

**Key to fields:****PN/ PNFP: Publication Number****PD : Publication Date****PA: Patent Assignee****IN: Inventor****TI: Title****AB: Abstract****GRANTED: Date "B" specification published**RESULTS FOR 1<sup>ST</sup> JANUARY 2010-28<sup>TH</sup> FEBRUARY 2010**PUBLISHED "A" SPECS****ADULT STEM CELLS- 108 Documents**

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PN - WO2010022017 A2 20100225  
PD - 2010-02-25  
PA - GEIGER HARTMUT [US]; HALL MARNIE A [US]  
IN - GEIGER HARTMUT [US]; HALL MARNIE A [US]  
TI - METHOD AND COMPOSITION FOR ENHANCING HEMATOPOIETIC STEM CELL MOBILIZATION  
AB - A therapeutic combination for improved mobilization of the hematopoietic stem and progenitor cells, and methods of use thereof are described. The therapeutic combination comprises G-CSF and an inhibitor of the EGFR signaling pathway. The role of EGFR is established by several lines of evidence, including use of quantitative trait locus analysis to map the chromosomal location of the non-G-CSF enhancement of hematopoietic stem and progenitor cells mobilization. Further, several different modes of inhibiting EGFR signaling all provide for an enhanced G-CSF induced mobilization of hematopoietic stem cells.

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PN - WO2010021993 A1 20100225  
PD - 2010-02-25  
PA - CYTORI THERAPEUTICS INC [US]; ALFONSO ZENI [US]; FRASER JOHN K [US]  
IN - ALFONSO ZENI [US]; FRASER JOHN K [US]  
TI - METHODS OF USING ADIPOSE TISSUE-DERIVED CELLS IN THE TREATMENT OF THE LYMPHATIC SYSTEM AND MALIGNANT DISEASE  
AB - Aspects of the invention provides methods for preparing and using adipose-tissue-derived stem and progenitor cells, adipose-tissue-derived lymphatic endothelial cells, and cells capable of differentiating into lymphatic endothelial cells to treat disorders of the lymphatic system and to modulate expansion, repair, and/or regeneration of the lymphatic system. The invention further provides using adipose-tissue-derived lymphatic endothelial cells and cells capable of differentiating into lymphatic endothelial cells for delivery of therapeutic agents to tumor cells as a means for treating malignant disease, and assays to screen for drugs that modulate lymphatic system expansion, repair or regeneration.

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PN - US2010047351 A1 20100225  
PD - 2010-02-25  
IN - ZEITLIN ANDY [US]; AJAI PAL [US]  
TI - TREATMENT OF STROKE USING ISOLATED PLACENTAL CELLS

AB - Provided herein are methods for the treatment of stroke comprising administering to a stroke victim placental stem cells, populations of cells comprising placental stem cells, and/or compositions comprising placental stem cells.

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PN - US2010047213 A1 20100225  
PD - 2010-02-25  
IN - ZEITLIN ANDY [US]; RUSSOTTI GREGORY [US]; HE SHUYANG [US]; PAL AJAI [US]; CHEN HONG J [US]; BRIEVA THOMAS [US]; SHORR RYAN [US]; MURPHY BRIAN [US]  
TI - CELL COMPOSITION AND METHODS OF MAKING THE SAME  
AB - Provided herein are improved methods for the formulation of compositions comprising placental stem cells, and improved compositions and cell formulations produced thereby.

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PN - WO2010021412 A1 20100225  
PD - 2010-02-25  
PA - JAPAN HEALTH SCIENCE FOUND [JP]; NAKASHIMA MISAKO [JP]; SUGIYAMA MASAHIKO [JP]  
IN - NAKASHIMA MISAKO [JP]; SUGIYAMA MASAHIKO [JP]  
TI - THERAPEUTIC MATERIAL FOR CEREBRAL INFARCTION, AND METHOD FOR REGENERATION OF BRAIN TISSUE  
AB - Disclosed is a therapeutic material for cerebral infarction, which can recover a vascular disorder in an area affected by cerebral infarction to improve the brain function. The therapeutic material for cerebral infarction comprises a dental pulp stem cell comprising at least one member selected from a CD105-positive cell, an SP cell, a CD24-positive cell, a CD133-positive cell, a CD271-positive cell and a CD150-positive cell. The therapeutic material may additionally comprise a protein secreted from a dental pulp cell. A transplanted dental pulp stem cell cannot be differentiated directly into a neural progenitor cell or a neurocyte, but is involved indirectly in the promotion of differentiation to eliminate an area affected by cerebral infarction, thereby recovering the affected area into a normal area.

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PN - WO2010020876 A2 20100225  
PD - 2010-02-25  
PA - CAPSANT NEUROTECHNOLOGIES S A [CH]; STOPPINI LUC [CH]  
IN - STOPPINI LUC [CH]  
TI - CELL CULTURE METHOD  
AB - The invention relates to the field of cell and tissue culture. In particular, the invention provides methods for culturing cells to form aggregates, including stem cells and primary cells. A method for culturing cells according to the invention comprises the steps of: (i) incubating a cells in a hanging drop on the underside of a porous membrane to form aggregates of cells; (ii) inverting the membrane so that the aggregates of cells are located on the upperside of the membrane; and (iii) incubating the aggregates of cells on the upperside of the membrane.

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PN - US2010047215 A1 20100225  
PD - 2010-02-25  
IN - PHILLIPS CATHERINE A [US]; BREILLATT JR JULIAN P [US]  
TI - STEM CELL TARGETING METHODS  
AB - The present invention is directed to methods for delivering stem cells to a target tissue in a mammal using glycoconjugate to traffic the stem cells to a desired organ in the mammal. The methods according to the present invention are especially applicable to administering stem cells such as those derived from the bone marrow or from umbilical cord tissue. The methods are also useful for targeting a gene of interest to a tissue in a mammal by introducing a cell containing the gene of interest and administering a glycoconjugate to the mammal.

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PN - US2010047911 A1 20100225  
PD - 2010-02-25  
PA - LEVESQUE BIOSCIENCES INC [US]  
IN - NEUMAN TOOMAS [US]; LEVESQUE MICHEL [US]  
TI - COMPOSITIONS AND METHODS FOR ISOLATION, PROPAGATION, AND DIFFERENTIATION OF HUMAN STEM CELLS AND USES THEREOF  
AB - The invention is directed to the field of human stem cells and includes methods and compositions for isolating, propagating, and differentiating human stem cells. The invention provides therapeutic uses of the methods and compositions, including autologous transplantation of treated cells into humans for treatment of Parkinson's and other neuronal disorders.

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PN - US2010048463 A1 20100225  
PD - 2010-02-25  
PA - POLYPHOR LTD [CH]; UNIV ZUERICH [CH]  
IN - OBRECHT DANIEL [CH]; GOMBERT FRANK [CH]; DEMARCO STEVEN J [CH]; LUDIN CHRISTIAN [CH]; VRIJBLOED JAN WIM [CH]; MOEHLE KERSTIN [CH]; ROBINSON JOHN-ANTHONY [CH]; MUKHERJEE RESHMI [US]; HENZE HEIKO [CH]; ROMAGNOLI BARBARA [CH]  
TI - TEMPLATE-FIXED PEPTIDOMIMETICS  
AB - The template-fixed B-hairpin peptidomimetics Cyclo(-Tyr-His-X-Cys-Ser-Ala-DPro-Dab-Arg-Tyr-Cys-Tyr-Gln-Lys-DPro-Pro), disulfide bond between Cys4 and Gys11, and pharmaceutically acceptable salts thereof, with X being Ala or Tyr, have CXCR4 antagonizing properties and can be used for preventing HIV infections in healthy individuals or for slowing and halting viral progression in infected patients; or where Cancer is mediated or resulting from CXCR4 receptor activity; or where immunological diseases are mediated or resulting from CXCR4 receptor activity; or for treating immuno suppression; or, in particular, for stem cell mobilisation of peripheral blood stem cells and/or mesenchymal stem cell (MSC) and/or other stem cells which retention depend on the CXCR4-receptor. These [beta]-hairpin peptidomimetics can be manufactured by a process which is based on a mixed solid- and Solution phase synthetic strategy, using methods which are well known to those adequately skilled in peptide chemistry.

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PN - US2010047827 A1 20100225  
PD - 2010-02-25  
PA - SUOMEN PUNAINEN RISTI VERIPALV [FI]; GLYKOS FINLAND LTD [FI]  
IN - LAINE JARMO [FI]; SATOMAA TERO [FI]; NATUNEN JARI [FI]; HEISKANEN ANNAMARI [FI]; BLOMQVIST MARIA [FI]; OLONEN ANNE [FI]; SAARINEN JUHANI [FI]; TITINEN SARI [FI]; IMPOLA ULLA [FI]; AITIO OLLI [FI]; VALMU LEENA [FI]; NATUNEN SUVI [FI]; SALO HANNA [FI]  
TI - NOVEL SPECIFIC CELL BINDERS  
AB - The invention describes reagents and methods for specific binders to glycan structures of stem cells. Furthermore the invention is directed to screening of additional binding reagents against specific glycan epitopes on the surfaces of the stem cells. The preferred binders of the glycans structures includes proteins such as enzymes, lectins and antibodies.

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PN - US2010047892 A1 20100225  
PD - 2010-02-25  
PA - SUOMEN PUNAINEN RISTI VERIPALV [FI]; GLYKOS FINLAND LTD [FI]  
IN - LAINE JARMO [FI]; SATOMAA TERO [FI]; NATUNEN JARI [FI]; JAATINEN TAINA [FI]; HEISKANEN ANNAMARI [FI]; NYSTEDT JOHANNA [FI]  
TI - METHOD FOR MODIFYING CELLS

AB - The invention describes specific sialylated structures present on human stem cells and cell populations derived thereof. The invention is especially directed to methods to control the status of stem cells by changing sialylation and/or fucosylation levels of the cells. The invention is further directed to novel stem cells, the glycosylation of which has been specifically altered. The control methods are preferably mass spectrometric methods.

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PN - US2010049273 A1 20100225  
PD - 2010-02-25  
IN - GAUDETTE GLENN [US]; POTAPOVA IRINA A [US]; BRINK PETER R [US]; COHEN IRA S [US]; ROBINSON RICHARD B [US]; ROSEN MICHAEL R [US]  
TI - USE OF LATE PASSAGE MESENCHYMAL STEM CELLS (MSCS) FOR TREATMENT OF CARDIAC RHYTHM DISORDERS  
AB - The present invention provides methods and compositions relating to the use of late passage mesenchymal stem cells (MSCs) for treatment of cardiac rhythm disorders. The late passage MSCs of the invention may be used to provide biological pacemaker activity and/or provide a bypass bridge in the heart of a subject afflicted with a cardiac rhythm disorder. The biological pacemaker activity and/or bypass bridge may be provided to the subject either alone or in tandem with an electronic pacemaker.

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PN - US2010047216 A1 20100225  
PD - 2010-02-25  
IN - GAUDETTE GLENN [US]; POTAPOVA IRINA A [US]; BRINK PETER R [US]; COHEN IRA S [US]; ROBINSON RICHARD B [US]; ROSEN MICHAEL R [US]  
TI - COMPOSITIONS OF LATE PASSAGE MESENCHYMAL STEM CELLS (MSCS)  
AB - The present invention provides methods and compositions relating to the use of late passage mesenchymal stem cells (MSCs) for treatment of cardiac disorders. Such late passage MSCs may be administered to the myocardium of a subject for induction of native cardiomyocyte proliferation and repair of cardiac tissue. Additionally, the late passage MSCs may be genetically engineered to express a gene encoding a physiologically active protein of interest and/or may be incorporated with small molecules for delivery to adjacent target cells through gap junctions. The late passage MSCs of the invention may be used to provide biological pacemaker activity and/or provide a bypass bridge in the heart of a subject afflicted with a cardiac rhythm disorder. The biological pacemaker activity and/or bypass bridge may be provided to the subject either alone or in tandem with an electronic pacemaker.

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PN - US2010047908 A1 20100225  
PD - 2010-02-25  
IN - WINNIER GLENN E [US]; NEWSOM BRIAN S [US]; RILL DONNA R [US]; WILLIAMS JIM C [US]  
TI - MONOCYTE-DERIVED STEM CELLS  
AB - Methods for generating multipotent stem cells from adult peripheral blood monocytes are provided. Monocytes may be de-differentiated into monocyte-derived stem cells (MDSCs) by contacting the monocyte with the de-differentiation factors, leukocyte inhibitory factor, macrophage colony-stimulating factor, or a combination thereof. The MDSCs may be differentiated into many different types of cells upon contact with the appropriate differentiation factors. Also provided are compositions comprising the MDSCs or differentiated cells derived from the MDSCs.

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PN - US2010047212 A1 20100225  
PD - 2010-02-25  
PA - UNI DE VALENCIA ESTUDI GENERAL [ES]; UNIV CASTILLA LA MANCHA [ES]

IN - FARINAS GOMEZ ISABEL [ES]; ANDREU AGULLO CELIA [ES]; RODRIGUEZ FERRON SACREMENTO [ES]; RAMIREZ CASTILLEJO CARMEN [ES]; SANCHEZ GOMEZ PILAR [ES]; MIRA APARICIO HELENA [ES]; ESCRIBANO MARTINEZ JULIO [ES]; SANCHEZ SANCHEZ FRANCISCO [ES]; AROCA AGUILAR JOSE DANIEL [ES]  
TI - USE OF THE PEDF FACTOR TO INDUCE CELL REGENERATION  
AB - Use of the PEDF factor to induce cell regeneration. The present invention refers to the use of the molecule PEDF for the manufacture of medicines to activate processes included in the group of regenerative processes, such as skin regeneration, wound healing, cell therapy for cardiac, neural, or hematopoietic regeneration. It also refers to the manufacture/use of pharmaceutical compounds that contain an efficient quantity of the PEDF factor for stem cell self-renewal.

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PN - US2010047211 A1 20100225  
PD - 2010-02-25  
PA - UNIV JOHNS HOPKINS [US]  
IN - MCNIECE IAN [US]  
TI - METHOD OF GROWTH OF MESENCHYMAL CELLS UNDER NON-ADHERENT CONDITIONS FOR CLINICAL APPLICATIONS  
AB - The invention provides methods for expanding mesenchymal stem cells (MSCs) in non-adherent cultures. The methods include the propagation of MSCs in or on non-adherent matrices. The invention further provides administration and the use of cells propagated by the method of the invention for administration and preparation of a therapeutic agent. The invention further provides kits including cells propagated by the methods of the inventions.

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PN - US2010040588 A1 20100218  
PD - 2010-02-18  
PA - CRYO CELL INT [US]  
IN - WALTON MERCEDES A [US]; ALLICKSON JULIE G [US]  
TI - Procurement, Isolation, and Cryopreservation of Endometrial/Menstrual Cells  
AB - Compositions comprising menstrual stem cells (MSCs) and methods, processes, and system therefor are provided by the invention. MSCs are processed from menstrual flow collected during menses. MSCs may be cryopreserved, processed through various culturing and selection steps in preparation for cryopreservation, or processed for therapeutic or cosmeceutical use. Cryopreserved MSCs may be thawed in preparation for therapeutic and cosmeceutical use. MSCs express CD9, CD10, CD13, CD29, CD44, CD49e, CD49f, CD59, CD81, CD105, CD166, and HLA class I, and have low or no expression of CD3 and HLA class II.

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PN - EP2155860 A1 20100224  
PD - 2010-02-24  
PA - BRIGHAM & WOMENS HOSPITAL [US]  
IN - CRAWFORD KEITH W [US]  
TI - MULTIPOTENT STEM CELLS AND USES THEREOF  
AB - The invention provides a quiescent stem cell having the capacity to differentiate into ectoderm, mesoderm and endoderm, and which does not express cell surface markers including MHC class I, MHC class II, CD44, CD45, CD13, CD34, CD49c, CD73, CD105 and CD90. The invention further provides a proliferative stem cell, which expresses genes including Oct-4, Nanog, Sox2, GDF3, P16INK4, BMI, Notch, HDAC4, TERT, Rex-1 and TWIST but does not express cell surface markers including MHC class I, MHC class II, CD44, CD45, CD13, CD34, CD49c, CD73, CD105 and CD90. The cells of the invention can be isolated from adult mammals, have embryonic cell characteristics, and can form embryoid bodies. Methods for obtaining the stem cells, as well as methods of treating diseases and differentiated the stem cells, are also provided.

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PN - EP2155862 A2 20100224  
PD - 2010-02-24  
PA - WHITEHEAD BIOMEDICAL INST [US]  
IN - ZHANG CHENGCHENG [US]; LODISH HARVEY [US]  
TI - EX VIVO EXPANSION OF HUMAN HEMATOPOIETIC STEM CELLS  
AB - Methods and kits for expanding the number of hematopoietic stem cells are provided. The methods comprise incubating cells in medium comprising isolated IGFBP-2 and an angiopoietin-like protein (Angpt1). Expanded HSCs are provided as well as culture media and kits for the expansion of human HSCs in a defined medium. Methods of administering expanded human HSCs to and individual are provided as well as methods of treating an individual by administering certain growth factors and cytokines.

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PN - WO2010019886 A1 20100218  
PD - 2010-02-18  
PA - OSIRIS THERAPEUTICS INC [US]; DANILKOVICH ALLA [US]; NEWMAN ROBERT E [US]; TOM SAMSON [US]; TON CHRISTOPHER [US]; WANG ZHANLING [US]; YOUNG RANDAL [US]  
IN - DANILKOVICH ALLA [US]; NEWMAN ROBERT E [US]; TOM SAMSON [US]; TON CHRISTOPHER [US]; WANG ZHANLING [US]; YOUNG RANDAL [US]  
TI - PURIFIED MESENCHYMAL STEM CELL COMPOSITIONS AND METHODS OF PURIFYING MESENCHYMAL STEM CELL COMPOSITIONS  
AB - One or more purified mesenchymal stem cell pharmaceutical compositions and methods of manufacture utilizing centrifugal filtration are disclosed. Threshold limits for intravenous administration of mesenchymal stem cell pharmaceutical compositions comprising residual animal products are also disclosed.

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PN - US2010041147 A1 20100218  
PD - 2010-02-18  
PA - WELLSTAT THERAPEUTICS CORP [US]  
IN - TSYRLOVA IRENA [US]; WOLPE STEPHEN D [US]  
TI - HEMOGLOBIN ALPHA CHAIN PEPTIDE FRAGMENTS USEFUL FOR INHIBITING STEM CELL PROLIFERATION  
AB - Disclosed and claimed are methods for the isolation and use of stem cell inhibiting factors for regulating the abnormal stem cell cycle and for accelerating the post-chemotherapy peripheral blood cell recovery. Also disclosed and claimed are the inhibitors of stem cell proliferation.

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PN - US2010040585 A1 20100218  
PD - 2010-02-18  
PA - CEDARS SINAI MEDICAL CENTER [US]  
IN - SHARIFI BEHROOZ [US]; WANG LAI [US]; SHAH PREDIMAN K [US]  
TI - METHODS FOR ISOLATING AND USING HEMATOPOIETIC AND EMBRYONIC STEM CELLS OF THE PERITONEAL CAVITY  
AB - The invention relates to the isolation and use of hematopoietic and embryonic stem cells. Additionally, the inventors identified the peritoneal cavity as a new source of hematopoietic stem cells. In one embodiment, the invention provides methods of isolating progenitor and/or stem cells from the peritoneal cavity. In another embodiment, the invention provides methods of transporting progenitor and/or stem cells from the peritoneal cavity to another organ. In another embodiment, the present invention provides methods of regenerating bioengineered tissues and/or reconstituting an hematopoietic system.

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PN - US2010040706 A1 20100218

PD - 2010-02-18  
PA - LVMH RECH [FR]  
IN - DUMAS MARC [FR]; BONTE FREDERIC [FR]; RENIMEL ISABELLE [FR]  
TI - METHOD OF ANTI-AGEING COSMETIC CARE BY STIMULATION OF SURVIVIN  
EXPRESSION  
AB - The invention relates to a cosmetic care method comprising the delivery of an effective amount of at least one cosmetically acceptable agent that activates or stimulates survivin expression in the stem cells of the basal layer of the epidermis. The invention makes it possible in particular to prevent or delay the appearance of the signs of skin aging or to treat them.

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PN - US2010040583 A1 20100218  
PD - 2010-02-18  
IN - FALANGA VINCENT [US]  
TI - COMPOSITIONS AND METHODS USING STEM CELLS IN CUTANEOUS WOUND  
HEALING  
AB - Provided herein are compositions and methods using stem/progenitor cells in a therapeutic approach for the treatment of, or promotion of healing of, acute and chronic wounds.

