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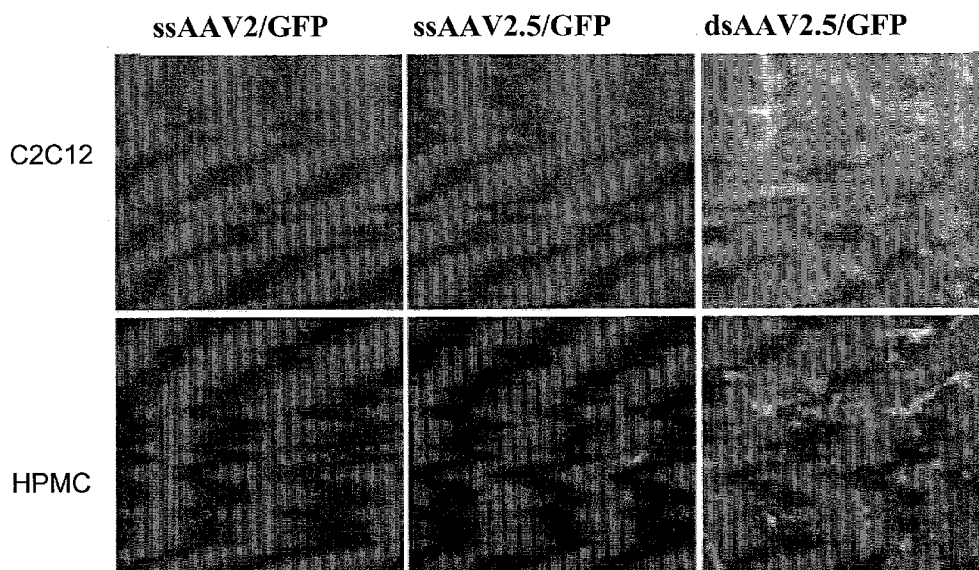
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(54) Title: MODIFIED FACTOR VIII AND FACTOR IX GENES AND VECTORS FOR GENE THERAPY



In Vitro GFP Transduction 1x10e9vg HPMC

(57) Abstract: The present invention relates to a modified and optimized Factor VIII or Factor IX nucleic acid for inclusion in a chimeric virus vector. Use of such vector can be used for treatment of hemophilia.

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 07/71553

<p>A. CLASSIFICATION OF SUBJECT MATTER IPC(8) - A61K 31/70; C12P 21/06 (2008.04) USPC - 514/44; 435/69.1 According to International Patent Classification (IPC) or to both national classification and IPC</p>												
<p>B. FIELDS SEARCHED</p> <p>Minimum documentation searched (classification system followed by classification symbols) USPC - 514/44; 435/69.1</p> <p>Documentation searched other than <i>minimum</i> documentation to the extent that such documents are included in the fields searched USPC - 435/69.6, 435/455, 435/456; 536/23.1, 536/23.2, 536/23.3 (text search, see terms below)</p> <p>Electronic data base consulted during the international search (name of data base and, where practicable, search terms used). PubWEST(PGPB,USPT,EPAB,JPAB); Google/Scholar; PubMed: Factor VIII, FVIII, factor IX, variant, modified, altered, GC content, codon, bias, usage, adaptation, capsid, optimize, AAV1, AAV2, AAV3, AAV4, AAV5, AAV6, AAV7, AAV8, AAV9, AAV10, AAV11, AAV12, cis acting. GenCore: SEQ ID NO: 12, 15, 7, 17, 1</p>												
<p>C. DOCUMENTS CONSIDERED TO BE RELEVANT</p> <table border="1"> <thead> <tr> <th>Category*</th> <th>Citation of document, with indication, where appropriate, of the relevant passages</th> <th>Relevant to claim No.</th> </tr> </thead> <tbody> <tr> <td>X</td> <td>US 6,924,365 B1 (MILLER et al.) 2 Aug 2005 (02.08.2005); (col 1, ln 12-13), (col 7, ln 12-14), (col 8, ln 38-43), (col 10, ln 22-49), (col 11, ln 58-67), (col 12, ln 1-3), (col 19, ln 13-15), (col 21, ln 56-57), (col 24, ln 51-67), (col 25, ln 1-8), (col 29, ln 21-26)</td> <td>1, 4, 11, 14, 21, 24, 31, 34, 35</td> </tr> </tbody> </table> <p><input type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/></p> <p>* 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</p> <table border="1"> <tr> <td>Date of the actual completion of the international search 06 November 2008 (06.11.2008)</td> <td>Date of mailing of the international search report 05 DEC 2008</td> </tr> <tr> <td>Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201</td> <td>Authorized officer: Lee W. Young PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774</td> </tr> </table>			Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.	X	US 6,924,365 B1 (MILLER et al.) 2 Aug 2005 (02.08.2005); (col 1, ln 12-13), (col 7, ln 12-14), (col 8, ln 38-43), (col 10, ln 22-49), (col 11, ln 58-67), (col 12, ln 1-3), (col 19, ln 13-15), (col 21, ln 56-57), (col 24, ln 51-67), (col 25, ln 1-8), (col 29, ln 21-26)	1, 4, 11, 14, 21, 24, 31, 34, 35	Date of the actual completion of the international search 06 November 2008 (06.11.2008)	Date of mailing of the international search report 05 DEC 2008	Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer: Lee W. Young PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774
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