

Stem cell new important key for servive human

Shima Parviz Persian Gulf University

index

What are Stem Cells? Recent Research on Stem Cells Stem Cell Research Timeline Concerns About Stem Cells Treatments done in the world Recommended Sites

SnapShot: Directed Differentiation of Luis A. Williams, Brandi N. Davis-Dusenbery, and Kevin C. Eggan

Ce

HHMI, Harvard University, Cambridge, MA 02138, USA This StateShot was previously published in Cell 149, May 25, 2012 62012 Baevier Inc. DOI 10.1016/j.cell.2012.05.015



STEMCELL Technologies is committed to making sure your research works. As scientists helping scientists, we support our customers by creating novel products with consistent unfailing quality and by providing unparalleled technical support.

For reproducible hPSC differentiation to specific lineages:

- For ectoderm: STEMdiff™ Neural Induction Medium (Catalog #05835)
- For endoderm: STEMdiff[™] Definitive Endoderm Kit (Catalog #05110)
- For user-directed differentiation to any lineage: STEMdiff™ APEL™ Medium (Catalog #05210)
- . For formation of uniform embryoid bodies: AggreWell™ plates (Catalog #27845)

Other key products for reprogramming and maintenance:

- Generate human IPS cells with feeder-free and defined TeSRTM-E7TMreprogramming medium (Catalog #05910)
- Support differentiation to numerous cell types with mTeSR™1, the most widely published feeder-free culture medium for hPSCs (Catalog #05850)



Cell

Scientists Helping Scientists[™] | WWW.STEMCELL.COM

What are Stem Cells? (NIH definition)

Stem cells have the remarkable potential to develop into many different cell types in the body during early life and growth. In addition, in many tissues they serve as a sort of internal repair system, dividing essentially without limit to replenish other cells as long as the person or animal is still alive.



When a stem cell divides, each new cell has the potential either to remain a stem cell or become another type of cell with a more specialized function, such as a muscle cell, a red blood cell, or a brain cell



What are the unique properties of all stem cells?

Stem Cells can Divide and Renew Themselves Stem Cells are Unspecialised Stem Cells Can Give Rise to Specialised Cells

Other properties of all stem

1-Retain a normal karyotype2-Cell proliferation in the absence of serum3- No need to contact inhibition

4-

Totipotent embryonic stem cell







the ability to differentiate into all possible cell types.





the ability to differentiate into almost all cell types.



Pluripotent Stem Cells

Multipotent

the ability to differentiate into a closely related family of cells



Unipotent

the ability to only produce cells of their own type, but have the property of self-renewal required to be labeled a stem cell.



TYPES OF STEM CELLS

Embryonic Stem Cell (ESC)
Adult stem Cell (ASC)
Cancer Stem Cell (CSC)

Embryonic stem cells

Embryonic stem cells are derived from a four- or fiveday-old human embryo that is in the blastocyst phase of development. The embryos are usually extras that have been created in IVF (in vitro fertilization) clinics where several eggs are fertilized in a test tube, but only one is implanted into a woman.



Making embryonic stem cells

Derived from eggs fertilized at an in vitro fertilization clinic, then donated for research purposes.



Embryonic Germ Stem Cell



Adult stem cells

Adult or somatic stem cells exist throughout the body after embryonic development and are found inside of different types of tissue. They remain in a quiescent or non-dividing state for years until activated by disease or tissue injury.



1-Bone marrow derived stemcell



A-Bone marrow stromal stemcell





B-Hematopoietic stem cells (HSC)



Sources of hematopoietic stem cells

1-Bone Marrow 2-Peripheral Blood 3-Umbilical Cord Blood 4-Fetal Hematopoietic System

2-Neural stem cell





Neural stem cells or progenitor cells as brain tumor initiating cells?



3- adult stem cells derived from adipose tissue



Cancer stem cells



Types of stem cells and where they come from:

Skin

Tissue stem cells

Embryonic stem cells

These cells are created from the

inner cell mass of a blastocyst.

Tissue stem cells allow us to develop, grow, heal and replace worn out cells.



Bone & Blood

Most tissues have tissue stem cells.

They are important at all stages of life.