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PN - US2010040540 A1 20100218  
PD - 2010-02-18  
PA - INST NAT SANTE RECH MED [FR]; UNIV HEALTH NETWORK [CA]  
IN - SMADJA FLORENCE [FR]; DICK JOHN [CA]  
TI - ANTI CD44 ANTIBODIES FOR ERADICATING LEUKAEMIC STEM CELLS AND  
BREAST CANCER STEM CELLS  
AB - The present invention provides the use of an anti-CD44 antibody, a (Fab')<sub>2</sub>, Fab, Fab' fragment thereof, an IgG or IgM isotype thereof, in a method for eradicating pathological stem cells in cancer therapy, and more specifically in breast cancer and leukaemia therapy

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PN - US2010040600 A1 20100218  
PD - 2010-02-18  
PA - CHUGAI PHARMACEUTICAL CO LTD [JP]  
IN - YOSHIKUBO TAKASHI [JP]; SHIINA MASASHI [JP]; INAGAKI YUKIKO [JP]  
TI - Agents for Promoting the Growth of Hematopoietic Stem Cells  
AB - The present inventors discovered that the administration of an agonistic minibody (VB22B sc(Fv)<sub>2</sub>) against the TPO receptor resulted in not only the induction of human megakaryocyte-specific differentiation (increase in platelet precursor cells), but also the engraftment of transplanted hematopoietic stem cells derived from human cord blood (CD34-positive cells) and significant increase in multi-lineage hematopoietic precursor cells. TPO and TPO receptor agonists can be used as agents for promoting the growth of CD34-positive hematopoietic cells or agents for promoting the engraftment of transplanted cells in the bone marrow, which can be effective when administered alone (without using G-CSF and erythropoietin in combination) after hematopoietic stem cell transplantation (in particular, cord blood transplantation). Furthermore, TPO and TPO receptor agonists can be used as agents for promoting the growth and/or differentiation of multilineage hematopoietic precursor cells and agents for promoting the recovery of multilineage hematopoiesis.

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PN - US2010040582 A1 20100218  
PD - 2010-02-18  
IN - ASKENASY NADIR [IL]  
TI - Methods of selecting stem cells and uses thereof  
AB - A method of selecting stem cells from heterogeneous population of cells is disclosed. The method comprises contacting the population of cells with an apoptosis inducing agent under

conditions which are apoptotic to non-stem cells and non-apoptotic to stem cells, thereby selecting the stem cells from the heterogeneous population of cells. The selected stem cells may then be used for a variety of applications including transportation and differentiation.

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PN - US2010040660 A1 20100218  
PD - 2010-02-18  
PA - KOREA RES INST CHEM TECH [KR]  
IN - KIM MOON SUK [KR]; LEE HAI BANG [KR]; LEE JU YOUNG [KR]; AHN HYUN HEE [KR]; LEE JUNG HWA [KR]; KIM KYUNG SOOK [KR]  
TI - DEVELOPMENT OF A TISSUE - ENGINEERED SCAFFOLD FOR NERVE REGENERATION USING A BIOCOMPATIBLE AND INJECTABLE HYDROGEL  
AB - The present invention relates to a tissue-engineered scaffold prepared by using a biocompatible and injectable hydrogel, and particularly to a tissue-engineered scaffold capable of regenerating or recovering an injured spinal nerve for central nervous system after being implanted to connect neurons, prepared by combining an adult stem cell or a nerve cell with a physiologically active material on tissue-engineered carriers comprising biocompatible and temperature-sensitive polyethylene glycol/polyester block copolymer or biocompatible and injectable hydrogel made of small intestinal submucosa tissue powder with sol-gel phase transition behavior.

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PN - WO2010018996 A2 20100218  
PD - 2010-02-18  
PA - IND ACADEMIC COOP [KR]; PARK KOOK-IN [KR]  
IN - PARK KOOK-IN [KR]  
TI - HUMAN NEURAL STEM CELL, AND PHARMACEUTICAL COMPOSITION FOR THE TREATMENT OF CENTRAL OR PERIPHERAL NERVOUS SYSTEM DISORDERS AND INJURIES USING SAME  
AB - The present invention relates to a human neural stem cell, and to a pharmaceutical composition for the treatment of central or peripheral nervous system disorders and injuries using same. More particularly, the present invention relates to a human telencephalon-derived human neural stem cell effective in the treatment of nervous system disorders and injuries, and to a pharmaceutical composition for the treatment of nervous system disorders and injuries using same, to the use of the human neural stem cell for preparing therapeutic agents for the treatment of nervous system disorders and injuries, and to a method for treating nervous system disorders and injuries, capable of administrating an effective amount of the human neural stem cells into individuals that need the human neural stem cells. The human neural stem cell of the present invention has active effects for treating patients of neural system disorders and injuries, specifically for treating patients with a severe spinal cord injury, ischemic brain damage, epilepsy, and Alzheimer's disease, known to have no special treatment as of present and remain with permanent neurological aftereffects. Accordingly, the pharmaceutical composition containing the human neural stem cell of the present invention provides a novel method for treating neural system injuries.

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PN - WO2010018652 A1 20100218  
PD - 2010-02-18  
PA - UNIV KEIO [JP]; OKANO HIDEYUKI [JP]; SHIMAZAKI TAKUYA [JP]; NAKA HAYATO [JP]  
IN - OKANO HIDEYUKI [JP]; SHIMAZAKI TAKUYA [JP]; NAKA HAYATO [JP]  
TI - AGENT FOR PROMOTING NEURONAL DIFFERENTIATION AND METHOD THEREFOR  
AB - An agent for promoting neuronal differentiation of a neural stem / progenitor cell includes an inhibitor of function of a COUP-TFI protein and/or a COUP-TFII protein. To promote neuronal differentiation of a neural stem / progenitor cell, the agent is administered to the neural stem / progenitor cell to inhibit function of a COUP-TFI protein and/or a COUP-TFII protein.

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PN - EP2152860 A2 20100217  
PD - 2010-02-17  
PA - FMC CORP [US]  
IN - BRINCHMANN JAN ENGELSEN [NO]; FRONSDAL KATRINE BJORNEBEK [NO]; MELVIK JAN EGIL [NO]  
TI - PEPTIDE LINKED CELL MATRIX MATERIALS FOR STEM CELLS AND METHODS OF USING THE SAME  
AB - Biostructures that comprises modified alginates entrapping one or more stem cells are disclosed. The modified alginates comprise at least one alginate chain section to which is bonded by covalent bonding at least one cell attachment peptide. Pluralities of stem cells are also disclosed. Methods of preventing death of stem cells and cells differentiated there from are disclosed. Methods of preparing a plurality of stem cells are disclosed. Methods of treating an individual who has a degenerative disease, such as a neurological disorder, or injury involving nerve damage by administering stem cells to said individual are disclosed.

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PN - EP2152900 A2 20100217  
PD - 2010-02-17  
PA - US GOVERNMENT [US]; UNIV OHIO STATE RES FOUND [US]  
IN - WANG XIN WEI [US]; JI JUNFANG [US]; YAMASHITA TARO [US]; CROCE CARLO M [US]  
TI - METHODS FOR DETERMINING HEPATOCELLULAR CARCINOMA SUBTYPE AND DETECTING HEPATIC CANCER STEM CELLS  
AB - The invention provides a method of determining an HCC subtype in a subject comprising a) obtaining a sample from the subject, b) assaying the sample to detect the expression of 1 or more biomarkers, and c) correlating the expression of the biomarkers with an HCC subtype in a subject. The invention further provides methods of detecting HCC stem cells in a sample. Additionally, the invention provides methods and compositions for treating subjects with HCC that take advantage of the biomarkers associated with HCC stem cells.

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PN - WO2010017551 A2 20100211  
PD - 2010-02-11  
PA - GEN HOSPITAL CORP [US]; MASSACHUSETTS INST TECHNOLOGY [US]; SCADDEN DAVID [US]; GUO SHANGQIN [US]; LU JUN [US]  
IN - SCADDEN DAVID [US]; GUO SHANGQIN [US]; LU JUN [US]  
TI - METHOD FOR MIR-125A IN PROMOTING HEMATOPOIETIC STEM CELL SELF RENEWAL AND EXPANSION  
AB - Embodiments of the invention relate to methods and compositions for the expansion of hematopoietic stem cell (HSC) self renewal. The microRNA-125a is a master control of HSC self-renewal. Increased expression of mir-125a increased HSC self-renewal by 6-30 folds. Increased expression of mir-125a can be used to expand HSC ex vivo and in vivo.

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PN - US2010034864 A1 20100211  
PD - 2010-02-11  
PA - BIOACTIVE SURGICAL INC [US]  
IN - SPEDDEN RICHARD H [US]; QIU JUDY [US]; BORCH WILLIAM [US]  
TI - STEM CELL CAPTURE AND IMMOBILIZATION COATINGS FOR MEDICAL DEVICES AND IMPLANTS  
AB - Constructs and methods for immobilizing stem and other precursor cells, as well as other bioactive materials of therapeutic value on the surfaces of medical devices, such as bone, cartilage, spinal and tooth implants, are described herein. The present invention has broad application in the incorporation of bioactive and therapeutic materials in or on a medical implant or other

interventional device, having particular value in enabling the real-time, utilization by medical personnel of bioactive materials extracted from the patient and subsequently reintroduced and immobilized in an implant device.

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PN - WO2010016832 A1 20100211  
PD - 2010-02-11  
PA - CHILDRENS MEDICAL CENTER [US]; MASSACHUSETTS INST TECHNOLOGY [US]; LANGER ROBERT S [US]; SAIGAL RAJIV [US]; TENG YANG [US]; WOODARD ERIC [US]  
IN - LANGER ROBERT S [US]; SAIGAL RAJIV [US]; TENG YANG [US]; WOODARD ERIC [US]  
TI - MEDICAL DEVICES FOR USE IN THE SURGICAL TREATMENT OF HYPERPROLIFERATIVE DISEASES AFFECTING THE SPINAL CORD  
AB - Provided herein are new methods for the treatment of hyperproliferative diseases affecting the spinal cord, including the use of biodegradable polymers to treat spinal cord tumor resection, i.e., to patch open zones left by spinal tumor removal. Biocompatible polymeric materials are tailored to fill areas previously occupied by tumors, e.g., materials in the form of tubular articles configured for insertion into the spinal column after surgical removal of a tumor. These protective articles may also include medicinal agents that stimulate spinal column neural regeneration, such as medicines or donor neuronal cells such as human neural stem cells, thus assisting patients to recover motor sensory function after spinal tumor surgery.

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PN - US2010034803 A1 20100211  
PD - 2010-02-11  
PA - TOBISHI PHARMACEUTICAL CO [JP]  
IN - SENGU HIROBUMI [JP]; HAN ZHONGCHAO [CN]; CAI DINGFANG [CN]; LI LI [CN]  
TI - ACTIVATING AGENT OF STEM CELLS AND/OR PROGENITOR CELLS  
AB - The present invention provides an activating agent of stem cells and/or progenitor cells comprising a thrombin-like enzyme which can be used in regenerative medicine, and particularly in regenerative medicine utilizing self-regeneration, acting promptly and moderately depending on the state of advancement and the degree of injured organs and/or tissues to which regenerative medicine is applied, with few or no side effects. The present invention also provides a method for activating stem cells and/or progenitor cells in an animal comprising the step of administering to the animal an effective amount of a thrombin-like enzyme and use of the thrombin-like enzyme for activating stem cells and/or progenitor cells.

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PN - US2010034793 A1 20100211  
PD - 2010-02-11  
PA - UNIV JOHNS HOPKINS [US]  
IN - MCNIECE IAN [US]; WANG JIN-FU [CN]  
TI - METHOD OF USING STROMA CELLS FROM CORD BLOOD TO EXPAND AND ENGRAFT NUCLEATED CELLS FROM CORD BLOOD  
AB - The invention features a method for expanding and engrafting nucleated cells, e.g., progenitor cells, such as hematopoietic cells, obtained from cord blood by co-culturing the nucleated cells with adherent stroma cells, e.g., mesenchymal stem/progenitor cells, also obtained from cord blood.

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PN - US2010034790 A1 20100211  
PD - 2010-02-11  
PA - SANBIO INC  
IN - DEZAWA MARI [JP]; MORI KEITA [US]  
TI - Use of materials for treatment of central nervous system lesions

AB - Disclosed are methods and materials for treatment of central nervous system lesions. Preferred methods and materials comprise neuronal precursor cells and/or marrow adherent stem cell-derived neuronal cells.

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PN - US2010034736 A1 20100211  
PD - 2010-02-11  
PA - CONSEJO SUPERIOR INVESTIGACION [ES]  
IN - SANCHEZ-GARCIA ISIDRO [ES]; PEREZ-CARO MARIA [ES]  
TI - IDENTIFICATION OF CANCER STEM CELLS USING GENETIC MARKERS  
AB - The invention relates to the identification of markers for cancer stem cells. These markers can be used in a number of different ways, including diagnosis and therapy. In particular, the invention relates to a method of detecting, identifying and/or quantifying cancer stem cells, the method comprising the step of assessing the level of expression; the activity; or the sequence of the SLUG, OVOL1 and/or OVOL2 gene, promoter and/or expression product in a cell.

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PN - US2010034783 A1 20100211  
PD - 2010-02-11  
IN - SON HYUN-MI [KR]; CHANG CHEONG-HO [KR]; JANG JAE-DEOG [KR]  
TI - Medical kit and using method thereof  
AB - An aseptic/sterile medical kits are comprising a cartilage regeneration kit, a bone regeneration kit or an umbilical cord blood storage kit in a configuration that each process performs according to functionally-specialized kit sets for each step, via division of overall processes into corresponding steps for isolation, culture, collection and storage of cells, and implantation of desired cells into target sites of the body. The cartilage is regenerated by cartilage tissue collection; chondrocyte isolation; chondrocyte medium change and subculture; preparation of chondrocyte therapy product; media for isolation/culture/preparation/cryopreservation of cells; and media for isolation/culture/cryopreservation of cells, using the cartilage regeneration kit. The bone is regenerated by bone marrow collection; osteoblast isolation; osteoblast medium change and subculture; and preparation of osteoblast therapy product, using the bone regeneration kit. Additionally, the umbilical cord blood is stored by umbilical cord blood collection; hematopoietic stem cell isolation; and cryopreservation of hematopoietic stem cells, using the umbilical cord blood storage kit.

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PN - US2010034866 A1 20100211  
PD - 2010-02-11  
IN - WESTENFELDER CHRISTOF [US]  
TI - Fused stem cells useful for the treatment of diabetes and methods thereof  
AB - Methods disclosed include methods of treating T1DM, said method comprising delivering a therapeutic amount of beta-MSK to a subject in need thereof. Further disclosed are fusion cells comprising MSC and a second cell wherein the nuclei of the MSC and the second cell are not fused in the fusion cell.

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PN - US2010034832 A1 20100211  
PD - 2010-02-11  
PA - GEN HOSPITAL CORP [US]  
IN - SCADDEN DAVID T [US]; SAITO YORIKO [JP]; ATTAR EYAL [US]  
TI - METHODS FOR MANIPULATING STEM CELLS  
AB - The invention generally features methods and compositions for enhancing stem cell function. In particular, the invention provides therapeutic or prophylactic methods that can increase survival, growth or proliferation during blood and/or stem cell transplant and protect stem cells in settings of injury.

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PN - US2010034856 A1 20100211  
PD - 2010-02-11  
PA - HAIR SCIENCE INST [NL]  
IN - GHO CONRADUS GHOSAL [NL]  
TI - Method For In Vivo Multiplication Of Hair  
AB - A method is described for the reproduction of hair by removing hair in the anagen phase in such a way that the hair stem cells which are responsible for hair growth are still attached to the hair removed, bringing these into contact with extracellular matrix components or substitutes therefor, and implanting the hair in the scalp. The application of extracellular matrix components or substitutes therefor for the reproduction of hair is also described.

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PN - US2010034778 A1 20100211  
PD - 2010-02-11  
PA - UNIV DUKE [US]  
IN - MCDONNELL DONALD P [US]; CHUTE JOHN P [US]  
TI - STEM CELLS  
AB - The present invention relates, in general, to stem cells and, in particular, to a method of expanding human stem cells using a retinoic acid receptor modulator.

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PN - WO2010016492 A1 20100211  
PD - 2010-02-11  
PA - UNIV OKAYAMA NAT UNIV CORP [JP]; KAWANABE NORIAKI [JP]; YAMASHIRO TAKASHI [JP]  
IN - KAWANABE NORIAKI [JP]; YAMASHIRO TAKASHI [JP]  
TI - METHOD FOR IDENTIFYING AND ISOLATING STEM CELL FROM DENTAL OR PERIODONTAL TISSUE AND STEM CELL OBTAINED BY THE METHOD  
AB - Provided is a method for identifying and isolating a stem cell originating from a dental or periodontal tissue by using SSEA-4 as a marker. Also provided is a stem cell having a high differentiation ability which is obtained by the above-described method.

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PN - WO2010015938 A2 20100211  
PD - 2010-02-11  
PA - INST NAT SANTE RECH MED [FR]; UNIV PARIS DIDEROT PARIS 7 [FR]; MARIE PIERRE [FR]; FROMIGUE OLIVIA [FR]; HAMIDOUCHE ZAHIA [FR]  
IN - MARIE PIERRE [FR]; FROMIGUE OLIVIA [FR]; HAMIDOUCHE ZAHIA [FR]  
TI - USE OF AGONISTS OF INTEGRIN ALPHA 5 FOR INDUCING THE OSTEOGENIC DIFFERENTIATION OF MESENCHYMAL STEM CELLS  
AB - The invention relates to the use of agonists of integrin alpha for promoting osteoblast differentiation of mesenchymal stem cells. These agonists are useful in particular for enhancing osteogenesis in the treatments of diseases associated with bone loss or insufficient bone formation.

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PN - WO2010015929 A2 20100211  
PD - 2010-02-11  
PA - CELLERIX SA [ES]; CONSEJO SUPERIOR INVESTIGACION [ES]; DELGADO MARIO [ES]; GONZALEZ-REY ELENA [ES]; BUESCHER DIRK [ES]  
IN - DELGADO MARIO [ES]; GONZALEZ-REY ELENA [ES]; BUESCHER DIRK [ES]  
TI - USES OF MESENCHYMAL STEM CELLS

AB - The invention relates to the use of mesenchymal stem cells (MSCs) for treating systemic inflammatory response syndrome (SIRS) in a subject. The invention provides compositions, uses and methods for the treatment of SIRS.

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PN - WO2010015831 A2 20100211  
PD - 2010-02-11  
PA - AVECIA BIOLOG LTD [GB]; KARA BHUPENDRA VALLABH [GB]; BODDY RACHEL YVONNE [GB]; KNIGHT ADRIAN [GB]  
IN - KARA BHUPENDRA VALLABH [GB]; BODDY RACHEL YVONNE [GB]; KNIGHT ADRIAN [GB]  
TI - PROCESS FOR CULTIVATING CELLS  
AB - A process for cultivation of differentiated human cells retaining stem cell potential is provided. The process comprises culturing differentiated human cells retaining stem cell potential anchored to a microcarrier selected from the group consisting of gelatin microcarriers and quaternary ammonium derivatised polystyrene microcarriers.

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PN - WO2010015087 A1 20100211  
PD - 2010-02-11  
PA - UNIV WESTERN ONTARIO [CA]; LI SHAWN SHUNCHENG [CA]; KENNEDY KAREN [CA]  
IN - LI SHAWN SHUNCHENG [CA]; KENNEDY KAREN [CA]  
TI - METHOD OF INDUCING STEM CELL DIFFERENTIATION  
AB - A method of manipulating stem cell differentiation in a population of stem cells is provided comprising the step of altering the expression of a Numb interacting protein (NIP) and/or the level of reactive oxygen species (ROS) in the stem cells.

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PN - US2010029672 A1 20100204  
PD - 2010-02-04  
IN - OBEN JUDE A [GB]; DIEHL ANNA M [US]  
TI - METHOD OF TREATING LIVER DISEASE  
AB - Treating diseased or damaged tissue, particularly the liver, using stem cells. The hepatic stem cell population of a subject suffering from disease or damaged tissue can be expanded by administering at least one regulator of the sympathetic nervous system. The regulator can be an adrenoceptor agonist or antagonist, adrenoceptor antagonists, prazosin, being particularly preferred. The invention also includes the use of agents which mobilize stem cells in the manufacture of medicaments for the treatment of diseased or damaged tissue.

