ASSOCIATING HYDROGELS FOR NUCLEUS PULPOSUS REPLACEMENT IN INTERVERTEBRAL DISCS

A prosthetic nucleus prepared from blends of polyvinylalcohol and polyvinyl pyrrolidone or its copolymers for replacement of the nucleus pulposus in intervertebral discs is provided. Also provided are methods of replacing the nucleus pulposus and treating disc degeneration-associated pain in mammals using this prosthetic nucleus.
A. CLASSIFICATION OF SUBJECT MATTER
   IPC(7) : A61F 244; A01K 9/10
   US CL : 0223.17.16, 17.11, 902
   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.   :  623/17.16, 17.11, 902

   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)
   WEST, CAS ONLINE, DERWENT

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>Y</td>
<td>US 5,192,326 A (BAO et al) 09 March 1993, col. 11, lines 17-53.</td>
<td>1-7</td>
</tr>
<tr>
<td>Y</td>
<td>US 5,824,093 A (RAY et al) 20 October 1998, col. 2, lines 17-34;</td>
<td>7</td>
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<td></td>
<td>col. 2, line 66- col. 3, line 10.</td>
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<td>col. 3, lines 38-51; col. 5, lines 43-51.</td>
<td></td>
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</tbody>
</table>

☐ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

* Special categories of cited documents
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   *E* earlier document 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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   *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
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   *A* document member of the same patent family

Date of the actual completion of the international search
08 JANUARY 2001

Date of mailing of the international search report
12 JUN 2001

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