Nervous

system





Inner cell mass

~150 cells — 200 micrometers



Cells are collected then grown on plates in a laboratory.

iPS cells (induced pluripotent stem cells) Cells from a person are genetically reprogrammed in a laboratory. The modified cells begin to gain the ability to self-renew and differentiate like embryonic stem cells can. 'embryonic-like' stem cells



when extracting embryonic stem cells, the blastocyst stage signals when to isolate stem cells by placing the "inner cell mass" of the blastocyst into a culture dish containing a nutrient-rich broth. Lacking the necessary stimulation to differentiate, they begin to divide and replicate while maintaining their ability to become any cell type in the human body. Eventually, these undifferentiated cells can be stimulated to create specialized cells.

Stem cell culture

000

Stem cell lines

Once stem cells have been allowed to divide and propagate in a controlled culture, the collection of healthy, dividing, and undifferentiated cells is called a stem cell line.



Stem cell therapy







1956 First bone marrow transplant performed in US

1978 Stem cells are discovered in human cord blood

1988 First cord blood transplant performed in a patient with Fanconi anemia

1996 First mammal cloned from an adult (somatic) cell - Dolly the sheep is born at Roslin Institute, Scotland

1998 Osiris Therapeutics (US), begins first trial using mesenchymal stem cells (MSCs) in bone marrow transplants and now has two MSC products in clinical trials for several indications including GvHD, Crohn's disease, diabetes and cardiac disease

2006 Shinya Yamanaka and colleagues at Kyoto University create the first iPS cells from mouse somatic cells

2008 Harvard researchers publish first disease specific iPS lines for diseases including Parkinson's, Down Syndrome, juvenile disbetes and Huntington's disease

2009 ASCC funds early phase clinical trial at UNSW to further test the use of eye stem cells on contact lenses to treat blinding corneal disease

2010 in Oct, Geron (US) announces it has commenced the world's first in human phase I clinical trial of a hESC based therapy for acute spinal cord injury

2010 in Nov, Advanced Cell Technology (USA) receives FDA approval to begin clinical trials using a hESC derived treatment for a rare type of blindness known as Stargardt's Macular Dystrophy **1961** Canadians James Till and Ernest McCulloch prove the existence of stem cells in the bone marrow

1951 First embryonic stem cells are derived from a mouse blastocyst

Before 1998

After 1998

1995 First embryonic stem cell line derived from a non-human primate

1995 James Thomson, University of Wisconsin-Madison, publishes the first paper in *Science* describing human embryonic stem cells (hESCs)

2000 First stem cells derived from an SCNT embryo in a mouse

2007 Thomson, Yamanaka and others publish the creation of iPS cells from humans

2005 Mesoblast (Aus) established in 2004, announce successful results from a clinical trial using MSC precursor cells to treat long bone fractures and now have a pipeline of products in clinical trials using MSCs to treat several indications including bone repair and cardiac disease

2010 Scientists at Stanford University directly reprogram fibroblasts to neurons without needing to return the cells to pluripotency first

2010 in Nov, Re Neuron (UK) announces it has commenced the world's first human phase I clinical trial of stem cell therapy for disabled stroke patients using cells derived from foet al stem cells Stem Cell Research Timeline
January 25, 2012: Blindness eased by historic stem cell treatment

Two people with eye degeneration both say their vision improved in the four months after they received implants of retinal pigment epithelial cells made from hESCs (human embryonic stem cells). The treatments were also safe, with no sign that the cells triggered aggressive tumours called teratomas, no sign of immune rejection of the cells, and no inflammation.

December 28, 2012: Scientists Create Stem Cells From Urine

Chinese scientists from the Guangzhou Institutes of Biomedicine and Health have converted cells found in urine into pluripotent stem cells that can be used to create neurons and brain cells. The researchers say the find holds huge potential for the rapid testing and development of new treatments for neuro-degenerative disorders

June 2013: Pluripotent Stem Cells **Derived from Cloned Human Embryos** Scientists recovered stem cells from cloned human embryos, a longstanding goal that could lead to new treatments for such illnesses as Parkinson's disease and diabetes, using somatic nuclear transfer, or SCNT

July 2013: Human Liver Created from Stem Cells

Scientists in Japan said they had grown human liver tissue from stem cells in a first that holds promise for alleviating the critical shortage of donor organs. August 2013: The World's First Test-Tube Burger is Made from Cow Stem Cells

Created by Dutch scientist Mark Post of Maastricht University in the Netherlands, the world's first test-tube burger, made from lab-grown meat, has been cooked and eaten in London on August 5, 2013. The 142g patty was made from 20,000 strips of meat grown from cow stem cells.