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PN - WO2010014990 A2 20100204  
PD - 2010-02-04  
PA - TRUSTEES OF THE UNIVERSITY OF [US]; LAZAROV ORLY [US]; GADADHAR ARCHANA [US]; DEMARS MICHAEL P [US]  
IN - LAZAROV ORLY [US]; GADADHAR ARCHANA [US]; DEMARS MICHAEL P [US]  
TI - METHOD OF PROMOTING NEUROGENESIS BY MODULATING SECRETASE ACTIVITIES  
AB - This invention provides methods and reagents for promoting neurogenesis, by modulating neural stem cell proliferation and differentiation. Particularly, this invention provides methods and reagents for promoting neurogenesis in a patient's central nervous system where the patient suffers from an aging-related neurodegenerative disease. Specifically, the invention provides methods for promoting neurogenesis comprising modulating the a and/or ?-secretase activities.

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PN - WO2010014949 A2 20100204  
PD - 2010-02-04  
PA - GEN HOSPITAL CORP [US]; PRYOR HOWARD I [US]; VACANTI JOSEPH P [US]; LUM DAVID H [US]; AHFELDT TIM D [US]; COWAN CHAD [US]  
IN - PRYOR HOWARD I [US]; VACANTI JOSEPH P [US]; LUM DAVID H [US]; AHFELDT TIM D [US]; COWAN CHAD [US]  
TI - COMPOSITIONS COMPRISING HEPATOCYTE-LIKE CELLS AND USES THEREOF  
AB - The invention generally features methods for generating hepatocytes from a variety of pluripotent stem cells, including adipose mesenchymal stem cells, therapeutic compositions featuring such cells, and methods of using them for the treatment of subjects.

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PN - US2010028997 A1 20100204  
PD - 2010-02-04  
PA - OLYMPUS CORP [JP]  
IN - LIN KONGHUA [JP]  
TI - Method for culturing mesenchymal stem cell and method for producing biological tissue prosthesis  
AB - The purpose is to proliferate a mesenchymal stem cell to a sufficient degree while reducing the amount of blood serum contained in a biological tissue progenitor cell to be grafted, and to efficiently differentiate the mesenchymal stem cell into the biological tissue progenitor cell. There is provided a method for culturing a mesenchymal stem cell, comprising: a first culture step of proliferating a mesenchymal stem cell in a medium containing blood serum; and a second culture step of differentiating the mesenchymal stem cell into a biological tissue progenitor cell in a medium containing blood serum at a lower concentration than that in the medium used in the first culture step.

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PN - US2010028305 A1 20100204  
PD - 2010-02-04  
IN - UCHIDA NOBUKO [US]; JACOBA YAKOP [US]; TAMAKI STANLEY [US]  
TI - Methods for the treatment of lysosomal storage disorders  
AB - Provided herein are methods for the treatment of lysosomal storage disorders characterized by a missing or defective secreted lysosomal enzyme. Such lysosomal storage disorders include, but are not limited to neuronal ceroid lipofuscinoses. The disclosed methods involve the transplantation of human multipotent neural stem cells into the CNS of patients suffering from the lysosomal storage disorder. Also provided herein are methods of reversing or slowing the progression of neurodegeneration in patients suffering from or at risk of developing neuronal ceroid lipofuscinoses.

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PN - WO2010006219 A2 20100114  
PD - 2010-01-14  
PA - BAXTER INT [US]; BAXTER HEALTHCARE SA [CH]; MOTLAGH DELARA [US]; AMRANI DAVID L [US]; DIORIO JAMES P [US]  
IN - MOTLAGH DELARA [US]; AMRANI DAVID L [US]; DIORIO JAMES P [US]  
TI - USE OF SCAFFOLD COMPRISING FIBRIN FOR DELIVERY OF STEM CELLS  
AB - The invention generally relates to the field of delivery of cells to desired tissue sites, prolonged retention of the cells at the sites, and integration of cells into an area of interest for increased therapeutic effect. The invention provides, in part, compositions and methods for treating ischemia in a subject in need thereof. In some aspects, the methods of treatment comprise the administration of a fibrin scaffold or fibrin clot comprising stem cells.

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PN - US2010028310 A1 20100204  
PD - 2010-02-04  
IN - DO BYUNG ROK [KR]; KIM JI HYANG [KR]; KANG SUNG GOO [KR]; KIM CHUL GEUN [KR]; KWON HYUCK CHAN [KR]; KIM BYEONG KYU [KR]; LEE AI-YOUNG [KR]; SUNG JEA KYUNG [KR]  
TI - Composition for Transplantation Comprising Adipose Stem Cells or Adipocytes  
AB - The present invention relates to a composition for transplantation in a physiologically compatible buffer solution comprising, (a) a transplant-cell selected among an adipose stem cell, an adipocyte, adipose tissues (fat tissue) and a mixture thereof; and (b) a semi-solid substance derived from a living body or a biodegradable substance selected among a hyaluronic acid, collagen, elastin, thrombin, chondroitin sulfate, albumin and a mixture thereof.

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PN - US2010028308 A1 20100204  
PD - 2010-02-04  
PA - TIGENIX N V [BE]  
IN - KNIPPER ANDREAS [DE]; MUIR-MCLEOD PAULA [GB]  
TI - METHODS TO MAINTAIN, IMPROVE AND RESTORE THE CARTILAGE PHENOTYPE OF CHONDROCYTES  
AB - The present invention relates to regulatory cells, which are capable of restoring, maintaining or improving the stable cartilage phenotype of expanded and passaged chondrocytes. These regulatory cells are also capable of directing precursor and stem cells into the chondrogenic lineage. An enriched population of regulatory cells can be obtained by harvesting the non-adherent cells in the culture medium of a monolayer culture of PO chondrocytes.

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PN - US2010028401 A1 20100204  
PD - 2010-02-04  
PA - NAT UNIV IRELAND  
IN - DUFFY GARRY PAUL [IE]; BARRY FRANK [IE]; O'BRIEN TIMOTHY [IE]  
TI - STEM CELL SOURCE FOR PROMOTING NEOVASCULARISATION  
AB - The Eph (erythropoietin-producing hepatocellular carcinoma) receptors and their cell surface anchored ligands, the Ephrins, comprise the largest of the receptor tyrosine kinases families with 14 receptors and 8 ligands. The receptors are subdivided into Eph-A and Eph-B categories and have known actions in the development of the vascular and nervous system. The present invention relates to an isolated mesenchymal stem cell selected from the group consisting of an isolated mesenchymal stem cell that expresses Ephrin-B2, an isolated mesenchymal stem cell that over-expresses Ephrin-B2, and an isolated mesenchymal stem cell that is genetically modified to increase Ephrin-B2 expression. The invention further relates to the various applications of the isolated mesenchymal stem cells of the present invention.

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PN - WO2010013906 A2 20100204  
PD - 2010-02-04  
PA - SEOUL NAT UNIVERSITY HOSPITAL [KR]; KIM HYO SOO [KR]; LEE EUN JU [KR]; KANG HYUN JAE [KR]; LEE HA NEUL [KR]; KIM KEUM HYUN [KR]  
IN - KIM HYO SOO [KR]; LEE EUN JU [KR]; KANG HYUN JAE [KR]; LEE HA NEUL [KR]; KIM KEUM HYUN [KR]  
TI - METHOD FOR SEPARATING HIGHLY ACTIVE STEM CELLS FROM HUMAN STEM CELLS AND HIGHLY ACTIVE STEM CELLS SEPARATED THEREBY  
AB - The present invention relates to a method for separating highly active stem cells from human stem cells, the highly active stem cells separated by the method, a cell therapeutic agent containing the stem cells, and a medium for separating the highly active stem cells from stem cells containing a specific cytokine. According to the present invention, the method is useful for separating the highly efficient stem cells from mesenchymal stem cells of various origins. Further, the method is very useful in developing a cell therapeutic agent of high efficiency because the method can be

applicable to stem cells of various origins which are cultured under different conditions. Senescent stem cells increased by several passage times in vitro can be effectively sorted out, so the method can be used for reactivating the stem cells.

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PN - WO2010012127 A1 20100204  
PD - 2010-02-04  
PA - HEBEI YILING MEDICINE RES INST [CN]; YANG YUEJIN [CN]; QIAN HAIYAN [CN]  
IN - YANG YUEJIN [CN]; QIAN HAIYAN [CN]  
TI - USE OF A TRADITIONAL CHINESE MEDICINAL COMPOSITION FOR PREPARING MEDICINE FOR PROMOTING BONE MARROW-DERIVED MESENCHYMAL STEM CELL SURVIVAL IN VIVO AND CARDIAC MUSCLE DIFFERENTIATION  
AB - Use of a traditional Chinese medicinal composition for preparing medicine for promoting bone marrow-derived mesenchymal stem cell survival in vivo and cardiac muscle differentiation, wherein the composition is prepared by using ginseng, leech, ground beetle, olibanum, red paeony root, rosewood heart wood, sandalwood, scorpion, cicada slough, centipede, borneol and spina date seed.

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PN - WO2010012025 A1 20100204  
PD - 2010-02-04  
PA - UNIV MONASH [AU]; JENKIN GRAHAM [AU]; GOLDSCHLAGER TONY [AU]; WALLACE EUAN MORRISON [AU]  
IN - JENKIN GRAHAM [AU]; GOLDSCHLAGER TONY [AU]; WALLACE EUAN MORRISON [AU]  
TI - AMNION EPITHELIAL CELLS FOR THE TREATMENT OF DEGENERATIVE DISC DISEASE  
AB - An orthopaedic device and methods for the treatment of degenerative disc disease (DDD) are disclosed that utilise cells such as multipotent amnion epithelial cells (AECs) and/or mesenchymal stem cells (MSCs) that may be directed towards a disc cartilage type cell for the in situ generation of intervertebral disc (IVD)-like tissue. In some embodiments, derivative cells of multipotent AECs and/or MSCs may be used.

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PN - EP2148569 A1 20100203  
PD - 2010-02-03  
PA - STOWERS INST FOR MEDICAL RES [US]  
IN - PERRY JOHN M [US]; LI LINHENG [US]; GRINDLEY JUSTIN C [US]  
TI - METHODS AND COMPOSITIONS FOR STEM CELL SELF-RENEWAL  
AB - The present invention relates to methods for expanding a stem cell population. More particularly, the invention relates, inter alia, to methods and compositions for expanding a stem cell population, particularly a hematopoietic stem cell population.

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PN - WO2010011893 A1 20100128  
PD - 2010-01-28  
PA - UNIV CENTRAL FLORIDA RES FOUND [US]; SUGAYA KIMINOBU [US]; ALVAREZ ANGEL [US]; BUSHNEV SERGEY [US]; AVGEROPOULOS NICHOLAS G [US]  
IN - SUGAYA KIMINOBU [US]; ALVAREZ ANGEL [US]; BUSHNEV SERGEY [US]; AVGEROPOULOS NICHOLAS G [US]  
TI - THERAPY TARGETING CANCER STEM CELLS  
AB - Disclosed herein are new immunotherapy methods that involve the isolation of cancer stem cells from tumor tissue and use of the cells either directly or indirectly through proteins or other factors associated with the cells to activate antigen presenting cells. The activated antigen presenting cells are useful as a therapy against the tumor. Also disclosed herein are novel methods of isolating

and characterizing cancer stem cells and producing individual cancer stem cell lines. Dendritic cell lines are also disclosed herein.

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PN - WO2010011352 A2 20100128  
PD - 2010-01-28  
PA - UNIV GEORGIA RES FOUND [US]; DALTON STEPHEN [US]; REYNOLDS DAVID [US]  
IN - DALTON STEPHEN [US]; REYNOLDS DAVID [US]  
TI - COMPOSITIONS FOR MESODERM DERIVED ISL1+ MULTIPOTENT CELLS (IMPS), EPICARDIAL PROGENITOR CELLS (EPCS) AND MULTIPOTENT CXCR4+CD56+ CELLS (C56CS) AND METHODS OF USE  
AB - The present invention relates to inter alia, methods for the generation and maintenance of Mesoderm-derived ISL 1+ Multipotent Progenitors (IMPs), the production of a number of pluripotent cells including and epicardial pluripotent cells (EPCs) and using these cells to produce endothelial cells, cardiomyocytes, smooth muscle cells, vascular cells and other cells and related methods as otherwise disclosed herein. The invention also relates to compositions comprising a population of cells.

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PN - US2010022005 A1 20100128  
PD - 2010-01-28  
IN - MARCH KEITH L [US]; REHMAN JALEES [US]  
TI - ADIPOSE STROMAL STEM CELLS FOR TISSUE AND VASCULAR MODIFICATION  
AB - Methods are provided for isolating adipose derived stromal cells from an animal by extracting adipose tissue from the patient, dissecting the tissue, dissociating the tissue into a cell suspension, removing the adipocytes, exposing the cell suspension to red cell lysis buffer, and isolating adipose derived stromal cells.

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PN - US2010024049 A1 20100128  
PD - 2010-01-28  
PA - IST SUPERIORE SANITA [IT]  
IN - MARCHIANO RUGGERO DE MARIA [IT]  
TI - Digestive System Cancer Stem Cells and Tests and Uses Therefor  
AB - The CD133 marker has been found to be diagnostic of tumourigenic digestive system cancer, particularly malignant colorectal cancers. Tests to show such cells and uses for such cells are disclosed.

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PN - US2010021438 A1 20100128  
PD - 2010-01-28  
PA - UNIV MINNESOTA [US]  
IN - ROSENBERG MARK E [US]; GUPTA SANDEEP [US]  
TI - KIDNEY DERIVED STEM CELLS AND METHODS FOR THEIR ISOLATION, DIFFERENTIATION AND USE  
AB - The invention relates generally to methods for isolation and culture of kidney stem cells, cells isolated by the methods, and therapeutic uses for those cells.

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PN - US2010021422 A1 20100128  
PD - 2010-01-28

PA - REGENERATIVE RES FOUNDATION [US]; ALBANY MEDICAL COLLEGE [US]; RENSSELAER POLYTECH INST [US]

IN - TEMPLE SALLY [US]; LOWRY NATALIA [US]; STERN JEFFREY [US]; GODERIE SUSAN K [US]; KANE RAVINDRA [US]; PUNYANI SUPRIYA [IN]; BANERJEE AKHILESH [IN]

TI - METHODS AND COMPOSITIONS FOR DELIVERY OF EXOGENOUS FACTORS TO NERVOUS SYSTEM SITES

AB - The present invention relates to treatment methods and methods for sustained delivery of one or more exogenous factors to desired nervous system sites. In certain embodiments, the invention relates to the use of biodegradable microspheres to deliver exogenous factors, such as the morphogenic factor, sonic hedgehog (Shh), to the site of spinal cord injury. In certain embodiments, the Shh-releasing microspheres are administered together with stem cells, which may be spinal cord neural stem cells. In certain embodiments, the invention relates to regrowth of neural cells in both the central and peripheral nervous systems.

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PN - US2010022003 A1 20100128

PD - 2010-01-28

IN - KANG SOO KYUNG [KR]

TI - Therapeutic cell medicine comprising skin tissue derived stem cell

AB - Provided is a cell therapeutic agent for treatment of neurological disorders, comprising skin-derived progenitor cells (SPCs). More specifically, the present invention provides a cell therapeutic agent for treatment of neurological disorders, comprising skin-derived progenitor cells (SPCs) isolated from skin tissues and a method for differentiation of the skin-derived progenitor cells (SPCs) into neural cell lineages. The cell therapeutic agent in accordance with the present invention is therapeutically effective for the treatment of the neurological disorders and diseases such as Parkinson's disease, Alzheimer's disease, Huntington's disease and Amyotrophic Lateral Sclerosis (ALS) caused by neural injury, and neurological deficits due to cerebral apoplexy, ischemia and spinal cord injury. Further, the present invention enables transplantation of autologous cells to thereby minimize adverse side effects.

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PN - US2010021436 A1 20100128

PD - 2010-01-28

PA - SEOUL NAT UNIV IND FOUNDATION [KR]

IN - KANG KYUNG SUN [KR]; KWON OH KYUNG [KR]; JEONG YUN HYEOK [KR]; LIM JI HEY [KR]; JUNG CHANG SOO [KR]

TI - MULTIPOTENT ADULT STEM CELL DERIVED FROM CANINE UMBILICAL CORD BLOOD, PLACENTA AND CANINE FETUS HEART, METHOD FOR PREPARING THE SAME AND CELLULAR THERAPEUTICS CONTAINING THE SAME

AB - The present invention relates to multipotent adult stem cells derived from canine umbilical cord blood, placental blood and blood sample from canine fetal heart, and a method for preparing the same as well as a cellular therapeutic agent containing the same, more specifically, to a multipotent adult stem cell isolated by culturing an eukaryotic cell derived from canine umbilical cord blood, placental blood and blood sample from canine fetal heart in a FBS-containing medium and a method for preparing the same. Adult stem cells according to the present invention are derived from canine umbilical cord blood, placental blood and blood sample from canine fetal heart. The adult stem cells have characteristics highly similar to human mesenchymal stem cells as well as remarkable cell growth at the initial step compared to human UCB-derived mesenchymal stem cells so that the cells are useful to treat canine incurable diseases and difficult-to-cure diseases. Furthermore, multipotent adult stem cells are effective to treat musculoskeletal diseases and neural diseases due to the ability to differentiate into osteogenic cells and neural cells.

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PN - US2010021435 A1 20100128

PD - 2010-01-28

IN - WINNIER GLENN E [US]; NEWSOM BRIAN S [US]; RILL DONNA R [US]; WILLIAMS JIM C [US]  
TI - PANCREATIC ISLET-LIKE CELLS  
AB - The generation of pancreatic islet-like cells from isolated monocyte-derived stem cells (MDSCs) is provided. MD-SCs may be differentiated into pancreatic islet cells by contacting the MDSCs with a differentiation factor or factors. Compositions comprising pancreatic islet cells and methods of using them are also provided.

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PN - WO2010011185 A1 20100128  
PD - 2010-01-28  
PA - AGENCY SCIENCE TECH & RES [SG]; COOL SIMON MCKENZIE [SG]; NURCOMBE VICTOR [SG]  
IN - COOL SIMON MCKENZIE [SG]; NURCOMBE VICTOR [SG]  
TI - STEM CELLS OBTAINED THROUGH IN VITRO CULTURE WITH HEPARAN SULFATE  
AB - The present invention relates to cell cultures, methods and pharmaceutical compositions comprising stem cells, in particular mesenchymal stem cells (hMSC), obtained through in vitro culture with heparan sulphate, preferably HS-2. The invention further relates to the provision of therapeutic numbers of multipotent stem cells.

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PN - WO2010009905 A1 20100128  
PD - 2010-01-28  
PA - IST SUPERIORE SANITA [IT]; MERLO DANIELA [IT]; MOLLINARI CRISTIANA [IT]; RICCI-VITIANI LUCIA [IT]; DE MARIA RUGGERO [IT]; GARACI ENRICO [IT]  
IN - MERLO DANIELA [IT]; MOLLINARI CRISTIANA [IT]; RICCI-VITIANI LUCIA [IT]; DE MARIA RUGGERO [IT]; GARACI ENRICO [IT]  
TI - CANCER TREATMENT AND TEST  
AB - Provided is a colon cancer treatment comprising downregulating or suppressing Thymosin Beta4 expression, as well a test for identifying Colon Cancer Stem Cells.

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PN - WO2010009121 A2 20100121  
PD - 2010-01-21  
PA - UNIV FLORIDA [US]; HUANG EMINA H [US]; SCOTT EDWARD W [US]; CARPENTINO JOSEPH E [US]  
IN - HUANG EMINA H [US]; SCOTT EDWARD W [US]; CARPENTINO JOSEPH E [US]  
TI - COLON STEM CELLS ASSOCIATED WITH COLITIS AND COLORECTAL CANCER AND METHODS OF USE  
AB - The disclosure provides methods of isolating and propagating self-renewing colonic stem/progenitor cells (CS/PCs) that express aldehyde dehydrogenase (ALDH1), from colon cancer and colitis tissues, as well as from normal colon tissue, methods of identifying agents for modulating the proliferative status of such cells, an methods of screening patients having colitis for an increased risk of colorectal cancer. Novel methods of adherent cell culture propagation of CS/PC involving use of colon-specific fibroblastic stromal cells (CFSt) {i.e. the "niche" cells} as support cells (e.g., "feeder cells"). The present disclosure encompasses an isolated mammalian pluripotent colon epithelial stem/progenitor cell (CS/PC), or a population of said cells, where each CS/PC may comprise a detectable marker, where the detectable marker is aldehyde dehydrogenase 1 (ALDH1), and where the isolated population of mammalian pluripotent CS/PCs is substantially free of cells that do not have the detectable ALDH 1 marker. The disclosure encompasses further provides methods for determining the prognosis for a patient for developing a colon cancer, the method detecting the presence of at least one marker in a tissue section from a patient, the marker or plurality of markers indicating the presence of a pluripotent colon epithelial stem/progenitor cells and indicating the prognosis of the patient for developing a colon cancer.

