

Patent Number	Assignee/Applicant Name	In vitro	In vivo	Composition	Method of making	Use/Diagnostic use	Cell type	Tissue of origin	Therapy	Device
US4327799	Helmholtz-Institut für Biomedizinische Technik, DE	Yes			Process of freezing stem cells		stem cells			
US4411990	University Patents, Inc., Norwalk, CT	Yes			Growing and Assaying the stem cell content in a specimen	method for measuring drug sensitivity of the tumor stem cells of a specimen of primary explanted cells obtained from a primary or metastatic human tumor as an indication of the antineoplastic activity of a drug against said human tumor	cells obtained from primary or metastatic human tumors			
US4714680	The Johns Hopkins University, Baltimore, MD, US			Yes			lympho-hematopoietic stem cells of human	Blood or bone marrow		
US4812443	Kuraray Co., Ltd., Okayama, JP		Yes				hematopoietic progenitor cells		Yes	
US4904259	ITAY; SAMUEL, IL		Yes				autologous bone marrow stroma cells; autologous muscle fibroblast derived chondrocytes; bone marrow osteogenic-chondrogenic progenitor cells		regenerating skeletal tissue by implantation	

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US5004681	Biocyte Corporation, New York, NY, US			Yes			neonatal or fetal hematopoietic stem cells	blood		
US5032507	The Salk Institute for Biological Studies. The Regents of the University of California Scripps Clinic and Research Foundation, San Diego, CA, Berkeley, CA, La Jolla, CA, US	Yes	Yes		culturing the cells to form erythroid colony-forming units		hematopoietic stem cells		To increase the population of erythrocytes in a human by injecting erythrocytes	
US5035994	The Johns Hopkins University, Baltimore, MD, US	Yes			Isolating human cells containing pluripotent lymphohematopoietic stem cells from mature human myeloid and lymphoid cells		lymphohematopoietic stem cells	Marrow and blood		
US5041289	Becton Dickinson and Company, Franklin Lakes, NJ, US	Yes			Cytotoxic cells in an autologous cell preparation are activated in vitro with IL-2 and then combined with enriched progenitor cells.		human progenitor cells			
US5073481	Beth Israel Hospital Association, Boston, MA, US	Yes				Detecting presence of hepatitis virus using stem cells	Stem cells from bone marrow and leukemic cell line	bone marrow of peripheral blood		

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US5130144	The Johns Hopkins University, Baltimore, MD, US		Yes				human cells comprising pluripotent lymphohematopoietic stem cells	Marrow or blood	to restore the production of lymphoid and hematopoietic cells in a patient where such production is lacking	
US5147784	SyStemix, Inc., Palo Alto, CA, US	Yes				Methodology is provided for identifying the presence of human T-lymphocyte progenitor cells	human progenitor cells			
US5147799	SPITALNY; GEORGE		Yes		Yes		hematopoietic stem cells			
US5149544	Research Corporation Technologies, Inc., Tucson, AZ, US	Yes					hematopoietic progenitor cell			
US5162215	Amgen Inc. Arbor Acres Farm, Inc., Thousand Oaks, CA Glastonbury, CT, US		Yes		Yes		EMBRYONIC			
US5175004	MATSUMURA; KENNETH N., US	Yes	Yes				progenitor cells		Cell replacement therapy	
US5175384	GenPharm International, Inc., Mountain View, CA, US		Yes			To make transgene offspring mouse by administering an embryonic stem cell containing the transgene into the embryo of the mouse.	embryonic stem cell			

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US5178856	Board of Regents of the University of Oklahoma, Norman, OK, US	Yes			Yes		megakaryocyte progenitor			
US5185323	Temple University, Philadelphia, PA, US		Yes				magakaryocyte progenitor cells		To treat thromboembolic disease or disorder by suppressing the maturation of immature magakaryocyte progenitor cells	
US5192553	Biocyte Corporation, New York, NY, US	Yes	Yes		Isolation and preservation of fetal and neonatal hematopoietic stem and progenitor cells of the blood		fetal and neonatal hematopoietic stem and progenitor cells of the blood	Blood	method for hematopoietic or immune reconstitution of a human by introducing into the human a composition comprising human neonatal or fetal hematopoietic stem cells derived from the blood	
US5197985	HAYNESWORTH; STEPHEN E. US	Yes	Yes		mesenchymal stem cells that have been isolated, purified and culturally expanded from a bone marrow specimen, further differentiated into bone cells		mesenchymal stem cells	human marrow	Repairing skeletal defects or repairing damaged articular cartilage by implanting the porous carrier containing the mesenchymal stem cells into the defective skeletal tissue	

