METHODS FOR TARGETED DELIVERY OF GENETIC MATERIAL TO THE LIVER

The present invention provides methods for enhanced delivery of various therapeutic agents, such as gene therapy agents, to the vasculature of a target organ in a mammalian subject. The methods for targeted gene therapy in the mammalian liver as a whole, or in a single hepatic lobe, are disclosed. The disclosed methods rely on minimally invasive catheter-based procedures wherein a target organ is isolated and treated locally with a gene therapy agent. The methods offer more efficient and localized transfection of tissue and are wellsuited for gene therapy in human subjects.
INTERNATIONAL SEARCH REPORT

A. CLASSIFICATION OF SUBJECT MATTER

IPC: A61K 48/00(2006.01); A61M 25/00(2006.01); A61M 31/00(2006.01)

USPC: 514/44; 604/101.01; 604/500
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)
U.S.: 514/44; 604/101.01; 604/500

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)
Please See Continuation Sheet

C. DOCUMENTS CONSIDERED TO BE RELEVANT

<table>
<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>T</td>
<td>HODGES, B.L. et al. Local delivery of a viral vector mitigates neutralization by antiviral antibodies and results in efficient transduction of rabbit liver. Molecular Therapy. December 2005, Vol. 12, No. 6, electronic publication. 31 August 2005, pages 1043-1051, see the entire document.</td>
<td>1-16, 24-32</td>
</tr>
<tr>
<td>A</td>
<td>US 5,674,192 A (SAHATJIAN et al.) 07 October 1997 (07.10.1997), see entire document.</td>
<td>1-32</td>
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</tbody>
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[Further documents are listed in the continuation of Box C.]

See patent family annex.

Date of the actual completion of the international search
26 May 2006 (26.05.2006)

Date of mailing of the international search report
29 Jun 2006

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Form PCT/ISA/210 (second sheet) (April 2005)
Continuation of B. FIELDS SEARCHED Item 3:
EAST: USPAT, PQ-PUB, JPO, EPO, DERWENT
STN: CAPLUS, MEDLINE, EMBASE, BIOSIS