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PN - WO2010008815 A1 20100121  
PD - 2010-01-21  
PA - BIOACTIVE SURGICAL INC [US]; SPEDDEN RICHARD [US]; PINGEL LAURA [US]; SCHON LEW [US]  
IN - SPEDDEN RICHARD [US]; PINGEL LAURA [US]; SCHON LEW [US]  
TI - SURGICAL SUTURES INCORPORATED WITH STEM CELLS OR OTHER BIOACTIVE MATERIALS  
AB - Materials and methods for immobilizing bioactive molecules, stem and other precursor cells, and other agents of therapeutic value in surgical sutures and other tissue scaffold devices are described herein. Broadly drawn to the integration and incorporation of bioactive materials into suture constructs, tissue scaffolds and medical devices, the present invention has particular utility in the development of novel systems that enable medical personnel performing surgical and other medical procedures to utilize and subsequently reintroduce bioactive materials extracted from a patient (or their allogenic equivalents) to a wound or target surgical site.

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PN - US2010015593 A1 20100121  
PD - 2010-01-21  
PA - LYMPHOTEC INC [JP]  
IN - BAMBBA KENZO [JP]; KUROIWA YASUYUKI [JP]; MORIO TOMOHIRO [JP]; SHIMIZU NORIO [JP]  
TI - METHOD FOR PRODUCING A COMPOSITION FOR PROMOTING SURVIVAL OF TRANSPLANTED HEMATOPOIETIC STEM CELL  
AB - HLA matched activated lymphocytes in mononuclear cells separated from peripheral blood or umbilical cord blood are proliferated and activated. After separating and collecting, the HLA matched activated lymphocytes are employed as the main component of a composition for promoting survival of transplanted hematopoietic stem cells. The obtained composition is widely usable in, for instance, prevention of survival failure of transplanted hematopoietic stem cells and therapy for promoting the survival thereof. Although the dose of the composition varies depending on the age, conditions, etc. of a patient, a humanized antibody is administered in a dose of from 0.2 to 20 ml/kg/day to mammals including humans. The composition is administered by intravenous injection either once a day (single administration or continuous administration) or intermittently once to 3 times in a week or once in 2 or 3 weeks.

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PN - WO2010008317 A1 20100121  
PD - 2010-01-21  
PA - LASKAVY VLADISLAV NIKOLAEVICH [RU]; GORYUNOV DMITRIY VLADIMIROVICH [CH]  
IN - LASKAVY VLADISLAV NIKOLAEVICH [RU]; GORYUNOV DMITRIY VLADIMIROVICH [CH]  
TI - AGENT FOR ACTIVATING STEM CELLS  
AB - The invention relates to medicine, in particular to medicinal preparations directed at activating their own stem cells. The aim of the invention is to develop a non-toxic agent which does not produce side effects and is used for activating the stem cells of an organism. The method for producing the agent involves taking a 37-40% medicinal formaldehyde solution and adding it into a 0.9-0.95% sterile sodium chloride solution used for injections in such a way that a 0.00003-0.003% formaldehyde solution is obtained. The agent should be stored in a dark place at a temperature of 15-35 DEG C.

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PN - WO2010008219 A2 20100121  
PD - 2010-01-21

PA - RNL BIO CO LTD [KR]; RA JEONG CHAN [KR]; KANG SUNG KEUN [KR]; YIM CHA OK [KR]; KIM HYO EUN [KR]  
IN - RA JEONG CHAN [KR]; KANG SUNG KEUN [KR]; YIM CHA OK [KR]; KIM HYO EUN [KR]  
TI - CULTURE OF MULTI-POTENTIAL STEM CELLS ORIGINATING IN ADIPOSE TISSUE AND A COSMETIC COMPOSITION CONTAINING PROTEIN EXTRACTED THEREFROM  
AB - The present invention relates to an adult stem cell culture originating in adipose tissue and a cosmetic composition containing either protein extracted from said adult stem cells originating in adipose tissue, or peptide or amino acid hydrolysates of said protein as the active ingredient. As a result of the synergistic and reciprocal effects of improving wrinkles and preventing aging of said adult stem cell cultures originating in adipose tissue and proteins or amino acids extracted from said culture, the cosmetic composition of the present invention can be used for the manufacture of functional cosmetics.

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PN - WO2010008157 A2 20100121  
PD - 2010-01-21  
PA - MARIA BIOTECH [KR]; LIM JIN HO [KR]; LEE YOUNG JAE [KR]  
IN - LIM JIN HO [KR]; LEE YOUNG JAE [KR]  
TI - METHOD FOR DIFFERENTIATING STEM CELLS FROM ECTODERMAL CELLS  
AB - The present invention relates to a method for differentiating stem cells from ectodermal cells, and more particularly, to a method for differentiating stem cells from ectodermal cells that includes a step of culturing a spheroid formed by the aggregation of adult stem cells. The present invention differentiates stem cells from ectodermal cells by using an increase in the interaction between cells caused by the aggregation of stem cells, instead of using conventional biochemical differentiation inducing substances, thereby lowering the risk of contamination caused by foreign substances and differentiating adult stem cells from ectodermal cells in a simpler manner.

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PN - WO2010007542 A2 20100121  
PD - 2010-01-21  
PA - FOND PARCO TECNOLOGICO PADANO [IT]; UNIV MILANO [IT]; MARIANI PAOLA [IT]; VIOLINI STEFANIA [IT]; CREMONESI FAUSTO [IT]  
IN - MARIANI PAOLA [IT]; VIOLINI STEFANIA [IT]; CREMONESI FAUSTO [IT]  
TI - METHOD FOR THE IN VITRO PRODUCTION OF TENOCYTES  
AB - A method for the in vitro production of tenocytes comprises the step of placing a mammal-origin cell culture of mesenchymal stem cells in direct contact with an effective amount of BMP12 (bone morphogenetic protein 12). A method is also described for the characterisation of mammal-origin mesenchymal stem cells, as well as a method for the characterisation of tenocytes obtained by differentiation of mesenchymal stem cells.

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PN - EP2147094 A1 20100127  
PD - 2010-01-27  
PA - HADASIT MED RES SERVICE [IL]  
IN - IDELSON MASHA [IL]; ALPER-PINUS RUSLANA [IL]; OBOLENSKY ALEX [IL]; BANIN EYAL [IL]; REUBINOFF BENJAMIN [IL]  
TI - STEM CELL-DERIVED RETINAL PIGMENT EPITHELIAL CELLS  
AB - The present invention concerns RPE cells obtainable by directed differentiation from stem cell, particularly, human stem cells. It has been specifically found that culturing stem cells in the presence of one or more member of the TGF superfamily, such as Activin A) induced directed differentiation into mature and functional RPE cells. This was evidenced by the expression of markers specific to mature RPE cells, including MiTF-A, RPE65 or Bestrophin). In accordance with one particular embodiment, the cells are a priori cultured with nicotinamide (NA) which was found to augment the cells' response to the inductive effect of the one or more member of the TGF

superfamily. The invention also provides methods of performing the directed differentiation, as well as methods for use of the resulting RPE cells.

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PN - US2010015106 A1 20100121  
PD - 2010-01-21  
PA - UNIV NEW YORK  
IN - ALTABA ARIEL RUIZ I [US]; SANCHEZ MARIA PILAR [US]  
TI - Method and compositions for inhibiting tumorigenesis  
AB - The present invention discloses methods of producing neuronal cells from stem cells, particularly from adult brain stem cells. The use of such neuronal cells in the treatment and/or prevention of neurological diseases, conditions and/or injuries is also disclosed. In addition, the present invention provides a novel source of neuronal cells for use as a laboratory tool.

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PN - US2010015702 A1 20100121  
PD - 2010-01-21  
IN - RAO MAHENDRA S [US]; MAYER-PROSCHEL MARGOT [US]  
TI - Generation, Characterization and Isolation of Neuroepithelial Stem Cells and Lineage Restricted Intermediate Precursor  
AB - Multipotent neuroepithelial stem cells and lineage-restricted oligodendrocyte-astrocyte precursor cells are described. The neuroepithelial stem cells are capable of self-renewal and of differentiation into neurons, astrocytes, and oligodendrocytes. The oligodendrocyte-astrocyte precursor cells are derived from neuroepithelial stem cells, are capable of self-renewal, and can differentiate into oligodendrocytes and astrocytes, but not neurons. Methods of generating, isolating, and culturing such neuroepithelial stem cells and oligodendrocyte-astrocyte precursor cells are also disclosed.

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PN - US2010015705 A1 20100121  
PD - 2010-01-21  
IN - VODYANYK MAKSYM A [US]; YU JUNYING [US]; THOMSON JAMES A [US]  
TI - Generation of Clonal Mesenchymal Progenitors and Mesenchymal Stem Cell Lines Under Serum-Free Conditions  
AB - Methods for obtaining multipotent mesenchymal stem cells under serum-free conditions and methods for identifying multipotent mesenchymal progenitor cells are disclosed.

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PN - US2010015615 A1 20100121  
PD - 2010-01-21  
PA - SLOAN KETTERING INST CANCER [US]  
IN - BENEZRA ROBERT [US]; NAM HYUNG-SONG [US]  
TI - Identification and Isolation of Adult Stem Cells and Related Methods of Use  
AB - Inhibitor of DNA Binding-1 (Id-1) is a marker protein found in stem cells, including adult stem cells, which can be used as an indicator of the "stem-ness" of the cells. This allows Id1 expression to be used in a method for identifying cells as potential stem cells involving the step of screening the cells for expression of Id1; and a method for isolating cells as potential stem cells comprising the step of separating cells that express Id1 from cells that do not. Expression of GFAP can be used as a secondary screen to isolate rare B1 type adult neuronal stem cells.

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PN - US2010015710 A1 20100121  
PD - 2010-01-21  
IN - JUNG SUNGHOON [CA]; SEN ARINDOM [CA]; BEHIE LEO A [CA]

TI - Methods and Compositions for Isolating, Maintaining and Serially Expanding Human Mesenchymal Stem Cells  
AB - Compositions and methods for isolating and expanding human mesenchymal stem/progenitor cells through multiple passages in defined serum-free environments are provided. The culture media compositions includes a basal medium supplemented with a nutrient mixture such as Ham's F12 nutrient mixture, glutamine, buffer solutions such as sodium bicarbonate and hepes, serum albumin, a lipid mixture, insulin, transferrin, putrescine, progesterone, fetuin, hydrocortisone, ascorbic acid or its analogues such as ascorbic acid-2-phosphate, fibroblast growth factor and transforming growth factor beta, and are free of serum or other undefined serum substitutes such as platelet lysate. Methods employing these compositions and protein-coated surfaces for the isolation of mesenchymal stem/progenitor cells from human bone marrow and other tissues such as adipose tissue are also provided. Finally, methods are also provided for serially expanding these cells through multiple passages without losing mesenchymal stem cell-specific proliferative, phenotypical and differentiation characteristics.

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PN - US2010015709 A1 20100121  
PD - 2010-01-21  
PA - TRUSTEES OF THE UNIVERSITY OF  
IN - REHFELDT FLORIAN [DE]; CAI SHENSHEN [US]; DISCHER DENNIS E [US]  
TI - Regulating Stem Cell Differentiation By Controlling 2D and 3D Matrix Elasticity  
AB - Provided are methods for the selection and regulation of the mechanical properties of 2D or 3D biocompatible substrates or tissue microenvironments as a technique to regulate in vitro differentiation, cell shape and/or lineage commitment of anchorage-dependent cells, such as mesenchymal stem cells into, e.g., neurogenic-, myogenic-, and osteogenic-type cells. Substrate mechanical properties include elasticity, tension, adhesion, and myosin-based contractile mechanisms. Inhibitors can be introduced to further regulate differentiation.

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PN - US2010015103 A1 20100121  
PD - 2010-01-21  
PA - UNIV NAT TAIWAN [TW]  
IN - LIU SHING-HWA [TW]; CHAO KUO-CHING [TW]; CHAO KUO-FANG [TW]  
TI - Cell culture method and application thereof  
AB - The invention relates to a cell culture method, particularly to a co-culture method for human mesenchymal stem cells and target animal cells, in order to solve the problem that animal cells are not easy to survive alone upon culturing. The invention also provides a method for using a stem cell conditioned medium to culture animal cells. The invention also provides a method to induce the transformation of human fetal islet-like cell clusters from human stem cells and its application thereof.

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PN - EP2144639 A2 20100120  
PD - 2010-01-20  
PA - STEM CELLS SPIN SP Z O O [PL]  
IN - CEGIELSKI MAREK [PL]; BOCHNIA MAREK [PL]; CALKOSINSKI IRENEUSZ [PL]; DZIEWISZEK WOJCIECH [PL]  
TI - NEW STEM CELL LINES, THEIR APPLICATION AND CULTURE METHODS  
AB - New lines of stem cells from the growing antlers of deer (Cervidae) and the application of said cells in the reconstruction of connective tissue, preferentially bone, cartilage or adipose tissue, in humans and animals; as well as a method of culturing them and the application of tissues from growing deer antlers in the production of the MIC-1 stable stem cell line.

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PN - US2010010087 A1 20100114

PD - 2010-01-14  
IN - HONG JOHN J [US]  
TI - Methods for Inducing Stem Cell Migration and Specialization with EC-18  
AB - The present invention relates to promoting stem cell migration and specialization by administering one or more MADG compounds. The present invention further pertains to repairing or promoting the healing of injured tissue or a wound of an individual by administering a MADG compound (e.g., EC-18) to the individual, or subjecting the injured tissue/wound to a MADG compound. Another aspect of the invention relates to treating disease or conditions that benefit from stem cell therapy by administering MADG with or without exogenous stem cells.

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PN - WO2010005991 A2 20100114  
PD - 2010-01-14  
PA - UNIV TEXAS [US]; KATZ RUTH L [US]; KHANNA ABHA [US]; ZAIDI TANWEER [US]; HE WEIGONG [US]; FERNANDEZ RICARDO [US]; GORLAV IVAN [US]  
IN - KATZ RUTH L [US]; KHANNA ABHA [US]; ZAIDI TANWEER [US]; HE WEIGONG [US]; FERNANDEZ RICARDO [US]; GORLAV IVAN [US]  
TI - CIRCULATING TUMOR AND TUMOR STEM CELL DETECTION USING GENOMIC SPECIFIC PROBES  
AB - The present invention comprises a method of detecting circular tumor cells and methods of detecting, evaluating, or staging cancer in a patient, as well as a method of monitoring treatment of cancer in a patient using the claimed method. The method comprises contacting a sample with a CD45 binding agent; selecting the cells based on positive or negative CD45 staining; contacting the selected cells with a labeled nucleic acid probe, and detecting hybridized cells by fluorescence in situ hybridization; and analyzing a signal produced by the labels on the hybridized cells to detect the CTCs. In other embodiments, the method provides for directed to a method of determining the level of CTCs in a sample having blood cells from a patient by contacting a sample having blood cells from a patient, wherein the sample has not been pre-sorted into CD45-positive and CD45-negative cells.

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PN - US2010011455 A1 20100114  
PD - 2010-01-14  
PA - SINAI SCHOOL MEDICINE [US]  
IN - KELLER GORDON [CA]; IRION STEFAN [CA]; LUCHE HERVE [DE]; GADUE PAUL [US]; FEHLING HANS JOERG [DE]  
TI - STEM CELL GENE TARGETING  
AB - The invention provides a method for generating a transgenic eukaryotic cell population having a modified human Rosa26 locus, which method includes introducing a functional DNA sequence into the human Rosa26 locus of starting eukaryotic cells. Also provided are targeting vectors useful in the method, as well as a cell population and a transgenic non-human animal comprising a modified human Rosa26 locus. Finally, the invention provides an isolated DNA sequence corresponding to the human Rosa26 locus.

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PN - US2010010099 A1 20100114  
PD - 2010-01-14  
PA - TAIPEI VETERANS GENERAL HOSPIT [TW]  
IN - CHIOU SHIH-HWA [TW]; LIU TSUNG-YUN [TW]; TSAI TUNG-HU [TW]; LO JENG-FAN [TW]; YANG YI-PING [TW]; TSAI FU-TING [TW]; CHEN YU-CHIH [TW]; CHIEN CHIAN-SHIU [TW]  
TI - MEDIUM AND DEVICE FOR PROLIFERATION OF STEM CELLS AND TREATMENT OF CANCER-RELATED STEM CELL WITH RESVERATROL  
AB - The invention relates to a device for selecting stem cells with a serum free medium for amplification of stem cells. The invention also relates to a method of treating or preventing diseases caused by cancer-related stem cells. The invention further provides a method of enhancing

radiosensitivity of cancer-related stem cells comprising radiotherapy with resveratrol, and the cancer-related stem cell has stronger drug resistance. The present invention further provides that resveratrol promotes differentiation and inhibits teratoma/tumor formation in induced pluripotent stem cells (iPS) and embryonic stem cells

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PN - US2010008896 A1 20100114  
PD - 2010-01-14  
IN - ZHANG JI [US]; WANG KANKAN [CN]; PAN XIAOLING [CN]; FANG HAI [CN]  
TI - Use of Fenretinide or Bioactive Derivatives Thereof and Pharmaceutical

Compositions Comprising the Same

AB - The present invention relates to a new medical use of fenretinide or bioactive derivatives thereof, particularly to the use of fenretinide or bioactive derivatives thereof in the preparation of a medicament for eliminating or killing tumor stem cells in a subject or for treating and/or preventing a tumor disease originating from tumor stem cells in a subject. The invention further relates to a new use of fenretinide or bioactive derivatives thereof in combination with other anti-tumor agents, a pharmaceutical composition comprising said fenretinide or bioactive derivatives thereof and at least one additional anti-tumor agent, a method of screening said other anti-tumor agent, a method of eliminating or killing tumor stem cells or particularly hematologic tumor stem cells in a subject by administering said fenretinide or bioactive derivatives thereof, as well as a method of eliminating or killing tumor stem cells and tumor cells derived from tumor stem cells, particularly hematologic tumor stem cells and hematologic tumor cells derived from hematologic tumor stem cells in a subject by administering said fenretinide or bioactive derivatives thereof in combination with other anti-tumor agent(s).

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PN - EP2142642 A1 20100113  
PD - 2010-01-13  
PA - IPD THERAPEUTICS B V [NL]  
IN - SPANHOLTZ JAN [DE]  
TI - METHODS AND MEANS FOR STEM CELL PROLIFERATION AND SUBSEQUENT GENERATION AND EXPANSION OF PROGENITOR CELLS, AS WELL AS PRODUCTION OF EFFECTOR CELLS AS CLINICAL THERAPEUTICS

AB - The invention is related to methods for expanding and differentiating hemopoietic progenitor cells in a medium comprising a collection of cytokines, desulphated glycosaminoglycan and human serum. The invention further relates to a collection of cells obtainable by a method of the invention, use of the collection of cells, and a kit of parts for expanding and differentiating hemopoietic progenitor cells.

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PN - EP2142195 A1 20100113  
PD - 2010-01-13  
PA - IOVATE T & P INC [CA]  
IN - HEUER MARVIN [CA]; CLEMENT KEN [CA]; CHAUDHURI SHAN [CA]; MOLINO MICHELE [CA]; APONG PHILIP [CA]; PETERS JASON [CA]

TI - COMPOSITION FOR PROMOTING THE MAINTENANCE AND FUNCTION OF MUSCLE-SPECIFIC PROGENITOR CELLS

AB - The biological function of skeletal muscle precursor cells in the repair and growth of skeletal muscle in response to exercise is promoted by providing a supplemental composition comprising at least creatine and fucoidin to reinforce biochemical pathways involved in the maintenance of skeletal muscle satellite cells and other myogenic precursors. The composition and method of the present invention induce muscle hypertrophy via satellite cells fusion to muscle fibres and induce a substantially simultaneous replenishment of myogenic precursor cells in response to exercise in a mammal.