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US5199942	Immunex Corporation, Seattle, WA, US		Yes				hematopoietic progenitor cells	Blood and marrow	autologous transplantation for cytoreductive therapy	
US5226914	HAYNESWORTH; STEPHEN E. US	yes				Method of repairing connective tissue damage, a method for enhancing implantation of a prosthetic device in connective tissue, a method for generating a human hematopoietic stem cell reserve	mesenchymal cells	human marrow-derived		Prosthetic device
US5229265	Litron Laboratories, Rochester, NY, US		yes			A flow cytometry process for determining changes, caused by chemical or biological agents, in blood or bone marrow cell populations	blood Stem cells	mice		
US5240856	CellPro Incorporated, Bothell, WA, US									A cell separator in combination with a column for collecting target cells from a sample fluid

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US5252479	Research Corporation Technologies, Inc., Tucson, AZ, US					An expression vector for site-specific integration and cell-specific expression	a hematopoietic stem or progenitor cell.			
US5256534	The United States of America as represented by the Department of Health and Human Services, Washington, DC, US			A purified and isolated cell line which is derived from a hematopoietic cell and wherein the cells of said cell line are CD4.sup.+ and comprise a latent HIV-1 provirus.			hematopoietic cell			
US5256560	University of Saskatchewan, Saskatoon, CA			A suspension of mammalian, non-murine, non-human cells comprised of pluripotent lymphohematopoietic non-adherent progenitor stem cells (NA cells) substantially free of mature lymphoid and myeloid cells and A suspension of pluripotent lymphohematopoietic non-adherent progenitor stem cells (NA cells) derived from a human			pluripotent lymphohematopoietic non-adherent progenitor stem cells	mammalian		

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US5258367	University of Florida, Gainesville, FL, US		yes			A method of stimulating hematopoietic cells in an animal with a hematopoietic disorder				
US5300422	Case Western Reserve University, Cleveland, OH, US	yes				A method of determining patient sensitivity to N-desme hylclozapine which comprises collecting heparinized blood from a patient, isolating CFU-GM, BFU-E and CFU-GEMM stem cells from said blood, subjecting said cells to a stem cell assay to determine the effect of N-desme hylclozapine on the growth of said cells and A method of detecting the onset of agranulocytosis complications in a patient on clozapine therapy	Stem cell	Blood or bone marrow		

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US5308764	The United States of America as represented by the Administrator of the National Aeronautics and Space Administration, Washington, DC, US			A multi-cellular, three-dimensional, differentiated, living mammalian tissue of at least two distinct originating cell types in which one cell type is fibroblasts and the other cell type is pluripotent human adenocarcinoma.			pluripotent adenocarcinoma	human		
US5328695	Massachusetts Institute of Technology, Cambridge, MA, US	yes	yes	A protein isolate comprising one or more water soluble proteins isolated from mammalian bone, wherein the protein isolate selectively stimulates stem cell myogenic lineage commitment and differentiation into myotubes and multinucleated structures in vitro and in vivo	A method of inducing myogenesis in undifferentiated stem cells in culture or in a patient in need of treatment thereof		stem cell			

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US5340740	North Carolina State University, Raleigh, NC, US	yes			A method of producing a sustained culture of undifferentiated avian cells expressing an embryonic stem cell phenotype		Embryonicstemcell	avian		
US5342776	BOLNET MARIE C N DIETERLEN LIEVRE FRANCOISE A	yes		A cell culture consisting essentially of isolated early avian hemopoietic progenitor cells and An isolated early avian hemopoietic progenitor cell and A pharmaceutical formula ion consisting essentially of early avian hemopoietic progenitor cells	A method of culturing avian hemopoietic cells in a culture medium		hemopoietic cells	avian		

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US5354557	Stryker Corporation, Kalamazoo, MI, US						migratory progenitor cells	mammal		An osteogenic device for implantation in a mammal, the device comprising: osteogenic protein dispersed within a biocompatible, in vivo biodegradable matrix defining pores of a dimension sufficient to permit influx, differentiation, and proliferation of migratory progenitor cells from the body of said mammal
US5359046	Cell Genesys, Inc. The Regents of the University of California, Foster City, CA Oakland, CA, US			A hematopoietic stem cell comprising a DNA sequence encoding a membrane bound protein			hematopoietic stem cell			