April 2014: British scientists make custom-made body parts using stem cells

London's Royal Free hospital, and others around the world, create custom made organs and body parts using stem cells. 'The new body part begins as a glass mould, based on the original, which is sprayed with a synthetic honeycomb-like material to create a framework for stem cells to cling to. The mould is then removed and the honey- comb covered with millions of 'blank cells' which, with the right nutrients, can turn into the cartilage of the organ. Meanwhile, the skin on another area of the body is gradually stretched by a small balloon placed under the surface and inflated until it is loose enough to accommodate the organ. After several months, the body part is taken out from under the skin and sewn into the right place.'

Over 70 diseases can currently be treated with cord blood stem cells such as

Leukemia

bout 2,000 children are diagnosed with childhood Leukemia each year

Immune Deficiency Diseases

"For several life threatening primary immune deficiencies, stem cell transplantation offers the chance of a dramatic, complete and permanent cure". National Institute of Child Health and Human Development

Myelomas

About every four minutes one person in the world is diagnosed of Blood Cancer.

Sickle Cell Anemia

About 300,000 babies with a severe form of the disease are born worldwide

Lymphoma

About 628,415 people are currently living with Lymphoma or are in remission.

Thalassemia

"Approximately 5% of the world's population are carriers of a trait gene for Thalassemia

The potential therapies being researched by cord blood stem cells include

Diabetes

Worldwide 70,000 children develop type 1 diabetes annually, almost 200 children a day

Alzheimer's

There are currently about 18 million people worldwide with Alzheimer's disease. This figure is projected to nearly double by 2025

Parkinson's

An estimated seven to 10 million people worldwide are living with Parkinson's disease

Cerebral Palsy

10,000 babies and infants are diagnosed annually with cerebral palsy

Spinal Cord Injury

Currently there are nearly 1 in 50 people living with Spinal Cord Injury -- approximately 6 million people in the world.

Stroke

World Health Organization and other leading stroke experts say stroke claims 5.8 million lives each year..

Muscular Dystrophy

500 - 600 male newborns are diagnosed with muscular dystrophy each year in the US

Recent Research on Stem Cells

The following are recent research journals from US National Library of Medicine National Institutes of Health's pubmed.gov directory on the use of stem cells for various diseases and conditions:

Stem cell treatment may reduce impairment caused by dementia

Researchers said the treatment could be used for several conditions that include dementia.

By Stephen Feller | Oct. 15, 2015 The study is published in Stem Cell Reports.

Stem Cells and ALS

Amyotrophic lateral sclerosis (ALS) is a neurodegenerative disorder of upper and lower motor neurons, characterized by progressive muscular atrophy and weakness which culminates in death within 2-5years...

J Clin Neurosci. 2013 Oct 19. pii: S0967-5868(13)00357-3. Author: Meamar R, Nasr-Esfahani MH, Mousavi SA, Basiri K, Stem cell therapy in amyotrophic lateral sclerosis.

Stem Cells and Alzheimer's

Alzheimer's disease (AD) is an irreversible neurodegenerative disease, still lacking proper clinical treatment. Therefore, many researchers have focused on the possibility of therapeutic use of stem cells for AD...

Neurodegener Dis. 2013 Oct 23. Author: Chang KA, Kim HJ, Joo Y, Ha S, Suh YH. The therapeutic effects of human adipose-derived stem cells in Alzheimer's disease mouse models

Stem Cells and Arthritis

Interleukin-6 (IL-6) is a pleiotropic cytokine with significant functions in the regulation of the immune system. As a potent pro-inflammatory cytokine, IL-6 plays a pivotal role in host defense against pathogens and acute stress...

Pharmacol Ther. 2013 Sep 27. pii: S0163-7258(13)00193-9. Author: Yao X, Huang J, Zhong H, Shen N, Faggioni R, Fung M, Yao Y. **Targeting interleukin-6 in inflammatory autoimmune** diseases and cancers.

Stem Cells and Cerebral Palsy

Adult neural stem cells contribute to neurogenesis and plasticity of the brain which is essential for central regulation of systemic homeostasis. Damage to these homeostatic components...

Cytotherapy. 2013 Oct 5. pii: S1465-3249(13)00561-6. Author: Wang X, Cheng H, Hua R, Yang J, Dai G, Zhang Z, Wang R, Qin C, An Y.