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PN - US2010003752 A1 20100107  
PD - 2010-01-07  
PA - FRESENIUS MEDICAL CARE DE GMBH [DE]  
IN - HERRERA SANCHEZ MARIA BEATRIZ [IT]; BUSSOLATI BENEDETTA [IT]; CAMUSSI GIOVANNI [IT]; BUTTIGLIERI STEFANO [IT]  
TI - Liver progenitor cells  
AB - The invention relates to human liver pluripotent progenitor cell lines which express hepatic cell markers such as albumin and alpha-fetoprotein and do not express some of the markers which are typical of oval stem cells. Also disclosed is a method of isolating the cell lines of the invention, methods for differentiating said cells into a plurality of different cell lineages, methods for conditional immortalization and metabolic selection of said cells, as well as the use of the cell lines of the invention for preparing a medicament with osteogenic differentiation activity or liver injury regeneration activity.

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PN - US2010003749 A1 20100107  
PD - 2010-01-07  
IN - UCHIDA NOBUKO [US]; TSUKAMOTO ANN [US]; TAMAKI STANLEY [US]; CAPELA ALEXANDRA [US]; AUSTIN TIM [US]  
TI - Enriched Pancreatic Stem Cell and Progenitor Cell, Populations, and Methods For Identifying, Isolating and Enriching For Such Populations  
AB - Enriched pancreatic stem and progenitor cell populations, and methods for identifying, isolating, and enriching for pancreatic stem cells using reagents that bind to cell surface markers are provided.

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PN - US2010003265 A1 20100107  
PD - 2010-01-07  
PA - UNIV FLORIDA [US]  
IN - SCHEFFLER BJORN [DE]; GOETZ ANTJE K [DE]; STEINDLER DENNIS A [US]  
TI - Isolation, expansion and uses of tumor stem cells  
AB - Disclosed are methods for isolating cell populations enriched in tumor stem cells (cancer stem cells), and isolated cell populations substantially enriched in cancer stem cells that are tumorigenic in vivo. Also provided are new methods of tumor diagnosis and classification and personalized methods of treatment for subjects with tumors, based on the availability of populations of cancer stem cells derived from the subject's tumor using the disclosed methods.

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PN - US2010003224 A1 20100107  
PD - 2010-01-07  
PA - GENZYME CORP [US]  
IN - BRIDGER GARY J [US]; PELUS LOUIS M [US]  
TI - Combination Therapy  
AB - Methods to mobilize progenitor and/or stem cells from the bone marrow to the bloodstream by administering a combination of at least one CXCR4 inhibitor and at least one VLA-4 inhibitor are described. The combinations may also be used to treat multiple myeloma.

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PN - US2010003754 A1 20100107  
PD - 2010-01-07  
PA - OSSACUR AG [DE]  
IN - BRIEST ARNE [DE]; SINDET-PEDERSEN STEEN [GB]  
TI - METHODS OF DIFFERENTIATING STEM CELLS

AB - A method for at least partial differentiating stem cells and/or progenitor cells to at least one tissue type includes treating the stem cells and/or the progenitor cells with extracts which include active substances and/or components for differentiating stem cells and/or progenitor cells, and cultivating and differentiating the stem cells and/or the progenitor cells.

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PN - US2010003751 A1 20100107  
PD - 2010-01-07  
PA - YEDA RES & DEV [IL]  
IN - REVEL MICHEL [IL]; CHEBATH JUDITH [IL]; IZRAEL MICHAL [IL]; KAUFMAN ROSALIA [IL]  
TI - Methods of generating glial and neuronal cells and use of same for the treatment of medical conditions of the CNS  
AB - A method of generating neural and glial cells is provided. The method comprising growing human stem cells under conditions which induce differentiation of said human stem cells into the neural and glial cells, said conditions comprising the presence of retinoic acid and an agent capable of down-regulating Bone Morphogenic Protein activity.

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PN - US2010003674 A1 20100107  
PD - 2010-01-07  
IN - COPE FREDERICK O [US]; BLUE MICHAEL S [US]  
TI - Adult stem cells, molecular signatures, and applications in the evaluation, diagnosis, and therapy of mammalian conditions  
AB - MicroRNA genes are associated with regulatory elements of living cells of all species. The perturbations of the expression of these genes and their gene products in the cell or genomic structure or chromosomal architecture of a cell provide specific signatures on the condition of the cell and even the organism. Evaluation of miR gene expression can therefore be used to indicate the presence and state of specific cell types and/or their state of differentiation relative to their surrounding tissue. The present invention relates to the identification of a stem cell-specific signature or signatures composed of protein and/or nucleic acid markers expressed by virtue of the position of a cell or cells in the time line of its/their development and the impact of the cells' environment on this signature as it relates to the cells' stem cell potential. The composition and combination of these signatures provides a means of identifying, manipulating and differentiating said adult stem cells and thus, their acquisition and utilization in research, diagnosis, and therapy of normal and pathological conditions.

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PN - WO2010001989 A1 20100107  
PD - 2010-01-07  
PA - KYOWA HAKKO KIRIN CO LTD [JP]; MIYAJI HIROMASA; UOCHI TAKAAKI; YOKOYAMA HIROMI; ONODERA HIDEYUKI  
IN - MIYAJI HIROMASA; UOCHI TAKAAKI; YOKOYAMA HIROMI; ONODERA HIDEYUKI  
TI - AGENT FOR REDUCING CANCER STEM CELL AND/OR CANCER PROGENITOR CELL, AND AGENT FOR PREVENTING RECURRENCE AND/OR METASTASIS OF CANCER  
AB - Disclosed are: an agent for reducing a cancer stem cell and/or a cancer progenitor cell, which comprises an inhibitor of a heat-shock protein-90 (Hsp90) family protein as an active ingredient; and others. The inhibitor of a Hsp90 family protein is a benzoyl compound represented by formula (I) [wherein n represents an integer of 1 to 5; R1 represents CONR7R8 (wherein R7 and R8 independently represent a hydrogen atom, a substituted or unsubstituted lower alkyl, or the like), or the like; R2 represents a substituted or unsubstituted aryl, or the like; R3 and R5 independently represent a hydrogen atom, a substituted or unsubstituted lower alkyl, or the like; R4 represents a hydrogen atom, or the like; and R6 represents a hydrogen atom, a halogen, a substituted or unsubstituted lower alkyl, or the like] or a pharmacologically acceptable salt thereof.

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PN - WO2010001951 A1 20100107  
PD - 2010-01-07  
PA - OTSUKA PHARMA CO LTD [JP]; JICHI MEDICAL UNIVERSITY [JP]; JIKEI UNIVERSITY [JP]; TOKYO WOMEN S MEDICAL UNIVERSI [JP]; KOBAYASHI EIJI [JP]; YOKOO TAKASHI [JP]; KAI KOUTARO [JP]  
IN - KOBAYASHI EIJI [JP]; YOKOO TAKASHI [JP]; KAI KOUTARO [JP]  
TI - ARTIFICIAL KIDNEY PRECURSOR AND PROCESS FOR PRODUCTION THEREOF  
AB - Disclosed is an artificial kidney precursor comprising a non-human mammalian metanephron removed out of a living body, wherein the metanephron has been subjected to freezing and thawing in vitro and contains a mammalian mesenchymal stem cell transplanted thereinto in vitro. Also disclosed is a process for producing the artificial kidney precursor.

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PN - WO2010000415 A1 20100107  
PD - 2010-01-07  
PA - UNIV EBERHARD KARLS [DE]; BUEHRING HANS-JOERG [DE]; TREML SABRINA [DE]; LAMMERS REINER [DE]  
IN - BUEHRING HANS-JOERG [DE]; TREML SABRINA [DE]; LAMMERS REINER [DE]  
TI - ISOLATION AND/OR IDENTIFICATION OF STEM CELLS HAVING ADIPOCYTIC, CHONDROCYTIC AND PANCREATIC DIFFERENTIATION POTENTIAL  
AB - The present invention relates to the use of an antibody that binds to the antigen TNAP, or functional fragments of the antibody, alone or in combination with an antibody that binds to CD56, or functional fragments of the antibody, for the isolation of stem cells having adipocytic, chondrocytic and pancreatic differentiation potential. The invention further relates to a method for isolating stem cells of said kind while using said antibodies.

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PN - WO2010000125 A1 20100107  
PD - 2010-01-07  
PA - SHANGHAI TIANSHENG BIO TECHNOL [CN]; ZHANG YONGTAI [CN]; HAO HSIAO-NAN [CN]; ZHAO JANE [CN]  
IN - ZHANG YONGTAI [CN]; HAO HSIAO-NAN [CN]; ZHAO JANE [CN]  
TI - THE KEY TECHNOLOGIES OF ISOLATION, PURIFICATION, FREEZE-DRYING, ANABIOSIS OF FETAL LIVER HEMOPOIETIC STEM CELL AND THE PREPARATION METHODS  
AB - A culture solution useful for enhancing expression of fetal liver hemopoietic stem cell CD34 and its preparation methods are provided. The culture solution comprises (wt.%): 56.5-64.7% of MEM, 29.4-30.4% of RPMI-1640, 5.88-13.0% of Hanks etc. The preparation methods of such culture solution comprise: (a) preparing the basic culture solution; (b) taking MEM, RPMI-1640, Hanks according to the proportion and adding to the basic culture solution, stirring and dissolving; (c) implanting purified fetal liver mesenchymal cells to culture flasks, culturing, washing, and mixing; continuously culturing and collecting all supernatant fluid, filtering and centrifuging the supernatant fluid to remove all the cell debris and insoluble substances to obtain conditioned culture solution; (d) mixing the conditioned culture solution with MEM, regulating pH value of the mixed culture solution to 7.40-7.45 with sodium bicarbonate, filtering to obtain the culture solution. The culture solution enhances expression of fetal liver hemopoietic stem cell CD34, and improves markable number of stem cell. It is safe and reliable, and meets the clinical application.

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PN - EP2139813 A2 20100106  
PD - 2010-01-06  
PA - UNIV COLUMBIA [US]; RES FOUNDATION OF THE STATE UN [US]  
IN - COHEN IRA S [US]; ROSEN AMY B [US]; BRINK PETER R [US]; GAUDETTE GLENN [US]; ROSEN MICHAEL R [US]; ROBINSON RICHARD B [US]

TI - QUANTUM DOT LABELED STEM CELLS FOR USE IN PROVIDING PACEMAKER FUNCTION

AB - The present invention provides methods and compositions relating to the labeling of target cells with nanometer scale fluorescent semiconductors referred to as quantum dots (QDs). Specifically, a delivery system is disclosed based on the use of negatively charged QDs for delivery of a tracking fluorescent signal into the cytosol of target cells via a passive endocytosis-mediated delivery process. In a specific embodiment of the invention the target cell is a stem cell, preferably a mesenchymal stem cell (MSC). Such labeled MSCs provide a means for tracking the distribution and fate of MSCs that have been genetically engineered to express, for example, a hyperpolarization-activated cyclic nucleotide-gated ("HCN") channel and administered to a subject to create a biological pacemaker. The invention is based on the discovery that MSCs can be tracked invitro for up to at least 6 weeks. Additionally, QDs delivered in vivo can be tracked for up to at least 8 weeks, thereby permitting for the first time, the complete 3-D reconstruction of the locations of all MSCs following administration into a host.

### **EMBRYONIC STEM CELLS -35 Documents**

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PN - US2010047843 A1 20100225

PD - 2010-02-25

IN - RAABE TOBIAS D [US]

TI - COMPOSITIONS AND METHODS FOR ENHANCING THE GROWTH OF MOUSE EMBRYONIC STEM CELLS

AB - Compositions and methods are provided which improve the growth rate, self-renewal potential and capacity of germ line transmission of mouse embryonic stem cells.

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PN - US2010047906 A1 20100225

PD - 2010-02-25

PA - STEMPEUTICS RES PRIVATE LTD [IN]

IN - TOTEY SATISH [IN]; KULKARNI KUMAR UDAY [IN]; SAXENA SHOBHIT [IN]

TI - GERM LINEAGE DERIVED FEEDER CELLS AND METHODS THEREOF

AB - The present disclosure relates to human germ layer derived feeder cells (GLDF cells) and method of generation thereof. Further, it relates to a method for culturing and propagating human embryonic stem cells (hESCs) in a substantially undifferentiated state for several passages on the human GLDF cells. In particular, the present disclosure relates to human GLDF cells which are capable of supporting proliferation of hESCs in a substantially undifferentiated and pluripotent state for several passages.

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PN - US2010047842 A1 20100225

PD - 2010-02-25

PA - CELLARTIS AB [SE]

IN - STREHL RAIMUND [SE]; ADLER SARAH [DE]

TI - NOVEL TOXICITY ASSAY BASED ON HUMAN BLASTOCYST-DERIVED STEM CELLS AND PROGENITOR CELLS

AB - An in vitro toxicity assay based on human blastocyst-derived stem cells for the detection of toxicity in the human species is provided, which enables novel detection of in vitro human toxicity for a substance and/or more efficiently detects human toxicity compared to non-human assays. Furthermore, the detection of toxicity for substances is enabled, which is known to display inter-species differences and the toxic effect was not detectable by toxicological tests in mice.

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PN - EP2155859 A1 20100224

PD - 2010-02-24  
PA - RAJALA KRISTIINA [FI]; SUURONEN MARJO-RIITTA [FI]; HOVATTA OUTI [FI]; SKOTTMAN HELI [FI]  
IN - RAJALA KRISTIINA [FI]; SUURONEN MARJO-RIITTA [FI]; HOVATTA OUTI [FI]; SKOTTMAN HELI [FI]  
TI - FORMULATIONS AND METHODS FOR CULTURING EMBRYONIC STEM CELLS  
AB - The present invention relates to a serum replacement formulation and to a culture medium suitable for the maintenance and derivation of embryonic stem cells.

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PN - EP2155861 A1 20100224  
PD - 2010-02-24  
PA - INTERNAT STEM CELL CORP [US]  
IN - REVAZOVA ELENA S [US]; TUROVETS NIKOLAY A [US]; KUZMICHEV LEONID N [RU]; JANUS JEFFREY D [US]  
TI - PATIENT-SPECIFIC STEM CELL LINES DERIVED FROM HUMAN PARTHENOGENETIC BLASTOCYSTS  
AB - Methods are disclosed for generating HLA homozygous parthenogenetic human stem cell (hpSC-Hhom) lines from both HLA homozygous and HLA heterozygous donors. These hpSC-Hhom lines demonstrate typical human embryonic stem cell morphology, expressing appropriate stem cell markers and possessing high levels of alkaline phosphatase and telomerase activity. Additionally, injection of these cell lines into immunodeficient animals leads to teratoma formation. Furthermore, in the case of HLA heterozygous donors, the hpSC-Hhom lines inherit the haplotype from only one of the donor's parents. SNP data analysis suggests that hpSC-Hhom lines derived from HLA heterozygous oocyte donors are homozygous throughout the genome as assessed by single-nucleotide polymorphism (SNP) analysis. The protocol as disclosed minimizes the use of animal-derived components, which makes the stem cells more practical for clinical application.

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PN - US2010041137 A1 20100218  
PD - 2010-02-18  
PA - UNIV EDINGBURGH [GB]  
IN - SMITH AUSTIN GERARD [GB]; YING QI-LONG [US]  
TI - CULTURE MEDIUM CONTAINING KINASE INHIBITORS, AND USES THEREOF  
AB - Pluripotent cells are maintained in a self-renewing state in serum-free culture medium comprising a MEK inhibitor, a GSK3 inhibitor and, optionally, an antagonist of an FGF receptor. Pluripotent cells are also maintained in a self-renewing state in serum-free culture medium comprising a MEK inhibitor and an antagonist of an FGF receptor.

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PN - WO2010018297 A1 20100218  
PD - 2010-02-18  
PA - CONSEJO SUPERIOR INVESTIGACION [ES]; UNIV JAEN [ES]; UNIV EXTREMADURA [ES]; HERNANDEZ SANCHEZ CATALINA [ES]; BARTULOS ENCINAS OSCAR [ES]; DE PABLO DAVILA FLORA [ES]; JIMENEZ ARANEGA AMELIA [ES]  
IN - HERNANDEZ SANCHEZ CATALINA [ES]; BARTULOS ENCINAS OSCAR [ES]; DE PABLO DAVILA FLORA [ES]; JIMENEZ ARANEGA AMELIA [ES]  
TI - USE OF CATECHOLAMINE FOR DIFFERENTIATION OF STEM CELLS INTO CARDIOMYOCYTES  
AB - The present invention relates to the use of catecholamine for differentiation of stem cells into cardiomyocytes and their maturation and a method for obtainment and maturation of these cardiac cells. In addition catecholamine may be used for the preparation of a medicament destined for treatment of cardiac damage.

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PN - GB2462569 A 20100217  
PD - 2010-02-17  
PA - UNIV OREGON HEALTH & SCIENCE [US]  
IN - MITALIPOV SHOUKHRAT [US]; WOLF DON [US]; BYRNE JAMES [US]  
TI - Primate stem cells produced by somatic cell nuclear transfer  
AB - Purified totipotent stem cells and pluripotent stems cells derived by somatic cell nuclear transfer are disclosed herein, as well as cell lines, multipotent cells and differentiated cells produced from these stem cells. The stem cells are produced from an enucleated host cell from a first donor and nuclear genetic material from a somatic cell of a second donor. Methods for making and using such compositions of such stem cells are also provided.

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PN - EP2154242 A1 20100217  
PD - 2010-02-17  
PA - FUKUDA KEIICHI [JP]  
IN - YUASA SHINSUKE [JP]; SHIMOJI KENICHIRO [JP]; FUKUDA KEIICHI [JP]  
TI - METHOD OF INDUCING DIFFERENTIATION INTO MYOCARDIAL CELLS USING G-CSF  
AB - A method for inducing differentiation of ES cells into cardiomyocytes, which comprises contacting the ES cells with an agonist for G-CSF receptor.

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PN - WO2010017518 A2 20100211  
PD - 2010-02-11  
PA - WHITEHEAD BIOMEDICAL INST [US]; JAENISCH RUDOLPH [US]; YOUNG RICHARD A [US]; MARSON ALEXANDER [US]; LEVINE STUART [US]  
IN - JAENISCH RUDOLPH [US]; YOUNG RICHARD A [US]; MARSON ALEXANDER [US]; LEVINE STUART [US]  
TI - CONNECTING MICRORNA GENES TO THE CORE TRANSCRIPTIONAL REGULATORY CIRCUITRY OF EMBRYONIC STEM CELLS  
AB - The present invention provides, among other things, promoters for mouse and human microRNA genes and methods of use thereof.

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PN - US2010034785 A1 20100211  
PD - 2010-02-11  
IN - PEDERSEN ROGER [GB]; VALLIER LUDOVIC [GB]  
TI - Differentiation of Pluripotent Cells into Primary Germ Layer Progenitors  
AB - This invention relates to the culture of pluripotent cells in a fully humanised chemically defined medium. Cells may be cultured over a prolonged period of time without losing their pluripotent status or may be controllably induced to differentiate into progenitor cells of the three primary germ layers by the addition of differentiation factors, for example differentiation factors which modulate one or more of the Activin/Nodal, FGF, Wnt or BMP signalling pathways.

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PN - US2010034779 A1 20100211  
PD - 2010-02-11  
IN - GUAN KAOMEI [DE]; HASENFUSS GERD [DE]; NAYERNIA KARIM [DE]; ENGEL WOLFGANG [DE]  
TI - COMPOSITIONS AND METHODS FOR PRODUCING PLURIPOTENT CELLS FROM ADULT TESTIS  
AB - The present application describes a method of producing embryonic stem cell (ESC)-like cells derived from adult mammalian testis. Furthermore, the application describes to a method of producing embryoid bodies from ESC-like cells as well as a method of producing a tissue and/or a differentiated cell from the ESC-like cell or the embryoid body. In addition, an ESC-like cell, an

embryoid body and/or differentiated cell and/or tissue obtainable by said methods and pharmaceutical preparations containing the same are provided. Finally, the application describes to the use of these products for medical treatments and the preparation of pharmaceutical compositions for medical treatments.

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PN - US2010035341 A1 20100211  
PD - 2010-02-11  
PA - TECHNION RES & DEV FOUNDATION [IL]  
IN - ITSKOVITZ-ELDOR JOSEPH [IL]; COHEN SHAHAR [IL]  
TI - Human Embryonic Stem Cell-Derived Connective Tissue Progenitors For Tissue Engineering  
AB - Methods of generating and expanding proliferative, multipotent connective tissue progenitor cells from embryonic stem cells and embryoid bodies are provided. Also provided are methods of generating functional tendon grafts in vitro and bone, cartilage and connective tissues in vivo using the isolated cell preparation of connective tissue progenitor cells.

