Abstract:
The invention relates to a method for isolation, purification and industrial scale expansion of canine adipose tissue derived mesenchymal stem cells (MSCs). The invention also relates to a method for treating and a therapeutic product for treating osteoarthritis, spinal cord injury, atopic dermatitis, dilated cardiomyopathy, type-1 diabetes, renal failure, hepatic disease and non-healing wounds comprising MSCs.
INTERNATIONAL SEARCH REPORT

A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - C12N 5/00, C12N 5/02 (2014.01)
CPC - A61K 35/12, A61K 38/00, A01N 1/02

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)

IPC(8) - C12N 5/00, C12N 5/02 (2014.01)
CPC - A61K 35/12, A61K 38/00, A01N 1/02

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

USPC - 435/378, 435/374, 435/375, 435/381

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

WEST: Google Scholar; PatBase
search terms - mesenchymal stem cells, MSC, canine, human, adipose tissue, SVF Fraction, Stromal Vascular Fraction, isolation, isolating, purifS, culture, expandS, seeding, trypsin, doublings, passage, CD73, CD 90 CD105, CD166, CD14, CD19, CD 34 CD 45, CD13

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 2013/0129688 A1 (BRENNER et al.) 23 May 2013 (23.05.2013) para [0010]-[0020J, [0080]; [0081]; [0235]; [0107]; [0123]; [0099]-[0094]; [0313][0320],</td>
<td>4, 7-9</td>
</tr>
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<td>Y</td>
<td>US 201 1/0244566 A1 (Wu et al.) 06 October 2011 (06.10.2011 1) para [0008], [0148], [0149]</td>
<td>7-9</td>
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<td>Y</td>
<td>US 201 1/0001323 A1 (KLEINSEK et al.) 07 April 2011 (07.04.2011 1) para [0007]-[0015]; [0044]; [0209]; [0184]; [0392]; [0559].</td>
<td>9</td>
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<tr>
<td>Y</td>
<td>Carvalho et al., &quot;Isolation and immunophenotypic characterization of mesenchymal stem cells derived from equine species adipose tissue.&quot; Veterinary immunology and immunopathology 132.2 (2009): 303-306. Authors manuscript uploaded and used for citations, full document, especially p. 2.</td>
<td>1-6</td>
</tr>
<tr>
<td>Y</td>
<td>US 201 1/0239965 A1 (PAL et al.) 22 September 2011 (22.09.2011 1) para [0050]; [0071]-[0078], and Table 5.</td>
<td>1-6</td>
</tr>
</tbody>
</table>

Further documents are listed in the continuation of Box C.

* 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
  "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: 20 January 2015 (20.01.2015)

Date of mailing of the international search report: 27 JAN 2015

Name and mailing address of the ISA/US

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PCT OSP: 571-272-7774

Form PCT/ISA/210 (second sheet) (July 2009)