Effects of bone marrow mesenchymal stromal cells on gross motor function measure scores of children with cerebral palsy: a preliminary clinical study.

Stem Cells and Diabetes

Adult neural stem cells contribute to neurogenesis and plasticity of the brain which is essential for central regulation of systemic homeostasis. Damage to these homeostatic components...

Rev Endocr Metab Disord. 2013 Oct 25. Author: Purkayastha S, Cai D. Disruption of neurogenesis by hypothalamic inflammation in obesity or aging.

Stem Cells and Heart Disease

Despite significant therapeutic advances, the prognosis of patients with heart failure (HF) remains poor, and current therapeutic approaches are palliative in the sense that they do not address the underlying problem.

Circ Res. 2013 Aug 30;113(6):810-34. Author: Sanganalmath SK, Bolli R. Cell therapy for heart failure

Stem Cells and Lupus

Recent evidence suggests that enhanced neutrophil extracellular trap (NET) formation activates plasmacytoid dendritic cells and serves as a source of autoantigens in SLE. We propose that aberrant NET formation...

J Clin Invest. 2013 Jul 1;123(7):2981-93. Author: Knight JS, Zhao W, Luo W, Subramanian V, O'Dell AA, Yalavarthi S, Hodgin JB, Eitzman DT, Thompson PR, Kaplan MJ. **Peptidylarginine deiminase inhibition is immunomodulatory and vasculoprotective in murine** *lupus.*

Stem Cells and Macular Degeneration

Diabetic retinopathy (DR) is the leading cause of visual loss in the developed world in those of working age, and its prevalence is predicted to double by 2025. The management of diabetic...

Clin Med. 2013 Aug;13(4):353-7. Author: Williams MA, Chakravarthy U. **Evidence underlying the clinical management of** diabetic macular oedema.

Stem Cells and Multiple Sclerosis

Interleukin (IL)-10 is an important immunoregulatory cytokine shown to impact inflammatory processes as manifested in patients with multiple sclerosis (MS) and in its animal model, experimental autoimmune...

Brain Behav Immun. 2013 May;30:103-14. Author: Payne NL, Sun G, McDonald C, Moussa L, Emerson-Webber A, Loisel-Meyer S, Medin JA, Siatskas C, Bernard CC.

Human adipose-derived mesenchymal stem cells engineered to secrete IL-10 inhibit APC function and limit CNS autoimmunity.

Stem Cells and Muscular Dystrophy

Stem cell transplantation is being tested as a potential therapy for a number of diseases. Stem cells isolated directly from tissue specimens or generated via reprogramming of differentiated cells require...

Hum Gene Ther. 2013 Oct 23. Author: Rozkalne A, Adkin C, Meng J, Lapan A, Morgan J, Gussoni E. Mouse regenerating myofibers detected as falsepositive donor myofibers with anti-human spectrin.

Stem Cells and Parkinson's

IMPORTANCE Recent advances in stem cell technologies have rekindled an interest in the use of cell replacement strategies for patients with Parkinson disease...

JAMA Neurol. 2013 Nov 11. Author: Kefalopoulou Z, Politis M, Piccini P, Mencacci N, Bhatia K, Jahanshahi M, Widner H, Rehncrona S, Brundin P, Björklund A, Lindvall O, Limousin P, Quinn N, Foltynie T. Long-term clinical outcome of fetal cell transplantation for Parkinson disease

Stem Cells and Spinal Cord Injury

Since several years, adult/perinatal mesenchymal and neural crest stem cells have been widely used to help experimental animal to recover from spinal cord injury...

Stem Cells. 2013 Oct 23. Author: Neirinckx V, Cantinieaux D, Coste C, Rogister B, Franzen R, Wislet-Gendebien S.

Spinal cord injuries: how could adult mesenchymal and neural crest stem cells take up the challenge?

Stem Cells and Stroke

Even after decades of intensive studies, therapeutic options for patients with stroke are rather limited. Thrombolytic drugs effectively treat the very acute stage of stroke, and several neuroprotectants...

Cell Transplant. 2013 Oct 22. Author: Yoo J, Seo JJ, Eom JH, Hwang DY.