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PN - WO2010016253 A1 20100211  
PD - 2010-02-11  
PA - UNIV KEIO [JP]; UNIV KYOTO [JP]; OKANO HIDEYUKI [JP]; TSUJI OSAHIKO [JP]; NAKAMURA MASAYA [JP]; YAMANAKA SHINYA [JP]; MIURA KYOKO [JP]  
IN - OKANO HIDEYUKI [JP]; TSUJI OSAHIKO [JP]; NAKAMURA MASAYA [JP]; YAMANAKA SHINYA [JP]; MIURA KYOKO [JP]  
TI - METHOD FOR SELECTING SECONDARY NEUROSPHERE DERIVED FROM DIFFERENTIATED CELL-DERIVED PLURIPOTENT STEM CELL, CLONE SELECTED BY THE METHOD AND USE OF THE CLONE  
AB - In order to provide a therapeutic agent for nerve injury which contains iPS-derived neural stem cells and has low or no risk of side effects, as well as a method for treating a nerve injury using the iPS cells, by efficiently establishing in vivo the iPS-derived neural stem having low or no risk of tumor formation, neurospheres are formed following formation of embryoid bodies from the iPS cells, and a clone whose ratio of cells in which the promoter of Nanog gene is activated is 0.01% or less is selected, and the clone is administered to a patient suffering from the nerve injury.

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PN - EP2150275 A1 20100210  
PD - 2010-02-10  
PA - VIVALIS [FR]  
IN - GUEHENNEUX FABIENNE [FR]; MOREAU KARINE [FR]; ESNULT MAGALI [FR]; MEHTALI MAJID [FR]  
TI - DUCK EMBRYONIC DERIVED STEM CELL LINES FOR THE PRODUCTION OF VIRAL VACCINES  
AB - The present invention relates to the development and manufacturing of viral vaccines. In particular, the invention relates to the field of industrial production of viral vectors and vaccines, more in particular to the use of avian embryonic stem cells, preferably the EBx<sup>TM</sup> cell line derived from duck embryonic stem cells, for the production of viral vectors and viruses. The invention is particularly useful for the industrial production of viral vaccines to prevent viral infection of humans and animals.

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PN - US2010028931 A1 20100204  
PD - 2010-02-04  
PA - HARVARD COLLEGE [US]  
IN - EGGAN KEVIN [US]; DIGIORGIO FRANCESCO PAOLO [IT]  
TI - Neurodegenerative diseases and methods of modeling

AB - Disclosed are embryonic stem cells and motor neurons derived from mice carrying transgenic alleles of the normal or mutant human SOD1 gene. Also disclosed are in vitro systems employing such SOD1 transgenic motor neurons for the study of neural degenerative disease.

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PN - US2010028307 A1 20100204  
PD - 2010-02-04  
IN - O'NEIL JOHN J [US]  
TI - PLURIPOTENT STEM CELL DIFFERENTIATION  
AB - The present invention relates to the field of pluripotent stem cell differentiation. The present invention provides methods for the differentiation of pluripotent stem cells on a human feeder cell layer. In particular, the present invention provides an improved method for the differentiation of pluripotent stem cells into pancreatic endocrine cells using a human feeder cell layer.

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PN - US2010021999 A1 20100128  
PD - 2010-01-28  
PA - TECHNION RES & DEV [IL]  
IN - AMIT MICHAL [IL]; ITSKOVITZ-ELDOR JOSEPH [IL]  
TI - Methods of preparing feeder cells-free, xeno-free human embryonic stem cells and stem cell cultures prepared using same  
AB - The present invention is of methods of establishing and propagating human embryonic stem cell lines using feeder cells-free, xeno-free culture systems and stem cells which are capable of being maintained in an undifferentiated, pluripotent and proliferative state in culture which is free of xeno contaminants and feeder cells.

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PN - US2010021443 A1 20100128  
PD - 2010-01-28  
PA - UNIV TEXAS [US]  
IN - WETSEL RICK A [US]; WANG DACHUN [US]  
TI - METHOD OF PREPARING LUNG ALVEOLAR EPITHELIAL TYPE II CELLS DERIVED FROM EMBRYONIC STEM CELLS  
AB - A method of preparing a population of in vitro cultured cells of alveolar epithelial type II (ATII) cell lineage derived from at least one embryonic stem cell is disclosed which comprises (a) culturing said at least one embryonic stem cell in vitro in a medium comprising Matrigel(R), to produce differentiated cells without formation of an embryonic body, wherein at least some of the differentiated cells are of ATII cell phenotype; (b) identifying the differentiated cells of ATII cell phenotype by detecting expression of at least one biomarker of ATII cells; (c) isolating the differentiated cells having ATII cell phenotype; and (d) cloning the isolated cells to produce a population of cells having ATII cell phenotype. The resulting cells are preferably >99% pure ATII phenotype lineage and are potentially useful therapeutically for treating lung injury and disease.

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PN - WO2010008486 A2 20100121  
PD - 2010-01-21  
PA - PARKINSONS INST [US]; UNIV LELAND STANFORD JUNIOR [US]; REIJO PERA RENEE ANN [US]; LANGSTON J WILLIAM [US]; SCHULE BIRGITT [US]; PALMER THEODORE D [US]; BYERS BLAKE [US]; NGUYEN HA NAM [US]; BYRNE JAMES ANTHONY [US]; CORD BRANDEN JOHN [US]  
IN - REIJO PERA RENEE ANN [US]; LANGSTON J WILLIAM [US]; SCHULE BIRGITT [US]; PALMER THEODORE D [US]; BYERS BLAKE [US]; NGUYEN HA NAM [US]; BYRNE JAMES ANTHONY [US]; CORD BRANDEN JOHN [US]  
TI - PLURIPOTENT CELL LINES AND METHODS OF USE THEREOF

AB - Methods of generating cell lines with a sequence variation or copy number variation of a gene of interest, methods of use thereof, and cell lines with a sequence variation or copy number variation of a gene of interest are provided.

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PN - WO2010008100 A1 20100121  
PD - 2010-01-21  
PA - UNIV NAGOYA NAT UNIV CORP [JP]; ISOBE KEN-ICHI [JP]; SAKURAI HIDETOSHI [JP]  
IN - ISOBE KEN-ICHI [JP]; SAKURAI HIDETOSHI [JP]  
TI - METHOD FOR INDUCTION OF SKELETAL MUSCLE CELL OR OSTEOCYTE  
AB - Disclosed is a method for inducing the differentiation of a pluripotent stem cell into an osteocyte, a chondrocyte or a skeletal muscle cell in a serum-free culture medium. Specifically disclosed are: a method for culturing a pluripotent stem cell derived from a mammal in a BMP4-containing serum-free culture medium to induce a PDGFRa-positive mesodermal progenitor cell and cause the differentiation of the PDGFRa-positive mesodermal progenitor cell into an osteocyte or a chondrocyte; and a method for producing a skeletal muscle cell, which comprises culturing a pluripotent stem cell in a BMP4-containing serum-free culture medium, and further culturing the pluripotent stem cell in a serum-free culture medium in the absence of BMP4 and in the presence of LiCl to induce the differentiation of the pluripotent stem cell into a PDGFRa-positive skeletal muscle progenitor cell.

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PN - WO2010007031 A2 20100121  
PD - 2010-01-21  
PA - NOVARTIS AG [CH]; TRAN THANH [US]; BURCIN MARK [US]  
IN - TRAN THANH [US]; BURCIN MARK [US]  
TI - METHODS FOR IMPROVING CARDIAC DIFFERENTIATION OF HUMAN EMBRYONIC STEM CELLS  
AB - Described herein are methods for inducing differentiation of stem cells into cardiomyocytes or other defined differentiated lineages by contacting the stem cells with Wnt3a or a functional fragment thereof. Also described herein are methods for treating patients with myocardial damage, e.g., after myocardial infarction or heart failure.

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PN - WO2010002846 A1 20100107  
PD - 2010-01-07  
PA - CENTOCOR ORTHO BIOTECH INC [US]; LIU JIA JIAN [US]; DAVIS JANET [US]; PARMENTER CHRISTINE [US]; BONNET PASALE [BE]  
IN - LIU JIA JIAN [US]; DAVIS JANET [US]; PARMENTER CHRISTINE [US]; BONNET PASALE [BE]  
TI - DIFFERENTIATION OF PLURIPOTENT STEM CELLS  
AB - The present invention is directed to methods to differentiate pluripotent stem cells. In particular, the present invention is directed to methods and compositions to differentiate pluripotent stem cells into cells expressing markers characteristic of the definitive endoderm lineage comprising culturing the pluripotent stem cells in medium comprising a sufficient amount of GDF-8 to cause the differentiation of the pluripotent stem cells into cells expressing markers characteristic of the definitive endoderm lineage.

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PN - US2010017899 A1 20100121  
PD - 2010-01-21  
PA - ADELAIDE RES & INNOVATION PTY [AU]  
IN - VASSILIEV IVAN [AU]; NOTTLE MARK BRENTON [AU]

TI - METHOD FOR THE ISOLATION OF PLURIPOTENT CELLS FROM A PRE-IMPLANTATION EMBRYO IN A CULTURE MEDIUM FREE FROM ANIMAL SERUM

AB - The present invention provides a method of isolating a pluripotent cell from a pre-implantation embryo without isolation of the pluripotent cells from other cells, the method including propagating a whole pre-implantation embryo including one or more pluripotent cells, embedded in a feeder cell layer and cultivated in a medium substantially free of serum, and isolating a pluripotent cell from the one or more pluripotent cells. The present invention also provides pluripotent cells generated by the method and uses thereof.

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PN - US2010015199 A1 20100121

PD - 2010-01-21

IN - YAMAKI MARIKO [JP]; OZAWA HIDEHIRO [JP]; EBINA SATOSHI [JP]; ASASHIMA MAKOTO [JP]

TI - METHOD FOR SUPPRESSING GENERATION OF A TERATOMA

AB - The present invention provides a method for suppressing generation of a teratoma of an undifferentiated cell, preferably an ES cell. A biological material obtainable by the method and a therapeutic method for transplanting the biological material into a subject are also provided. An undifferentiated cell, in particular, preferably an ES cell is cultured to produce an increased embryoid body-like and the embryoid body-like is cultured for at least one week on, and adhered to, a three-dimensional solid type-I collagen carrier or an analogue thereof. Furthermore, a biological material is obtained thereby and the biological material is transplanted into a mammalian subject.

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PN - US2010015100 A1 20100121

PD - 2010-01-21

IN - XU JEAN [US]

TI - DIFFERENTIATION OF HUMAN EMBRYONIC STEM CELLS

AB - The present invention provides methods to promote the differentiation of pluripotent stem cells. In particular, the present invention provides an improved method for the formation of pancreatic endoderm, pancreatic hormone expressing cells and pancreatic hormone secreting cells. The present invention also provides methods to promote the differentiation of pluripotent stem cells without the use of a feeder cell layer.

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PN - US2010009442 A1 20100114

PD - 2010-01-14

IN - SASAI YOSHIKI [JP]; WATANABE KIICHI [JP]

TI - Stem Cell Culture Medium and Method

AB - Stem cells such as embryonic stem cells (ES cells), including human ES cells, are cultured in a medium comprising a ROCK inhibitor, and a stem cell culture medium, optionally serum free, comprises a ROCK inhibitor.

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PN - US2010009858 A1 20100114

PD - 2010-01-14

PA - CHUNDSSELL MEDICALS AB [SE]

IN - LI CHUNDE [SE]

TI - EMBRYONIC STEM CELL MARKERS FOR CANCER DIAGNOSIS AND PROGNOSIS

AB - A method of predicting the development of a cancer in a patient, comprises procuring a sample of tumour tissue from the patient, determining the expression pattern of embryonic stem cell genes in the tissue, comparing the expression pattern with the corresponding expression pattern of embryonic stem cell genes in tumour tissue of reference patients with known disease histories. Also disclosed are microarrays and DNA/RNA probes for use in the method.

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PN - US2010009399 A1 20100114  
PD - 2010-01-14  
PA - CELLARTIS AB [SE]  
IN - SARTIPY PETER [SE]; AAKESSON KAROLINA [SE]; AMEEN CAROLINE [SE]  
TI - Novel population of multipotent cardiac precursor cells derived from human blastocysts derived stem cells  
AB - A novel population of multipotent cardiac precursor (MCP) cells derived from human blastocysts derived stem cells is disclosed, methods for the preparation thereof and use of the cells for in vitro testing. Basement cells derived from hBS cells are also disclosed and method for the preparation of MCP cells from basement cells. The MCP cells have the following characteristics i) at least 1% of the cells exhibit no antigen expression of one or more markers for undifferentiated cell, the marker being selected from the group consisting of SSEA-3, SSEA-4, TRA-1-60, TRA-1-81 and Oct-4, ii) at least 1% of the cells exhibit no protein expression of one or more of a neural marker including nestin or GFAP iii) at least 1% of the cells exhibit protein and/or gene expression of one or more of a mesodermal marker including brachyury, vimentin or desmin iv) at least 1% of the cells exhibit protein and/or gene expression of Flk-1 (KDR). Furthermore, the MCP cells have a characteristic morphology. They grow as clusters of small, round and phase-bright cells; individual cells are 5-20 µm in diameter and each cluster is composed of 2-500 cells. They form clusters of round or elongated shape, that appear as loosely adherent cell clumps that as illustrated in FIG. 2 panel a, b and c. Furthermore, they have a relatively high nucleus-to-cytoplasm ratio, e.g. 1:2-1:64 of the total volume of the cell and/or appear as balloons on a string, as illustrated in FIG. 18, schematic sketch. Moreover, the MCP cells are non-contracting.

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PN - WO2010004096 A2 20100114  
PD - 2010-01-14  
PA - SUOMEN PUNAINEN RISTI VERIPALV [FI]; GLYKOS FINLAND OY [FI]; IMPOLA ULLA [FI]; TIITTANEN MINNA [FI]; MIKKOLA MILLA [FI]; PARTANEN JUKKA [FI]; NATUNEN JARI [FI]; SATOMAA TERO [FI]; SAARINEN JUHANI [FI]  
IN - IMPOLA ULLA [FI]; TIITTANEN MINNA [FI]; MIKKOLA MILLA [FI]; PARTANEN JUKKA [FI]; NATUNEN JARI [FI]; SATOMAA TERO [FI]; SAARINEN JUHANI [FI]  
TI - CULTURE OF CELLS  
AB - The invention relates to a method for culturing human embryonic stem cells (hESCs) and/or induced pluripotent stem (iPS) cells on a lectin. The invention relates also to the use of a lectin in a method for culturing human embryonic stem cells (hESCs) and/or induced pluripotent stem (iPS) cells and a culture medium composition containing a lectin attached on the culturing plates.

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PN - EP2142640 A2 20100113  
PD - 2010-01-13  
PA - REGENERON PHARMA [US]  
IN - WEI YI [US]; MACDONALD LYNN [US]; LIN HSIN CHIEH [US]  
TI - IDENTIFYING GERMLINE COMPETENT EMBRYONIC STEM CELLS  
AB - Methods and compositions for selecting ES cells that are germline competent are provided, including gene expression arrays of from one to about 300 or more genes. Selecting ES cells that are competent for germline transmission by comparing the expression of one or more genes between an ES cell that is competent at germline transmission with an ES cell of interest is described. Selecting ES cells likely to be competent at germline transmission, based on their level of expression of gtl2, is also described.

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PN - EP2142641 A2 20100113  
PD - 2010-01-13

PA - HADASIT MED RES SERVICE [IL]  
IN - REUBINOFF BENJAMIN [IL]; STEINER DEBORA [IL]  
TI - UNDIFFERENTIATED STEM CELL CULTURE SYSTEMS  
AB - The present disclosure provides methods for maintaining and propagating undifferentiated pluripotent stem cells (SC) in suspension. The methods comprise culturing such SC in a non-adherent culture dish under conditions comprising a basic serum free medium and one or more of a basic medium, a serum replacement, an extra cellular matrix component and a factor supporting expansion of said SC. A specific and preferred culture condition comprise supplementing Neurobasal medium with KO serum replacement (KOSR). These conditions allowed for large scale and long term propagation of undifferentiated pluripotent SC. The culture system comprising suspended undifferentiated pluripotent SC were found to have many applications including in methods for directed as well as spontaneous differentiation of the SC into somatic cells. Also disclosed herein is a method of deriving SC, preferably human embryonic SC from human embryos via the formation of cell clusters.

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PN - EP2143791 A1 20100113  
PD - 2010-01-13  
PA - UNIV HIROSHIMA [JP]; HIROSHIMA IND PROMOTION ORG [JP]  
IN - HORIUCHI HIROYUKI [JP]; MATSUDA HARUO [JP]; FURUSAWA SHUICHI [JP]; NAKANO MIKIHARU [JP]; YAMASHITA YUSUKE [JP]; NISHIMOTO MASAKI [JP]  
TI - CHICKEN EMBRYONIC STEM CELL AND METHOD FOR EVALUATION THEREOF  
AB - A chicken embryonic stem cell is established, which stably has pluripotency and an ability of being differentiated into a germ cell. For evaluating on whether or not the chicken embryonic stem cell can be applied to genetic modification technique, detection is made on a protein which serves as an indicator of the ability of being differentiated into a germ cell. This provides (i) a chicken embryonic stem cell applicable to genetic modification technique and (ii) a method for evaluation of the chicken embryonic stem cell.

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PN - WO2010002785 A1 20100107  
PD - 2010-01-07  
PA - CENTOCOR ORTHO BIOTECH INC [US]; DAVIS JANET [US]; LIU JIA JIAN [US]; RAGHUNATHAN GOPALAN [US]; HUNTER MICHAEL JOSEPH [US]; PARDINAS JOSE RAMON [US]; CONNOR JUDITH ANN [US]; SWANSON RONALD VERNON [US]; CHI ELLEN [US]  
IN - DAVIS JANET [US]; LIU JIA JIAN [US]; RAGHUNATHAN GOPALAN [US]; HUNTER MICHAEL JOSEPH [US]; PARDINAS JOSE RAMON [US]; CONNOR JUDITH ANN [US]; SWANSON RONALD VERNON [US]; CHI ELLEN [US]  
TI - DIFFERENTIATION OF PLURIPOTENT STEM CELLS  
AB - The present invention is directed to methods to differentiate pluripotent stem cells. In particular, the present invention is directed to methods and compositions to differentiate pluripotent stem cells into cells expressing markers characteristic of the definitive endoderm lineage. The present invention also provides methods to generate and purify agents capable of differentiating pluripotent stem cells into cells expressing markers characteristic of the definitive endoderm lineage.

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PN - EP2139991 A1 20100106  
PD - 2010-01-06  
PA - BUCK INST FOR AGE RES [US]  
IN - ZENG XIANMIN [US]  
TI - TARGETED NEURONAL AND GLIAL HUMAN EMBRYONIC STEM CELL LINE  
AB - The present invention is related to human stem cells lines comprising a targeted gene construct, and in particular to human embryonic stem cells lines (hESC) comprising a reporter gene inserted into the Olig2 locus via homologous recombination. The hESC line remains pluripotent and maintains a normal karyotype, and allows for visualization of Olig2 expression by fluorescence microscopy and sorting by FACS. Since Olig2 is important in the development of motor neurons and

oligodendrocytes, the present invention provides a means to study differentiation of stem cells into motor neurons and oligodendrocytes, as well as the study of intrinsic and extrinsic factors that affect such differentiation. The hESCs of the present invention also provide a means to study and determine optimal factors and conditions for cell differentiation.

### **INDUCED PLURIPOTENT CELLS/ DEDIFFERENTIATION OF CELLS- 17 Documents**

#### © EPODOC / EPO

PN - WO2010022395 A2 20100225  
PD - 2010-02-25  
PA - HARVARD COLLEGE [US]; MELTON DOUGLAS A [US]; ZHOU QIAO [US]  
IN - MELTON DOUGLAS A [US]; ZHOU QIAO [US]  
TI - METHODS OF REPROGRAMMING CELLS  
AB - The present invention provides methods of reprogramming cells, for example, directly reprogramming a somatic cell of a first cell type into a somatic cell of a second cell type, are described herein. In particular, the present invention generally relates to methods for reprogramming a cell of an endoderm origin to a cell having pancreatic ss-cell characteristics. The present invention also relates to an isolated population comprising reprogrammed cells, compositions and their use in the treatment of diabetes mellitus. In particular, the present invention relates to reprogramming a cell of an endoderm origin to a cell having pancreatic ss-cell characteristics by increasing the protein expression of at least one transcription factor selected from Pdx1, Ngn3 or MafA in the cell of endoderm origin to reprogram the cell of an endoderm cell to a cell which exhibits at least one or at least two characteristics of an endogenous pancreatic ss-cell.