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US5362716	The United States of America as represented by the Department of Health and Human Services, Washington, DC, US		yes		A method of stimulating hematopoietic progenitors comprising administering to mammals a hematopoietic progenitor stimulating effective amount of Hepatocyte Growth Factor and at least one other growth factor selected from the group consisting of IL-3 and GM-CSF.		hematopoietic progenitors	mammalian		
US5374658	Ortho Pharmaceutical Corporation, Raritan, NJ, US		yes			A method for the selective suppression of at least one subpopulation of deleterious cells within a graft population of mammalian cells	myeloid progenitor cells	mammalian		
US5397706	CORREA; PAULO N. ALEXRAD; ARTHUR A., CA/CA			A basal serum-free medium for maintaining cells selected from the group consisting of hematopoietic stem cells, hematopoietic progenitor cells and leukemia cells			hematopoietic stem cells, hematopoietic progenitor cells			

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US5399493	The Regents of the University of Michigan, Ann Arbor, MI, US	yes			A method for obtaining ex vivo human hematopoietic stem cell stable genetic transformation		hematopoietic stem cell	human		
US5405772	Amgen Inc., Thousand Oaks, CA, US			A medium for the long-term proliferation and development of cells			hematopoietic progenitor cells			
US5409813	SyStemix, Inc., Palo Alto, CA, US	yes				A method for selectively separating at least one mammalian target cell population from a suspension of a mixture of cell populations wherein the suspension contains the target cell population and at least one nontarget cell population	hematopoietic stem cells and hematopoietic progenitor cells	human		

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US5411883	Somatix Therapy Corporation, Alameda, CA, US	yes		A culture consisting essentially of mammalian ventral mesencephalon neuron progenitor cells or mammalian ventral mesencephalon neuron progenitor cells and their differentiated counterparts	A method for producing a culture comprising neuron progenitor cells		ventral mesencephalon neuron progenitor cells or ventral mesencephalon neuron progenitor cells	mammalian		
US5416260	University of North Carolina at Chapel Hill, Chapel Hill, NC, US		yes	A genetically engineered mouse characterized by inactivation of the .beta..sub.2 - microglobulin gene and lacking functional Class I major histocompatibility complex antigens		A method of producing a genetically engineered mouse lacking functional Class I major histocompatibility complex antigens	embryonic stem cells	mouse		
US5434340	GenPharm International, Inc., Mountain View, CA, US		yes	A transgenic mouse		A method for producing a transgenic mouse	embryonic stem cell	mouse		

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US5436151	Regents of the University of Minnesota, Minneapolis, MN, US	yes			cell culture method comprising culturing in vitro a population of hematopoietic human stem cells supported in a non-contacting relationship to a supported population of cultured stromal cells		hematopoietic stem cells	human		
US5437994	Regents of The University of Michigan, Ann Arbor, MI, US	yes			A method for obtaining ex vivo human stem cell division comprising culturing a human hematopoietic stem cell composition in a liquid culture medium and A method for culturing a human hematopoietic progenitor cell composition comprising culturing human hematopoietic progenitor cells in a liquid culture medium		hematopoietic progenitor cell	human		

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US5453357	Vanderbilt University, Nashville, TN, US	yes		A composition comprising: (a) pluripotential embryonic stem cells; and (b) a fibroblast growth factor, leukemia inhibitory factor, membrane associated steel factor, and soluble steel factor in amounts to enhance the growth of and allow the continued proliferation of the cells.	A method of making a pluripotential embryonic stem cell	A method of screening cells which can be promoted to become pluripotential embryonic stem cells	pluripotential stem cells	embryonic		
US5460964	Regents of the University of Minnesota, Minneapolis, MN, US	yes			A cell culture method comprising culturing in vitro a population of human hematopoietic cells comprising stem cells or committed progenitor cells		hematopoietic cells	human		
US5464753	RONINSON; IGOR B. US	yes			A method of purifying a P-glycoprotein expressing pluripotential hematopoietic stem cell from a mixture of blood or bone marrow cells		pluripotential hematopoietic stem cell	blood or bone marrow		

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US5464764	University of Utah Research Foundation, Salt Lake City, UT, US	yes		A positive-negative selection (PNS) vector for modifying a target DNA sequence contained in the genomes of murine embryonic stem cells	A method for enriching for a transformed murine embryonic stem cell containing a modification in a target DNA sequence in the genome of said cell		embryonic stem cell	murine		