Enhanced recovery from chronic ischemic injury by bone marrow cells in a rat model of ischemic stroke

Treatments done in the world



Stom Coll Treatment

Patient Videos

ALS

Patient Letter: Anait

Alzheimer's

- Patient Letter: Srila
- Patient Letter: Charles

Autism

- Patient Letter: Benz
- Patient Letter: Kyle
- Patient Letter: Margaret
- Patient Letter: William

Brain Damage

- Patient Letter: Louis
- Patient Letter: Jonathar
- Patient Letter: Terrie

Cancer

Patient Letter: Bob

Cerebral Palsy

- Patient Letter: Allan
- Patient Letter: Chris
- Patient Letter: Kate

Cerebral Palsy

- Patient Letter: Allan
- Patient Letter: Chris
- Patient Letter: Kate

Chronic Pain

Patient Letter: Robert

COPD

Patient Letter: Marge

Diabetes

🕟 Patient Letter: Sujatha

Down Syndrome

Patient Letter: Luca

Epilepsy

- Patient Letter: Aaron
- Patient Letter: Carol
- Patient Letter: Jennifer
- Patient Letter: Bupinder

Fibromyalgia

- Patient Letter: Susan
- Patient Letter: Taylor

Longevity and Anti-Aging

Patient Letter: Marty

Lupus

- Patient Letter: Jackie
- Patient Letter: Moriah
- Patient Letter: Sandra

Mitochondrial Disorder

Patient Letter: Ellen

Multiple Sclerosis

- 😼 Patient Letter: Leah
- Patient Letter: Lisa
- Patient Letter: Sam

Muscular Dystrophy

Patient Letter: Arnold

Parkinson's

- Patient Letter: Alan
- Patient Letter: Andrea
- Patient Letter: Broderick

Rheumatoid Arthritis

Patient Letter: Jacky

Seizures

- Patient Letter: Allison
- Patient Letter: Kevin

Spinal Cord Injury

- Patient letter: Donny
- Patient letter: Sara

Spinal Muscular Atrophy

Patient Letter: Ellie

Stroke

- Patient Letter: Harold
- Patient Letter: Melissa

Patient Letter: Brian - Stroke

After Neurosurgery



Comatose



On Life Support



Receiving His "Last Rites"



4 Months After Treatment



2 Years After Treatment







UKSCF | FOUNDATION

Helping the Body Overcome Illness and Injury



	.com.cn	☆ ♀ :
Home About Us Stem Cell Treatments Case Analysis Clinic	Hotwords: sequela, st glaucoma, ical Center Patient's Stories Q&A Stem C	Spanish Arabic Search als, liver, sma, diabetes, motor, ataxia, troke, result, kidney, cp, medication, india, cerebralpa, duchenne, alzheimer', cristian, cell Research Contact Us
Stem Cell Treatments more >> Spinal Cord Injury 1. Spinal Cord Injury Brief Introduction A pressure or cut on the spinal cord can cause damage of gray matter in the spinal cord nerve cells. The white matter nerve fiber and the different amounts of hemorrhaging, where the most severe is in the ce [Read more] Clinical study of neural stem cell transplantation for the treatment of spinal cord injury By:Like Wu , Xiaojuan Wang , Bo Cheng, Saichun Chu, Shuangshuang Liu , Xinrui Xi , Fang Peng , Xiang Wang , Xueyan Feng Wu Medical Center Abstract: Objective : To evaluate clinical therapeutic effect of the neural stem cell (NSC) transplantation for [Read more]	Worldwide Reports on WMC BBC The Washington Post China News Agency CNN Patient's Stories	send an inquiry The Parkinson's Center Twitter Facebook Expert blog Patient's Stories
Wu Medical Center used neural stem cell transplantation for the treatment of spinal cord injury in a progress reportBy:Like Wu, Xiaojuan Wang, Bo Cheng, Saichun Chu, Shuangshuang Liu, Xinrui Xu, Fang Peng, Xiang Wang, Xueyan Feng Wu Medical Center Spinal cord injury (SCI) can cause damage below the motor, sensory and the sphincters. Because nerve damage cannot be [Read more]Stem Cell Researchmore >>Neural Progenitor cells derived from adult bone marrow mesenchymal stem	Image: Second system Tadeo - Cerebral palsy (Argentina) updaye on May 13th, 2015 Image: Second system Ana Florencia Maria Castillo- Cerebral palsy-(Argentina)-	 » ALS » Alzheimer's Disease » Anti-aging » Ataxia » Autism » Autoimmune Disease » Batten Disease » Brain Injury » Cerebral Palsy



