

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

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CPC (source: EP)

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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/NEJM19950928331303>> [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 IMMUNOSUPPRESSIVE 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

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

DOCDB simple family (publication)

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