4-7

[X] Further documents are listed in the continuation of box C.

[X] Patent family members are listed in 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)

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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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"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
20 April 2004	19. 07. 2004

Name and mailing address of the ISA	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Sitch, W

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Form PCT/ISA/210 (second sheet) (January 2004)

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DATABASE BIOSIS [Online] BIOSCIENCES INFORMATION SERVICE, PHILADELPHIA, PA, US; 31 March 1998 (1998-03-31), BAUMGARTNER IRIS ET AL: "Constitutive expression of phVEGF165 after intramuscular gene transfer promotes collateral vessel development in patients with critical limb ischemia" XP002277366 Database accession no. PREV199800207109 cited in the application abstract & CIRCULATION, vol. 97, no. 12, 31 March 1998 (1998-03-31), pages 1114-1123, ISSN: 0009-7322 -----	1,2,4-7
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X	DATABASE BIOSIS [Online] BIOSCIENCES INFORMATION SERVICE, PHILADELPHIA, PA, US; May 2002 (2002-05), COMEROTA ANTHONY J ET AL: "Naked plasmid DNA encoding fibroblast growth factor type 1 for the treatment of end-stage unreconstructible lower extremity ischemia: Preliminary results of a phase I trial" XP002277368 Database accession no. PREV200200358126 abstract & JOURNAL OF VASCULAR SURGERY, vol. 35, no. 5, May 2002 (2002-05), pages 930-936, ISSN: 0741-5214 ----- -/--	1,2,4-7

INTERNATIONAL SEARCH REPORT

International Application No
PCT/JP 03/15400

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2002/137707 A1 (BUDKER VLADIMIR G ET AL) 26 September 2002 (2002-09-26) paragraph [0007] paragraph [0010] paragraph [0024] paragraph [0030] - paragraph [0032] paragraph [0053] paragraph [0055] paragraph [0057] - paragraph [0060] -----	
P,X	DATABASE BIOSIS [Online] BIOSCIENCES INFORMATION SERVICE, PHILADELPHIA, PA, US; 25 November 2003 (2003-11-25), HIRAOKA KAZUYA ET AL: "Enhanced therapeutic angiogenesis by cotransfection of prostacyclin synthase gene or optimization of intramuscular injection of naked plasmid DNA." XP002277369 Database accession no. PREV200400009718 abstract & CIRCULATION, vol. 108, no. 21, 25 November 2003 (2003-11-25), pages 2689-2696, ISSN: 0009-7322 (ISSN print) -----	1-7

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/JP 03/15400

Box I Observations where certain claims were found unsearchable (Continuation of item 1 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. [X] Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

Although claims 1-7 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.

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 II Observations where unity of invention is lacking (Continuation of item 2 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 fee, this Authority did not invite payment of any additional fee.

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.:

4. [X] 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.:

1-7

Remark on Protest

[ ] The additional search fees were accompanied by the applicant's protest.

[ ] No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.1

Although claims 1-7 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

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

1. claims: 1-7

Method of treating or preventing an angiogenesis dependent symptom comprising delivering a naked plasmid DNA encoding an angiogenic growth factor into muscle, and under a condition such that pressure inside the muscle is increased

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2. claims: 8-14

Method of treating or preventing an angiogenesis dependent symptom comprising delivering a naked plasmid DNA encoding an angiogenic growth factor into muscle, in combination with hyperbaric oxygen therapy

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INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No
PCT/JP 03/15400

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