Home > Patient's Stories

Stories sorted by categories of disease/disorder

ALS	Alzheimer's Disease	The Parkin
Anti-aging	Ataxia	Cente
Autism	Autoimmune Disease	Twitter
Batten Disease	Brain Injury	Facebook
Cerebral Palsy	Charcot-Marie-Tooth Disease	Expert blog
Chorea	CIDP	Patient's Stories
Dementia	Diabetes	
Encephalomyelitis	Epilepsy	Stem Cell Treatments
Eye Disorders	Huntington's Disease	» Spinal Cord Injury » Clinical study of
Motor Neuron Disease	MS (Multiple Sclerosis)	transplantation for the trea
MSA	Muscular Dystrophy	» Wu Medical Center us
Others	Parkinson's Disease	transplantation for the trea
Spinal Cord Injury	Spinal Muscular Atrophy	 Optic Neuropathy(Atrop
Stroke	West Syndrome	 Chorea Charcot-Marie-Tooth Dis

send an inquiry
The Parkinson's
Center
]► Twitter
]▶ Facebook
● Expert blog
D Patient's Stories

- Spinal Cord Injury

Clinical study of neural stem cell ansplantation for the treatment of spinal cord jury

Wu Medical Center used neural stem cell ansplantation for the treatment of spinal cord jury in a progress report

- Optic Neuropathy(Atrophy)
- Chorea
- Charcot-Marie-Tooth Disease
- Autism >>

» Huntington's Disease

Sevda Rec Rech-Spinal Cord Injury-(Macedonia)-Posted on October 26th, 2015



Name: Sevda Rec Rech Sex: Female Country: Macedonia Age: 40 Years Diagnosis: 1. Seguel of Spinal Cord Injury 2. Hyperlipidemia Date of Admission: Sept. 25, 2015 Treatment hospital/period: Wu Medical

Center/19 days Before treatment: 17 years ago, th

[Read more...]

Mohamed Amin Abdullateef-Spinal Cord Injury-(Egypt)-Posted on Sept.21th,2015



Name: Mohamed Amin Abdullateef Sex: Male Country: Egypt Age: 32 years Diagnosis: Sequela of Spinal Cord Injury Date: Aug 16th, 2015 Days Admitted to Hospital: Wu Medical Center/21 days Before treatment: 2 years

ago, patient was injured by firearm we

[Read more...]

Carlos Matias Garces Todorivich-Spinal Cord Injury-(Chile)-Posted on Aug.19th, 2015



Name: Carlos Matias Garces Todorivich Sex: Male Nationality: Chile Age: 23Years Diagnosis: 1. Spinal Cord Injury 2. Hyperthyroidism Date of Admission: July 10th, 2015 Treatment hospital/period: Wu Medical Center/21

days Before treatment: 3 years ag

[Read more...]

Angel-Spinal Cord Injury-(USA)-Posted on June 18th,2015



Name: Angel Sex: Female Age: 65Y Nationality: USA Diagnosis: 1. Post of spinal vascular diseases 2. Spinal cord injury Date: March. 11th, 2015 Days Admitted to Hospital: 19 days Before treatment: Four years ago, the

patient was presented with pain

[Read more...]

Mohamed Amin Abdullateef-Sequel of SCI-(Egypt)-Posted on May 13th,2015



Name: Mohamed Amin Abdullateef Sex: Male Country:

Bouaziz-MS-(Tunisia)-Posted Lassaad on Jan.20th.2015



Name: Lassaad Bouaziz Sex: Male Country: Tunisia Age: 47 years Diagnosis: Multiple Sclerosis Date: December 19, 2014 Days Admitted to Hospital: 21 days Before treatment: Nine years ago (2005), the patient appeared paralyzed. The parts affected were

[Read more...]

Maria Elena Ramirez-Optical neuromyelitis (Venezuela) Posted on December 1,2014



Name: Maria Elena Ramirez Sex: Female Country: Venezuela Age: 38 years Diagnosis: 1. Optical neuromyelitis 2. Antiphospholipid syndrome 3. Post thyroid carcinoma resection, Secondary low thyroid

function 4. Iron deficiency anemia 5. Cardiac arrhythmi

[Read more...]