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PN - WO2010022194 A2 20100225  
PD - 2010-02-25  
PA - VIRXSYS CORP [US]; D COSTA JENICE G [US]; HUMEAU LAURENT M [US]; MANSFIELD GARY STEPHEN [US]; PUTTARAJU MADAI AH [US]; KOROKHOV NIKOLAY [US]; MCGARRITY GERARD J [US]  
IN - D COSTA JENICE G [US]; HUMEAU LAURENT M [US]; MANSFIELD GARY STEPHEN [US]; PUTTARAJU MADAI AH [US]; KOROKHOV NIKOLAY [US]; MCGARRITY GERARD J [US]  
TI - COMPOSITIONS AND METHODS FOR GENERATION OF PLURIPOTENT STEM CELLS  
AB - The present invention describes the use of pre-trans-splicing molecules (PTMs) to reprogram human normal and diseased somatic cells into pluripotent stem cells using spliceosome-mediated RNA trans-splicing. More specifically, the present invention describes the use of the SMaRT technology to repair or reprogram the newly induced diseased pluripotent stem cells.

#### © EPODOC / EPO

PN - WO2010021390 A1 20100225  
PD - 2010-02-25  
PA - UNIV TOKYO [JP]; NAKAUCHI HIROMITSU [JP]; KOBAYASHI TOSHIHIRO [JP]; YAMAGUCHI TOMOYUKI [JP]; HAMANAKA SANAE [JP]  
IN - NAKAUCHI HIROMITSU [JP]; KOBAYASHI TOSHIHIRO [JP]; YAMAGUCHI TOMOYUKI [JP]; HAMANAKA SANAE [JP]  
TI - ORGAN REGENERATION METHOD UTILIZING iPS CELL AND BLASTOCYST COMPLEMENTATION  
AB - In a blastocyst complementation method, it is found that the regeneration of an organ can be achieved by utilizing a fact that the defect in an organ such as pancreas can be complemented by injecting an induced pluripotent stem cell (an iPS cell) into a developed blastocyst. Disclosed is a method, in a living body of a non-human mammal having such an abnormality that a desired organ cannot be developed in the development stage, for producing an organ that is the same as the

desired organ and is derived from a mammal different from the non-human mammal by using an iPS cell.

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PN - WO2010019569 A1 20100218  
PD - 2010-02-18  
PA - CELLULAR DYNAMICS INTERNATIONAL [US]; MACK AMANDA [US]  
IN - MACK AMANDA [US]  
TI - METHODS FOR THE PRODUCTION OF IPS CELLS  
AB - Methods and composition of induction of pluripotent stem cells are disclosed. For example, in certain aspects methods for generating induced pluripotent stem cells using reporter genes are described. Furthermore, the invention provides novel reprogramming vectors employing reporter genes.

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PN - WO2010017562 A2 20100211  
PD - 2010-02-11  
PA - MAYO FOUNDATION [US]; IKEDA YASUHIRO [US]; TERZIC ANDRE [US]; NELSON TIMOTHY J [US]; MAEL AMBER A [US]; FERNANDEZ ALMUDENA J MARTINEZ [US]; YAMADA SATSUKI [US]  
IN - IKEDA YASUHIRO [US]; TERZIC ANDRE [US]; NELSON TIMOTHY J [US]; MAEL AMBER A [US]; FERNANDEZ ALMUDENA J MARTINEZ [US]; YAMADA SATSUKI [US]  
TI - INDUCED PLURIPOTENT STEM CELLS  
AB - This document provides methods and materials related to induced pluripotent stem cells. For example, induced pluripotent stem cells, compositions containing induced pluripotent stem cells, methods for obtaining induced pluripotent stem cells, and methods for using induced pluripotent stem cells are provided. In addition, methods and materials for using induced pluripotent stem cells to repair tissue (e.g., cardiovascular tissue) in vivo as well as methods and materials for using induced pluripotent stem cells to assess their therapeutic potential in appropriate animal models are provided.

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PN - WO2010014675 A1 20100204  
PD - 2010-02-04  
PA - BIODONTOS LLC [US]; GARY RACEY [US]; BOWERMASTER RUSSELL [US]; BOB THOMAS [US]  
IN - GARY RACEY [US]; BOWERMASTER RUSSELL [US]; BOB THOMAS [US]  
TI - NEURAL STEM CELL ISOLATES FROM THE DENTAL PAPILLARY ANNULUS OF DEVELOPING TEETH  
AB - Multipotent cranial neural crest stem cells and non-lineage committed precursor cells are described. The neural crest cells are capable of self-renewal, of being cultured into clonal spheroids including neurospheres, and of differentiation into neurons or other neuroepithelial cells. The non-lineage committed precursors are capable of differentiation into neurons, astrocytes and oligodendrocytes, and are capable of de-differentiation into induced pluripotent stem cells (iPSCs). Methods of obtaining, generating, isolating and culturing cranial neural crest stem cells and non-lineage committed precursor cells are also disclosed, including methods of providing a substantially pure in vitro cell culture consisting essentially of stem cells capable of multipotent differentiation and de-differentiation to a pluripotent state, which may be used for medical research or preserved for future therapeutic use by their autologous donor or a heterologous recipient.

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PN - WO2010013845 A1 20100204  
PD - 2010-02-04  
PA - UNIV KYOTO [JP]; YAMANAKA SHINYA [JP]; YOSHIDA YOSHINORI [JP]  
IN - YAMANAKA SHINYA [JP]; YOSHIDA YOSHINORI [JP]

TI - METHOD OF EFFICIENTLY ESTABLISHING INDUCED PLURIPOTENT STEM CELLS  
AB - Provided is a method of improving the efficiency of establishment of induced pluripotent stem cells, comprising culturing somatic cells under hypoxic conditions in the step of nuclear reprogramming thereof.

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PN - WO2010013359 A1 20100204  
PD - 2010-02-04  
PA - UNIV GIFU [JP]; UNIV KYOTO [JP]; TEZUKA KENICHI [JP]; SHIBATA TOSHIYUKI [JP]; KUNISADA TAKAHIRO [JP]; TAMAOKI NARITAKA [JP]; TAKEDA TOMOKO [JP]; YAMANAKA SHINYA [JP]; TAKAHASHI KAZUTOSHI [JP]  
IN - TEZUKA KENICHI [JP]; SHIBATA TOSHIYUKI [JP]; KUNISADA TAKAHIRO [JP]; TAMAOKI NARITAKA [JP]; TAKEDA TOMOKO [JP]; YAMANAKA SHINYA [JP]; TAKAHASHI KAZUTOSHI [JP]  
TI - EFFICIENT METHOD FOR ESTABLISHING INDUCED PLURIPOTENT STEM CELLS  
AB - The present invention provides a method of producing induced pluripotent stem (iPS) cells, comprising bringing a nuclear reprogramming substance into contact with dental pulp stem cells. By using dental pulp stem cells as a source of somatic cells, the efficiency of establishment of human iPS cells by transfer of 3 or 4 factors can be improved dramatically. Additionally, dental pulp stem cells are easily available because they can be isolated and prepared from extracted wisdom teeth and teeth extracted because of periodontal disease and the like, so that they can be used widely as a source of somatic cells for iPS cell banks.

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PN - WO2010012077 A1 20100204  
PD - 2010-02-04  
PA - MOUNT SINAI HOSPITAL CORP [CA]; UNIV EDINBURGH [GB]; NAGY ANDRAS [CA]; KAJI KEISUKE [GB]; WOLTJEN KNUT [CA]; MICHAEL IACOVOS [CA]  
IN - NAGY ANDRAS [CA]; KAJI KEISUKE [GB]; WOLTJEN KNUT [CA]; MICHAEL IACOVOS [CA]  
TI - COMPOSITIONS, METHODS AND KITS FOR REPROGRAMMING SOMATIC CELLS  
AB - The invention relates to non-viral based vector systems, methods, reprogrammed cells and kits for reprogramming somatic cells. Reprogrammed cells are generated by integrating into somatic cells one or more non-viral based vector systems capable of expressing reprogramming factors necessary to reprogram somatic cells.

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PN - US2010022533 A1 20100128  
PD - 2010-01-28  
PA - SCRIPPS RESEARCH INST [US]  
IN - CHEN SHUIBING [US]; DING SHENG [US]; SCHULTZ PETER G [US]  
TI - COMPOSITIONS AND METHODS FOR INDUCING CELL DEDIFFERENTIATION  
AB - The present invention provides compounds, compositions and methods for dedifferentiating lineage committed mammalian cells into stem cells. The present invention also provides methods of inducing dedifferentiation of lineage committed mammalian cells into stem cells, which can be further differentiated into various lineage committed cells. Methods of identifying additional compounds useful for inducing dedifferentiation of lineage committed cells into stem cells are also provided.

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PN - US2010021437 A1 20100128  
PD - 2010-01-28

PA - MCLEAN HOSPITAL CORP WHITEHEAD  
IN - ISACSON OLE [US]; PRUSZAK JAN [US]; WERNIG MARIUS [US]; JAENISCH RUDOLF [US]  
TI - NEURAL STEM CELLS DERIVED FROM INDUCED PLURIPOTENT STEM CELLS  
AB - The present invention provides novel populations of neural stem cells derived from induced pluripotent stem cells, and methods for making and using the same.

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PN - US2010008891 A1 20100114  
PD - 2010-01-14  
IN - WEBB CAROL [US]; KINCADE PAUL [US]  
TI - Production of Pluripotent Cells Through Inhibition of Bright/Arld3a Function  
AB - The present invention involves the identification of Bright/ARID3a as involved in the regulation of pluripotency in cells, and the targeting of that function for the regulation of pluripotency. Thus, methods of de-differentiating cells into pluripotent cells are provided, as well as methods for re-differentiating such cells in a controlled fashion.

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PN - WO2010008054 A1 20100121  
PD - 2010-01-21  
PA - DNAMEC CORP [JP]; FUSAKI NOEMI [JP]; BAN HIROSHI [JP]; HASEGAWA MAMORU [JP]; YONEMITSU YOSHIKAZU [JP]  
IN - FUSAKI NOEMI [JP]; BAN HIROSHI [JP]; HASEGAWA MAMORU [JP]; YONEMITSU YOSHIKAZU [JP]  
TI - METHOD FOR PRODUCTION OF REPROGRAMMED CELL USING CHROMOSOMALLY UNINTEGRATED VIRUS VECTOR  
AB - Disclosed is a vector for producing an ES-like cell having no foreign gene integrated into the chromosome thereof conveniently and efficiently. Also disclosed is a method for producing an ES-like cell from a somatic cell by using a chromosomally unintegrated virus vector. The ES-like cell produced by the method has no foreign gene integrated into the chromosome thereof. Therefore, the cell can be advantageously used for tests and studies, and has high possibility of eliminating the problem of immunological rejection or ethical problems in the treatment of diseases.

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PN - EP2145000 A1 20100120  
PD - 2010-01-20  
PA - WHITEHEAD BIOMEDICAL INST [US]  
IN - JAENISCH RUDOLPH [US]; HANNA JACOB [US]; WERNIG MARIUS [US]; LENGNER CHRISTOPHER J [US]; MEISSNER ALEXANDER [US]; BRAMBRINK OLIVER TOBIAS [US]; WELSTEAD G GRANT [US]; FOREMAN RUTH [US]  
TI - REPROGRAMMING OF SOMATIC CELLS  
AB - The disclosure relates to a method of reprogramming one or more somatic cells, e.g., partially differentiated or fully/ terminally differentiated somatic cells, to a less differentiated state, e.g., a pluripotent or multipotent state. In further embodiments the invention also relates to reprogrammed somatic cells produced by methods of the invention, to uses of said cells, and to methods for identifying agents useful for reprogramming somatic cells.

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PN - WO2010004989 A1 20100114  
PD - 2010-01-14  
PA - TAKARA BIO INC [JP]; ENOKI TATSUJI [JP]; IWAMOTO FUMIKO [JP]; NISHIE TOSHIKAZU [JP]; MARUI TAKAHIRO [JP]; TAKASHIMA FUYUKO [JP]; KATO IKUNOSHIN [JP]  
IN - ENOKI TATSUJI [JP]; IWAMOTO FUMIKO [JP]; NISHIE TOSHIKAZU [JP]; MARUI TAKAHIRO [JP]; TAKASHIMA FUYUKO [JP]; KATO IKUNOSHIN [JP]  
TI - METHOD FOR PRODUCTION OF PLURIPOTENT STEM CELL

AB - In the production of a cell mass containing a pluripotent stem cell, a step of treating a somatic cell under nutrient-starved conditions while contacting the somatic cell with a nuclear reprogramming factor and/or a step of treating the somatic cell with a substance capable of arresting a cell cycle is involved. It becomes possible to induce and grow a pluripotent stem cell at high frequency, and it also becomes possible to produce a pluripotent stem cell with high efficiency. The nuclear reprogramming factor to be used may be any one selected from the group consisting of OCT4, SOX2, c-MYC, KLF4, NANOG and LIN28.

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PN - US2010003757 A1 20100107  
PD - 2010-01-07  
IN - MACK AMANDA [US]; THOMSON JAMES [US]  
TI - METHODS FOR THE PRODUCTION OF IPS CELLS USING NON-VIRAL APPROACH

AB - Methods and composition of induction of pluripotent stem cells and other desired cell types are disclosed. For example, in certain aspects methods for generating essentially vector-free induced pluripotent stem cells are described. Furthermore, the invention provides induced pluripotent stem cells and desired cell types essentially free of exogenous vector elements with the episomal expression vectors to express differentiation programming factors.

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PN - US2010003223 A1 20100107  
PD - 2010-01-07  
PA - METAPONTIUM AGROBIOS S R L [IT]  
IN - CIFARELLI ROSA ANNA [IT]; CELLINI FRANCESCO [IT]; DI LIDDO ROSA [IT]; PARNIGOTTO PIER PAOLO [IT]

TI - METHOD FOR THE PRODUCTION OF MULTICOMPONENT STEM CELLS, RELATIVE KITS AND USES IN THE MEDICAL FIELD

AB - The invention relates to a method for the production of multipotent stem cells starting from highly differentiated adult somatic cells of mammals or their precursors comprising the demethylating treatment phase of highly differentiated cells with 5' Aza 2' cytidine and relative kits and uses in the medical field.

**GRANTED "B" SPECS**

**ADULT STEM CELLS -16 Documents**

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PNFP - US7655225 B2 20100202  
GRANTED - 2010-02-02  
PA - GAMIDA CELL LTD [IL]  
IN - PELED TONY [IL]; TREVES AVI [IL]; ROSEN OREN [IL]  
TI - Methods of expanding stem and progenitor cells and expanded cell populations obtained thereby

AB - Ex vivo and in vivo methods of expanding a population of stem and/or progenitor cells, while at the same time reversibly inhibiting differentiation of the stem and/or progenitor cells by providing the stem and/or progenitor cells with an effective amount of at least one copper chelate, so as to maintain a free copper concentration available to said cells substantially unchanged, to thereby expand the population of said stem and/or progenitor cells, while at the same time reversibly inhibit differentiation of said stem and/or progenitor cells.

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PNFP - US7659121 B2 20100209  
GRANTED - 2010-02-09

PA - BIOS RES INST INC [JP]  
IN - ENDO FUMIO [JP]; OKUMURA KENJI [JP]; NAKAMURA KIMITOSHI [JP]  
TI - Human salivary gland-origin stem cell  
AB - A novel human stem cell which can be differentiated to cells constituting a plurality of human organs including human liver is disclosed. The human stem cell according to the present invention is originated from human salivary gland, which is CD49f-positive, and which can be differentiated to (1) a nestin-positive and albumin-positive cell, (2) an insulin-positive cell and (3) a glucagon-positive cell by culture in vitro.

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PNFP - US7662385 B2 20100216  
GRANTED - 2010-02-16  
PA - UNIV KEIO [JP]; ADVANCED IND SCIENCE AND TECHN [JP]  
IN - OKANO HIDEYUKI [JP]; SAWAMOTO KAZUNOBU [JP]; SAKAGUCHI MASANORI [CA]; HIRABAYASHI JUN [JP]  
TI - Agent for inhibiting proliferation of neural stem cells  
AB - The object of the present invention is to provide methods for inhibiting proliferation of neural stem cells, an agent for inhibiting proliferation of neural stem cells, and methods for using the same. According to the method of the present invention, a galectin-1 inhibitor such as anti-galectin-1 antibody and/or an integrin beta1 inhibitor such as anti-integrin beta1 antibody is administered to a human or a vertebrate other than human for inhibiting proliferation of neural stem cells. This method can be used for treatment of nerve injury and nerve tumors.

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PNFP - US7666615 B2 20100223  
GRANTED - 2010-02-23  
PA - HEMOGENIX INC [US]  
IN - RICH IVAN N [US]  
TI - HIGH-THROUGHPUT ASSAY OF HEMATOPOIETIC STEM AND PROGENITOR CELL PROLIFERATION  
AB - The present invention relates generally to assays, methods, and kits that provide reagent mixes and instructions for determining the proliferative status of isolated target cell populations. The methods measure the luminescent output derived from the intracellular ATP content of incubated target cells, and correlate the luminescence with the proliferative status of the cells.

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PNFP - US7655224 B2 20100202  
GRANTED - 2010-02-02  
PA - CHILDRENS MEDICAL CENTER [US]; GEN HOSPITAL CORP [US]; UNIV NORTHEASTERN OHIO [US]  
IN - SNYDER EVAN Y [US]; BREAKEFIELD XANDRA O [US]; ABOODY KAREN S [US]; HERRLINGER ULRICH [DE]; LYNCH WILLIAM P [US]  
TI - Neural stem cells and use thereof for brain tumor therapy  
AB - The present invention is based upon a surprising finding that stem cells, more particularly neural stem cells, can migrate throughout a brain tumor and track metastatic brain tumor cells. The invention provides a method for treating brain tumors by administering genetically engineered neural stem cells in an individual affected by brain tumors. The invention also provides a method of preparing genetically engineered neural stem cells and a composition comprising genetically engineered neural stem cells in a pharmaceutically acceptable carrier.

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PNFP - EP1671627 B1 20100217  
GRANTED - 2010-02-17  
PA - DORNIER MEDTECH SYSTEMS GMBH [DE]; ZEIHNER ANDREAS MICHAEL [DE]; DIMMELER STEFANIE [DE]; HEESCHEN CHRISTOPHER [DE]; AICHER ALEXANDRA [DE]

IN - LUTZ ANDREAS [DE]; EIZENHOEFER HARALD [DE]; ZEIHNER ANDREAS  
MICHAEL [DE]; DIMMELER STEFANIE [DE]; HEESCHEN CHRISTOPHER [DE]; AICHER  
ALEXANDRA [DE]

TI - Improvement of cell therapy and tissue regeneration in patients with cardiovascular  
and neurological diseases by means of shockwaves

AB - The present invention relates to methods for improving the cell therapy in a patient  
suffering from a cardiovascular or a neurological disease undergoing cell therapy by using shock  
waves as a therapeutic tool for targeting the recruitment of stem and/or progenitor cells to a tissue of  
said patient affected by the disease. The present invention also relates to methods for improving the  
tissue regeneration in a patient suffering from a cardiovascular or neurological disease and methods  
for treating a cardiovascular or neurological disease in a patient. The present invention further relates  
to the use of stem and/or progenitor cells for preparing a pharmaceutical composition for treating a  
patient suffering from a cardiovascular disease or neurological disease wherein the patient is  
subjected to a treatment with shock waves before, during or after administration of the stem and/or  
progenitor cells.

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PNFP - US7642045 B2 20100105

GRANTED - 2010-01-05

IN - GHOSH SWAPAN K [US]

TI - Antibodies to protein markers associated with bone marrow stem cell differentiation  
into early progenitor dendritic cells

AB - A novel cytosolic 58 kd phosphoprotein induced during bone marrow stem cell (BM)  
differentiation into dendritic cells (DC) during in vitro cultivation with the cytokine GM-CSF by addition  
of antisera to an 82 kd BM cell surface protein generating cultivatable dendritic progenitor cells (DP).  
Genes, methods for preparing them as well as early DP have been provided. Potential  
uses/advantages lie in the study of BM differentiation and innate immunity due to stimulatory/inhibitory  
DC, contribution of (BM) and DP to inflammation during infection and carcinogenesis, tumor  
promotion/regression, identification of BM-derived blood cells, T-cell activation/regulation/tolerance  
and inflammation.

