MAGNETIC TARGETING AND SEQUESTERING OF THERAPEUTIC FORMULATIONS

A therapeutic system and a method that uses stents, and/or other implantable devices (104) for local delivery of a therapeutic agent is disclosed. A therapeutic formulation (102) may include particles of a biocompatible magnetic or magnetizable material that carry the therapeutic agent, or magnetically responsive cells. The therapeutic formulation (102) is intravenously administered to a mammalian subject. A portion of the formulation (102) is delivered to the proximity of a device (104) implanted in the vascular system of the subject by externally generating a magnetic field gradient (106) on the implantable device (104). The portion of the therapeutic formulation (102) not delivered to the proximity of the implantable device (104) is removed from the vascular system. The method allows for the repeated administration of the same or different therapeutic agent, and further, has the option of locally injecting, or alternatively, peripherally administering, the therapeutic agent.

WO 2007/124016 A3
INTERNATIONAL SEARCH REPORT

A.  CLASSIFICATION OF SUBJECT MATTER

IPC: A61B 19/00(2006.01)

USPC: 128/897

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.: 128/897-899; 600/9-15; 604/890.1, 891.1, 20

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)

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>A</td>
<td>US 5,921,244 A (CHEN ET AL) 13 July 1999, see entire document.</td>
<td>1-16</td>
</tr>
<tr>
<td>A</td>
<td>US 7,249,604 B1 (MOHANRAJ) 31 July 2007, see entire document.</td>
<td>1-16</td>
</tr>
</tbody>
</table>

Further documents are listed in the continuation of Box C.

D.  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 application or patent 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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"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
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"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

Date of the actual completion of the international search
02 January 2008 (02.01.2008)

Date of mailing of the international search report
17 JAN 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
John P. Lacyk
Telephone No. 308-0858

Form PCT/ISA/210 (second sheet) (April 2007)