

Title (en)
SKELETAL MUSCLE AUGMENTATION UTILIZING MUSCLE-DERIVED PROGENITOR COMPOSITIONS, AND TREATMENTS THEREOF

Title (de)
SKELETTMUSKELVERSTÄRKUNG MIT AUS MUSKELN STAMMENDEN VORLÄUFER-ZUSAMMENSETZUNGEN UND BEHANDLUNGEN DAFÜR

Title (fr)
AUGMENTATION DE MUSCLE SQUELETTIQUE AU MOYEN DE COMPOSITIONS PROGÉNITRICES DÉRIVÉES DE MUSCLE ET TRAITEMENTS ASSOCIÉS

Publication
EP 2209482 A4 20160601 (EN)

Application
EP 08836519 A 20081003

Priority
• US 2008011458 W 20081003
• US 97745007 P 20071004

Abstract (en)
[origin: JP2014040485A] PROBLEM TO BE SOLVED: To provide skeletal muscle augmentation utilizing muscle-derived progenitor compositions, and treatments thereof.SOLUTION: An object of the present invention is to provide novel muscle-derived progenitor cells (MDCs) and MDC compositions exhibiting long-term survival following transplantation. The MDCs of this invention and compositions containing the MDCs comprise early progenitor muscle cells, i.e., muscle-derived stem cells that express progenitor cell markers, including, but not limited to, desmin, M-cadherin, MyoD, myogenin, CD34, and Bcl-2. In addition, these early progenitor muscle cells express the Flk-1, Sca-1, MNF, and c-met cell markers, but do not express the CD45 or c-Kit cell markers.

IPC 8 full level
A61K 35/34 (2006.01); **A61K 35/12** (2006.01); **C12N 5/077** (2010.01)

CPC (source: EP)
A61K 35/34 (2013.01); **A61P 21/00** (2018.01); **A61P 21/02** (2018.01); **A61P 21/04** (2018.01); **A61P 21/06** (2018.01); **C12N 5/0658** (2013.01); **C12N 5/0659** (2013.01); **A61K 35/12** (2013.01); **C12N 2510/00** (2013.01); **C12N 2533/54** (2013.01)

Citation (search report)
• [X] US 7115417 B1 20061003 - CHANCELLOR MICHAEL B [US], et al
• [X] WO 2004012503 A2 20040212 - TIGENIX NV [BE], et al & BARI DE C ET AL: "Multipotent mesenchymal stem cells from adult human synovial membrane", ARTHRITIS & RHEUMATISM, WILEY, US, vol. 44, no. 8, 1 August 2001 (2001-08-01), pages 1928 - 1942, XP002266867, ISSN: 0004-3591, DOI: 10.1002/1529-0131(200108)44:8<1928::AID-ART331>3.0.CO;2-P
• [X] LEE J-Y ET AL: "Clonal isolation of muscle-derived cells capable of enhancing muscle regeneration and bone healing", THE JOURNAL OF CELL BIOLOGY : JCB, THE ROCKEFELLER UNIVERSITY PRESS, US, vol. 150, no. 5, 4 September 2000 (2000-09-04), pages 1085 - 1099, XP002161665, ISSN: 0021-9525, DOI: 10.1083/JCB.150.5.1085
• [X] QU-PETERSEN Z ET AL: "Identification of a novel population of muscle stem cells in mice: Potential for muscle regeneration", THE JOURNAL OF CELL BIOLOGY : JCB, THE ROCKEFELLER UNIVERSITY PRESS, US, vol. 157, no. 5, 27 May 2002 (2002-05-27), pages 851 - 864, XP002302343, ISSN: 0021-9525, DOI: 10.1083/JCB.200108150
• [X] JANKOWSKI RON J ET AL: "Flow cytometric characterization of myogenic cell populations obtained via the preplate technique: Potential for rapid isolation of muscle-derived stem cells", HUMAN GENE THERAPY, MARY ANN LIEBERT, NEW YORK ,NY, US, vol. 12, no. 6, 10 April 2001 (2001-04-10), pages 619 - 628, XP002183830, ISSN: 1043-0342, DOI: 10.1089/104303401300057306

Citation (examination)
• US 6866842 B1 20050315 - CHANCELLOR MICHAEL B [US], et al
• MUSGRAVE D S ET AL: "Human skeletal muscle cells in ex vivo gene therapy to deliver bone morphogenetic protein-2", JOURNAL OF BONE AND JOINT SURGERY. BRITISH VOLUME, LIVINGSTONE, LONDON, GB, vol. 84-B, no. 1, 1 January 2002 (2002-01-01), pages 120 - 127, XP009061807, ISSN: 0301-620X, DOI: 10.1302/0301-620X.84B1.11708
• STEWART J D ET AL: "Characterization of proliferating human skeletal muscle-derived cells in vitro: differential modulation of myoblast markers by TGF-beta2", JOURNAL OF CELLULAR PHYSIOLOGY, WILEY SUBSCRIPTION SERVICES, INC, US, vol. 196, no. 1, 1 July 2003 (2003-07-01), pages 70 - 78, XP002317537, ISSN: 0021-9541, DOI: 10.1002/JCP.10322
• MENDELL J., KISSEL J.T.,AMATO A.A., ET AL: "MYOBLAST TRANSFER IN THE TREATMENT OF DUCHENNE'S MUSCULAR DYSTROPHY", NEW ENGLAND J. MED., 1 January 1995 (1995-01-01), XP055358109, Retrieved from the Internet <URL:http://www.nejm.org/doi/pdf/10.1056/NEJM199509283331303> [retrieved on 20170325]
• TREMBLAY J.P., MALOUN F., ROY R., HUARD J.P. ET AL: "RESULTS OF A TRIPLE BLIND CLINICAL STUDY OF MYOBLAST TRANSPLANTATIONS WITHOUT IMMUNISUPPRESSIVE TREATMENT IN YOUNG BOYS DUCHENNE MUSCULAR DYSTROPHY", CELL TRANSPLANTATION, COGNIZANT COMMUNICATION CORPORATION, US, vol. 2, no. 2, 1 January 1993 (1993-01-01), pages 99 - 112, XP000571490, ISSN: 0963-6897
• ALLEN: "Skeletal muscle satellite cell cultures", METHODS IN CELL BIOLOGY, 1 January 1997 (1997-01-01), pages 155 - 176, XP055640285, Retrieved from the Internet <URL:http://www.ncbi.nlm.nih.gov/pubmed/9379949> [retrieved on 20191107]
• See also references of WO 2009045506A2

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MT NL NO PL PT RO SE SI SK TR

DOCDB simple family (publication)
WO 2009045506 A2 20090409; AU 2008307519 A1 20090409; AU 2008307519 B2 20141002; AU 2008307519 B9 20141113; CA 2701354 A1 20090409; CA 2701354 C 20180724; EP 2209482 A2 20100728; EP 2209482 A4 20160601; JP 2010540639 A 20101224; JP 2014040485 A 20140306; JP 5687059 B2 20150318

DOCDB simple family (application)
US 2008011458 W 20081003; AU 2008307519 A 20081003; CA 2701354 A 20081003; EP 08836519 A 20081003; JP 2010527998 A 20081003; JP 2013249167 A 20131202