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PNFP - US7666673 B2 20100223

GRANTED - 2010-02-23

PA - UNIV KYOTO [JP]

IN - SHINOHARA TAKASHI [JP]; SHINOHARA MITO [JP]

TI - Method of growing sperm stem cells in vitro, sperm stem cells grown by the method,  
and medium additive kit to be used in growing sperm stem cells in vitro

AB - The present invention provides a method of growing spermatogonial stem cells of  
mammals and the like in vitro, which is characterized in that glial cell-derived neurotrophic factor  
(GDNF) or an equivalent thereto, and leukemia inhibitory factor (LIF) are contained in a medium  
(culture broth) for culturing spermatogonial stem cells. According to the method of the present  
invention, spermatogonial stem cells can be grown in vitro to the extent that enables use thereof for  
developmental engineering.

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PNFP - US7659118 B2 20100209

GRANTED - 2010-02-10

PA - ABT HOLDING COMPANY [US]; UNIV MINNESOTA [US]

IN - FURCHT LEO T [US]; VERFAILLIE CATHERINE M [US]; REYES MORAYMA [US]

TI - Multipotent adult stem cells

AB - The invention provides isolated stem cells of non-embryonic origin that can be  
maintained in culture in the undifferentiated state or differentiated to form cells of multiple tissue  
types. Also provided are methods of isolation and culture, as well as therapeutic uses for the isolated  
cells.

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PNFP - US7655465 B2 20100202  
GRANTED - 2010-02-02  
PA - MASSACHUSETTS INST TECHNOLOGY [US]  
IN - SHERLEY JAMES L [US]; KING JOHNATHAN [US]  
TI - Methods for ex vivo propagation of somatic hair follicle stem cells  
AB - The present invention is directed to methods for readily propagating somatic hair follicle stem cells or melanocyte stem cells. The methods comprise enhancing guanine nucleotide (GNP) biosynthesis, thereby expanding guanine nucleotide pools. This in turn conditionally suppresses asymmetric cell kinetics in the explanted cells. The methods of the invention include pharmacological methods and genetic methods. For example, the resulting cultured somatic hair follicle stem cells can be used for a variety of applications including cell replacement therapies such as hair transplants, gene therapies, and tissue engineering applications, such as the generation of artificial skin and skin regeneration strategies including skin grafts.

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PNFP - US7662625 B2 20100216  
GRANTED - 2010-02-16  
PA - CANCER REC TECH LTD [GB]  
IN - STERN PETER L [DE]; CARROLL MILES W [DE]; WARD CHRISTOPHER M [DE]  
TI - Methods for detecting the differentiation status of cells using 5T4 antigen expression  
AB - The present invention relates to methods for detecting the differentiation status of stem cells comprising detecting the expression of 5T4 antigen in said stem cells. The present invention also relates to methods for separating populations of undifferentiated or differentiated mammalian stem cells from a mixture of differentiated and undifferentiated stem cells through detection of 5T4 expression.

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PNFP - US7658951 B2 20100209  
GRANTED - 2010-02-09  
PA - FORD HENRY HEALTH SYSTEM [US]  
IN - SABBAH HANI N [US]; SHAROV VIKTOR G [US]; ISHIGAI YUKATA [JP]; MALTSEV VICTOR A [US]  
TI - Method of improving cardiac function of a diseased heart  
AB - a method of treating heart failure and improving cardiac function by administering stem cell products to a heart in need of treatment, whereby the stem cell products improve cardiac muscle function thereby treating heart failure and improving cardiac function. A method of enriching or regenerating damaged myocardium by administering stem cell products to damaged myocardium. Stem cell products for use in treating heart failure are also provided. A composition for enriching and regenerating damaged myocardium, the composition having stem cell products in a pharmaceutically acceptable carrier.

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PNFP - US7666675 B2 20100223  
GRANTED - 2010-02-23  
PA - ANTICANCER INC [US]  
IN - LI LINGNA [US]; YANG MENG [US]  
TI - Nestin-expressing hair follicle stem cells  
AB - Hair follicle stem cells are isolated from mammals by isolating nestin-expressing cells. These hair follicle stem cells are a source of adult stem cells for autologous or heterologous stem cell therapy. The stem cells can be systemically implanted into the mammal or directly implanted into the organ. In addition, the stem cells may be further differentiated in vitro and then implanted systemically or directly into the mammal.

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PNFP - US7666393 B2 20100223  
GRANTED - 2010-02-23  
PA - CHILDRENS MEDICAL CENTER [US]  
IN - SOKER SHAY [US]; ATALA ANTHONY [US]; SCHUCH GUNTER [DE]  
TI - Methods for assessing antiangiogenic agents  
AB - We have discovered that endothelial progenitor cells (EPC) are particularly suitable for use in a sensitive assay for antiangiogenic factors. We have found that EPC mobilization and differentiation is greatly inhibited by antiangiogenic factors as evidenced in vivo by VEGF inducing a massive mobilization of EPC into the blood circulation which effect is significantly inhibited by endostatin treatment, and, in vitro, human blood-derived EPC forming adherent colonies, which colonies, in the presence of angiogenic factors, give rise to differentiated EC, and which differentiation is disrupted and cell growth is inhibited in the presence of angiostatin and endostatin.

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PNFP - EP1363995 B1 20100120  
GRANTED - 2010-01-20  
PA - IGR ET D [FR]; COHEN HAGUENAUER ODILE [FR]  
IN - COHEN-HAGUENAUER ODILE [FR]  
TI - USE OF A COMPOSITION COMPRISING N-ACETYLCYSTEINE FOR  
CONDITIONING STEM CELLS  
AB - The invention concerns the use of a composition with antioxidant activity for conditioning in vitro stem cells and in particular hematopoietic cells, for therapeutic use thereof. The invention concerns in particular the use of N-acetylcysteine, and the hematopoietic stem cells conditioned with N-acetylcysteine.

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PNFP - EP1228212 B1 20100106  
GRANTED - 2010-01-06  
PA - COMMISSARIAT ENERGIE ATOMIQUE [FR]  
IN - KIRSZENBAUM MAREK [FR]; LE DISCORDE MAGALI [FR]; PROST STEPHANE [FR]  
TI - PROTEIN PRESENT AT THE SURFACE OF HEMATOPOIETIC STEM CELLS OF THE LYMPHOID LINE AND OF NK CELLS, AND USES THEREOF  
AB - The invention concerns a protein present at the surface of hematopoietic stem cells of the lymphoid cell line and mature NK cells, the corresponding isolated cDNA sequence and their uses as marker of said cells and for preparing antibodies directed against said protein. The invention also concerns the uses of said antibodies for selecting cells expressing at their surface said protein. Said isolated protein has a structure (a) comprising an extracellular domain located between positions 21 and 152, five transmembrane domains located between positions 153 and 295 and a cytoplasmic domain located between positions 296 and 350, with reference to the sequence SEQ ID NO:2; an apparent molecular weight of about 36 to 38 kDa, and its precursor, which comprises in N-terminal of structure (a), a signal sequence of 20 amino acids, is selected in the group consisting of the protein of SEQ ID NO:2, and the proteins having an amino acid sequence having at least 70 % identity or at least 85 % similarity and preferably at least 95 % identity or at least 99 % similarity with the sequence SEQ ID NO:2.

**EMBRYONIC STEM CELLS- 7 documents**

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PNFP - US7666423 B2 20100223  
GRANTED - 2010-02-23  
PA - CHILDREN S MEMORIAL HOSPITAL [US]  
IN - HENDRIX MARY JESSICA [US]; POSTOVIT LYNNE-MARIE [CA]; SEFTOR RICHARD EDWARD BARNET [US]; SEFTOR ELISABETH ANN [US]

TI - Methods of Inhibiting Tumor Cell Aggressiveness Using The Microenvironment of Human Embryonic Stem Cells  
AB - The invention provides compositions comprising one or more isolated factors from a microenvironment of human embryonic stem cells (hESCs), including, but not limited to, Lefty and inhibitors of Nodal. The invention also provides methods of utilizing factors derived from human embryonic stem cells (hESC) and their microenvironment to treat and prevent tumor formation and progression and to inhibit tumor cell aggressiveness. The invention further provides methods of inhibiting tumor cell growth and/or treating aggressive tumors in a mammal comprising administering to the mammal, having at least one tumor cell present in its body, an effective amount of an inhibitor of Nodal activity.

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PNFP - US7642091 B2 20100105  
GRANTED - 2010-01-05  
IN - LEE JAU-NAN [TW]; LEE TONY TUNG-YING [TW]; LEE YUTA [TW]  
TI - Human trophoblast stem cells and use thereof  
AB - Existence of human trophoblast stem (hTS) cells has been suspected but unproved. The isolation of hTS cells is reported in the early stage of chorionic villi by expressions of FGF4, fgfr-2, Oct4, Thy-1, and stage-specific embryonic antigens distributed in different compartments of the cell. hTS cells are able to derive into specific cell phenotypes of the three primitive embryonic layers, produce chimeric reactions in mice, and retain a normal karyotype and telomere length. In hTS cells, Oct4 and fgfr-2 expressions can be knockdown by bFGF. These facts suggest that differentiation of the hTS cells play an important role in implantation and placentation. hTS cells could be apply to human cell differentiation and for gene and cell-based therapies.

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PNFP - US7662941 B2 20100216  
GRANTED - 2010-02-16  
PA - TRUSTEES OF THE UNIVERSITY OF [US]  
IN - LEMISCHKA IHOR R [US]; SCHANIEL CHRISTOPH [US]; LI FENG [US]; SCHAFER XENLA [US]; PADDISON PATRICK J [US]  
TI - Embryonic stem cell self maintenance and renewal reporter  
AB - The present invention relates to methods and compositions for assaying embryonic stem cell maintenance. In particular, the present invention provides reporter constructs for stem cell pluripotency and differentiation and cells and organisms containing such constructs.

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PNFP - US7641897 B2 20100105  
GRANTED - 2010-01-05  
PA - UNIV LELAND STANFORD JUNIOR [US]  
IN - WEISSMAN IRVING L [US]; YAMANE TOSHIYUKI [US]; DYLLA SCOTT [US]  
TI - Feeder layer and serum independent embryonic stem cells  
AB - Undifferentiated primordial stem cells are manipulated to permit their long term growth in defined media lacking serum and feeder layer cells by shifting the apoptotic balance of the cells, through increasing the activity of Bcl-2 family anti-apoptotic proteins or decreasing the activity of Bcl-2 family pro-apoptotic proteins. In some embodiments of the invention, the Bcl family protein is Bcl-2. The ES cells sustain the characteristics of undifferentiated, pluripotent stem cells during long-term serum- and feeder layer cell-free conditions, including the ability to be expanded in vitro, but maintain their potential to differentiate into mature cell types.

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PNFP - EP1711599 B1 20100217  
GRANTED - 2010-02-17  
PA - BION CO LTD H [KR]

IN - ROH SUNG-IL [KR]; HWANG WOO-SUK [KR]; LEE BYEONG-CHUN [KR]; KANG SUNG-KEUN [KR]; RYU YOUNG-JUNE [KR]; LEE EU-GENE [KR]; KIM SOON-WOONG [KR]; KWON DAE-KEE [KR]; KWON HEE-SUN [KR]; KOO JA-MIN [KR]; PARK EUL-SOON [KR]; HWANG YOUN-YOUNG [KR]; MOON SHIN-YONG [KR]; OH SUN-KYUNG [KR]; AHN CU-RIE [KR]; YOON HYUN-SOO [KR]; PARK JONG-HYUK [KR]; KIM SUN-JONG [KR]; CHOI YANG-KYU [KR]  
TI - Culture medium for human blastocysts  
AB - NOVELTY : An embryonic stem cell line derived from a nucleus-transferred oocyte prepared by transferring a nucleus of a human somatic cell into an enucleated human oocyte, is new.

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PNFP - US7648833 B2 20100119  
GRANTED - 2010-01-19  
PA - NOF CORP [JP]  
IN - KUROSAWA HIROSHI [JP]; SAKAKI SHUJIRO [JP]  
TI - Container for germ layer formation and method of forming germ layer  
AB - The invention relates to a vessel for embryoid formation used for forming embryoid bodies from ES cells easily without complicated technique, and to a method for forming embryoid bodies easily and efficiently using the vessel. The method includes the steps of (A) providing a vessel for embryoid formation having a coating layer formed from a compound having a particular PC-like group on a vessel surface defining a region for floating culture of ES cells, and (B) floating culturing ES cells in the vessel to form embryoid bodies.

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PNFP - US7652192 B2 20100126  
GRANTED - 2010-01-26  
PA - KYOWA HAKKO KIRIN CO LTD [JP]  
IN - FORSBERG ERIK J [US]; MALLON KELLY S [US]; GOLUEKE PAUL J [US]; BISHOP MICHAEL D [US]  
TI - Cloning of transgenic unglulates comprising artificial chromosomes  
AB - The invention is directed in part to totipotent cells that have one or more artificial chromosomes; processes for producing such cells; processes for using such cells (e.g., nuclear transfer); transgenic embryos and transgenic animals cloned from such cells; and processes for producing such embryos and animals

**INDUCED PLURIPOTENT CELLS/ DEDIFFERENTIATION OF CELLS - 1 document**

© EPODOC / EPO

PNFP - GB2450603 B  
GRANTED - 2010-02-10  
PA - BAYER SCHERING PHARMA AG [DE]; IZUMI BIO INC [US]; IPIERIAN INC [US]  
IN - SAKURADA KAZUHIRO [JP]; MASAKI HIDEKI [JP]; ISHIKAWA TETSUYA [JP]  
TI - Human pluripotent stem cells and their medical use  
AB - Human pluripotent stem cells are disclosed which are established from human postnatal tissue through the introduction of Oct3/4, Sox2, and Klf4 genes, or Oct3/4, Sox2, and Klf4 genes in combination with either a c-Myc gene or a histone deacetylase inhibitor. Methods of inducing human pluripotent stem cells of the invention from an undifferentiated stem cell in human postnatal tissue are also claimed, as are stem cells of the invention for use in cell replacement therapy. Undifferentiated stem cells in which each of the genes Tert, Nanog, Oct3/4, and Sox2 has not undergone epigenetic inactivation, and which can be induced into the pluripotent stem cells of the invention, are also claimed.

## ANNEX A

### Search strategy

(includes new IPC terms for stem cells)

..his

Databases : EPODOC, WPI

#### SS Results

- 1 8981 /EC/ECNO OR C12N5/06B2P, C12N5/06B3, C12N5/06B3A, C12N5/06B6P, C12N5/06B8P, C12N5/06B11P, C12N5/06B12P, C12N5/06B14P, C12N5/06B18P, C12N5/06B20P, C12N5/06B21P, C12N5/06B22P, C12N5/06B26P, C12N5/06B28P, C12N5/06B30P
- 2 7429 \*M4/PR/ALL
- 3 7201 \*M4/PR/ALL
- 4 4887 \*M4/PR/ALL
- 5 0 \*M4/PR/ALL
- 6 0 \*M4/PR/ALL
- 7 0 \*M4/PR/ALL
- 8 2 \*M4/PR/ALL
- 9 13283 1: 8
- 10 8806 9 AND (STEM? OR PLURIPOTEN+ OR PROGENITOR? OR EMBRYO+ OR HBS OR BLASTOCYST? OR RE\_PROGRAM+ OR DE\_DIFFERENTIAT+ OR RETRO\_DIFFERENTIAT+ OR ?ESC?)
- 11 727 /IC OR C12N5/0735, C12N5/074, C12N5/0775, C12N5/0789, C12N5/0797
- 12 33438 ((STEM? OR PLURIPOTEN+ OR EMBRYONIC+ OR PROGENITOR? OR EMBRYONAL+ OR HBS OR BLASTOCYST? OR DE\_DIFFERENTIAT+ OR RETRO\_DIFFERENTIAT+ OR ?ES OR RE\_PROGRAM+) 3D CELL?) OR (HESC? OR (HUMAN W ESC?) OR (PRIMATE W ESC?))
- 13 36959 1 OR 10 OR 11 OR 12
- 14 36959 ..LIM 13
- 15 582 PD<=2010-02 AND PD>2009-12-31
- 16 **486 15 AND (OR GB/PN, EP/PN, US/PN, WO/PN) – viewed “A” specs**
- 17 4 /PN GB S B? S (OR 201001, 201002)
- 18 37 /PN EP S B? S (OR 201001, 201002)
- 19 108 /PN US S B? S (OR 201001, 201002)
- 20 **147 17 OR 18 OR 19 – viewed “B” specs**

### Key to ECLA classification marks searched:

- C12N5/06B2P** . . . . (1355) [N: Pluripotent cells, e.g. embryonic stem cells (ES)]
- C12N5/06B3** . . . (489) [N: Non-embryonic pluripotent cells, e.g. MASC] [N0209]
- C12N5/06B3A** . . . . (136) [N: Artificially induced pluripotent cells, e.g. iPS] [N0905]
- C12N5/06B6* . . . (87) [N: Muscle cells] [N9703] [C0209]
- C12N5/06B6P** . . . . (269) [N: Stem cells; Progenitor cells, e.g. satellite cells] [N9703]
- C12N5/06B8* . . . (451) [N: Cells of the nervous system] [N9703]
- C12N5/06B8P** . . . . (1113) [N: Stem cells; Progenitor cells; Precursor cells] [N9703]
- C12N5/06B11* . . . (360) [N: Cells from the blood or the immune system] [N0305]
- C12N5/06B11P** . . . . (1972) [N: Haematopoietic stem cells; Uncommitted or multipotent progenitors]
- C12N5/06B12* . . . (285) [N: Epithelial cells (cornea, eye epithelium C12N5/06B8C)]
- C12N5/06B12P** . . . . (239) [N: Stem cells; Progenitor cells; Precursor cells] [N9703]
- C12N5/06B14* . . . (674) [N: Hepatocytes] [N9703]
- C12N5/06B14P** . . . . (254) [N: Stem cells; Progenitor cells; Precursor cells; Oval cells]

**C12N5/06B18** ... (651) [N: Osteoblasts; Osteocytes; Odontoblasts]  
**C12N5/06B18P** .... (164) [N: Stem cells; Progenitor cells; Precursor cells] [N9703]

**C12N5/06B20** ... (1118) [N: Chondrocytes] [N9703]  
**C12N5/06B20P** .... (53) [N: Stem cells; Progenitor cells; Precursor cells] [N0305]

**C12N5/06B21** ... (104) [N: Cells from bone marrow stroma] [N0305]  
**C12N5/06B21P** .... (1072) [N: Mesenchymal stem cells] [N0305]

**C12N5/06B22** ... (975) [N: Pancreatic cells]  
**C12N5/06B22P** .... (173) [N: Stem cells; Progenitor cells; Precursor cells] [N0205]

**C12N5/06B26** ... (325) [N: Fat cells, e.g. adipocytes] [N9703]  
**C12N5/06B26P** .... (259) [N: Stem cells; Progenitor cells, e.g. adipose stroma progenitors; precursor cells] [N0205]

**C12N5/06B28** ... (661) [N: Endothelial cells (eye endothelium C12N5/06B8C)] [N9703]  
**C12N5/06B28P** .... (279) [N: Stem cells; Progenitor cells; Precursor cells] [N0209]

**C12N5/06B30** ... (548) [N: Tumour cells; Cancer cells] [N9703] [C0205]  
**C12N5/06B30P** .... (79) [N: Stem cells; Progenitor cells; Precursor cells] [N0608]

### **Key to IPC terms searched:**

**C12N5/00** [Core] (46061) Undifferentiated human, animal or plant cells, e.g. cell lines; Tissues; Cultivation or maintenance thereof; Culture media therefor (plant reproduction by tissue culture techniques A01H4/00) [3,5]

**C12N5/07** . [Core] (2886) Animal cells or tissues [2010.01]

**C12N5/071** .. [Core] (1794) Vertebrate cells or tissues, e.g. human cells or tissues [2010.01]

**C12N5/0735** .... [Core] (151) Embryonic stem cells; Embryonic germ cells [2010.01]

**C12N5/074** ... [Core] (266) Adult stem cells [2010.01]

**C12N5/0775** .... [Core] (193) Mesenchymal stem cells; Adipose-tissue derived stem cells [2010.01]

**C12N5/078** ... [Core] (299) Cells from blood or from the immune system [2010.01]

**C12N5/0789** .... [Core] (329) Stem cells; Multipotent progenitor cells [2010.01]

**C12N5/079** ... [Core] (38) Neural cells [2010.01]

**C12N5/0797** .... [Core] (52) Stem cells; Progenitor cells [2010.01]