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(54) **Title:** TREATMENT OF INTERVERTEBRAL DISC DEGENERATION

(57) **Abstract:** The present application discloses a method for preventing or retarding degeneration of intervertebral disc at an intervertebral disc defect site, which includes injecting a mammalian connective tissue cell into the intervertebral disc defect site.

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 09/37987

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - A61K 45/00 (2009.01)

USPC - 424/93.7; 435/366

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: 424/93.7; 435/366

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

USPC: 424/93.7; 435/366 (text search -- see terms below)

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

PubWEST (USPT, PGPB, USOC, EPAB, JPAB); Google Scholar

Search Terms: allogeneic, cell, chondrocyte, connective, defect, degenerate, disc, gene, human, inject, intervertebral, juvenile, mammal, mixture, regenerate, TGF-beta, tissue, transduce, transplant

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category*     | Citation of document, with indication, where appropriate, of the relevant passages                                    | Relevant to claim No.                 |
|---------------|---|---------------------------------------|
| X<br>---<br>Y | US 2007/0128174 A1 (Kleinsek et al.) 7 June 2007 (07.06.2007), abstract, para [0003], [0576], and claim 2             | 1, 3, 5, 6, 19<br>-----<br>2, 4       |
| X<br>---<br>Y | US 2006/0160214 A1 (Masuda et al.) 20 July 2006 (20.07.2006), para [0004]-[0006], [0014], [0029]-[0034]               | 7, 12, 20<br>-----<br>8-11, 13-18, 21 |
| Y             | US 2006/0292131 A1 (Binette et al.) 28 December 2006 (28.12.2006), para [0005], [0010], [0049], [0052]                | 2, 4, 10, 11, 16                      |
| Y             | US 7,338,655 B1 (Noh et al.) 4 March 2008 (04.03.2008), col 2, ln 64-67, col 3, ln 1-7, 12-28, 59-65, col 4, ln 18-33 | 8, 9                                  |
| Y             | US 2006/0115463 A1 (Song et al.) 1 June 2006 (01.06.2006), para [0002], [0017], [0018], [0023], [0034], [0081]        | 13-18, 21                             |

 Further documents are listed in the continuation of Box C.

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"A" document defining the general state of the art which is not considered to be of particular relevance

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"P" document published prior to the international filing date but later than the priority date claimed

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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

"&amp;" document member of the same patent family

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