Title: METHOD, COMPOSITION, AND ARTICLES FOR IMPROVING JOINT LUBRICATION

Abstract: Articles for increasing lubrication of a joint are described herein. The articles include resorbable, biocompatible particles having a glass transition temperature within a joint of less than about 37°C and capable of increasing fluid movement within the joint compared to synovial fluid, viscosupplemental fluid, or combinations thereof. A composition for increasing lubrication of a joint is also disclosed. The composition includes the resorbable, biocompatible particles and a carrier fluid. Methods of lubricating a joint and treating disease affecting the joint such as osteoarthritis are also described herein. The methods include introducing the resorbable, biocompatible particles into a joint.
### A. CLASSIFICATION OF SUBJECT MATTER

**IPC(8) - A61 K31/728; A61 P 19/02 (2012.01)**

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)

USPC - 514/54

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

USPC - 514/54 (text search - see search terms below)

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

PubWEST (USPT, PG/PUB, EPAB, JPAB), Google Patent/Scholar

Search terms - joint, microparticle, synovial, fluid, biocompatible, glass, transition

### 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>X</td>
<td>US 2009/0246123 A1 (Zanella et al.) 01 October 2009 (01.10.2009); entire document, especially paras. [0024], [0036], and [0039]</td>
<td>1-3, 12, 13, 19, 24-30, 32-34, 37, and 38</td>
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**Further documents are listed in the continuation of Box C.**

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</table>

*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

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**"&"** document member of the same patent family

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Date of the actual completion of the international search: 01 August 2012 (01.08.2012)

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