Dimitriy Lissitsyn - MS (Kazakhsta) Posted on July 28, 2014



Name: Dimitriy Lissitsyn Sex: Male Country: Kazakhsta Age:38 years Diagnoses: Multiple sclerosis, Urinary infection Date: June 29, 2014 Days Admitted to Hospital: 27 days Before treatment: About 14 years ago,

the patient suffered from sensory disorde

[Read more...]

James Dodds - Multiple sclerosis (Canada) Posted on April 28, 2014



Name: James Dodds Sex: Male Country: Canada Age: 43 Diagnosis: Multiple sclerosis Date: March 24, 2014 Days Admitted to Hospital: 28 days Before treatment: The patient suffered from dead limb and astriction 8 years

ago, without obvious incentive. The

[Read more...]

Sevavash Mahvi- Multiple sclerosis (United States) Posted on March 15, 2012

Name: Sevda Rec Rech Sex: Female Country: Macedonia Age: 40 Years Diagnosis: 1. Sequel of Spinal Cord Injury 2.

Hyperlipidemia Date of Admission: Sept. 25, 2015

Treatment hospital/period: Wu Center/19 days

Before treatment:

Medical

17 years ago, the patient had a car accident. She developed motor

function and sensory disturbance of her lower limbs. A local hospital

better life, so she came to our center. From the onset of disease, the

patient has been able to maintain a good spirits. She has a normal

diet and sleep. She has urine incontinence, and the excrement was

Bp: 124/79mmHg; Hr: 71/min. Temperature: 36.3 degree. Br: 18/min.

She was overweight. There was no yellow stain or petechia on

mucous membrane. The superficial lymph nodes were normal. Her

head type was normal, her eyelid was not dropsically. Her sclera was

not yellow. Her neck was flexible. The type and size of thyroid was

normal. The thorax was symmetrical. The respiratory sounds in both

lungs were clear, with no obvious moist or dry rales. The heart

sounds was strong, the rhythm of her heartbeat was normal. There

was no obvious murmur in the valves. The abdomen was flat and

soft. There was no pressing pain or rebound tenderness. The liver and spleen were normal. The peristaltic sound was normal. The

The Parkinso Center Twitter Facebook

Spinal Cord Injury » Clinical study of neural transplantation for the treatment injury

- » Wu Medical Center used ne transplantation for the treatment injury in a progress report
- » Optic Neuropathy(Atrophy)
- » Chorea

Charcot-Marie-Tooth Disease

- Autism

- » Multiple Sclerosis (MS)
- » Epilepsy

- Muscular Dystrophy
- Anti-aging
- » Cerebral Palsy

Commend Files

Sevda Rec Rech-Spinal (Macedonia)-Posted on Octobe Mohamed Amin Abdullateef Injury-(Egypt)-Posted on Sept.2

Hot Files

Marcelo Vanay-Spinal injury(Argentina) Posted on May Ali - Spinal cord injury (Qatar) March 10, 2014

» Amad Mohd Khany-Spinal (Saudi Arabia) Posted on Octob Ugarte - Sequelae of spinal (Argentina) Posted on February Ana mishova - Spinal

(Macedonia) Posted on Ser

diagnosed her with Spinal Cord Injury so she had an operation. After the operation, the patient swam every summer. The patient has not been able to move her legs recently. She can sit up with her arms supporting her. She can turn over with someone's help. She wants a

- » Huntington's Disease
- » Dementia CIDP
- Ataxia
- » Eye Disorders
- » Stroke
- » Brain Injury

- Parkinson's Disease

Expert blog Patient's Stories Stem Cell Treatments





dorsal artery beat of foot was weak. The feet and ankles were dropsically. Her blood lipid level was higher than normal.

Nervous System Examination:

normal. Her weight is normal.

Admission PE:

Sevda Rec Rech was alert and her speech was fluent. Her memory, calculation and orientation abilities were normal. Both pupils were equal in size and round, the diameter was 3.0 mms, both eyeballs

Concerns About Stem Cells

Despite the enormous therapeutic potential for stem cells to treat a vast array of serious diseases there are still concerns about potentially dangerous results. also be considered.

Passing on Viruses

A possible concern is that stem cell therapy could pass on viruses or other microscopic agents that cause disease. Patients who are receiving transplants often take strong drugs that essentially 'wipe out' their immune system. This is to reduce the chances of their body rejecting a transplant. The flip side is that if any viruses are present in the transplanted stem cells, a patient's immune system is completely vulnerable to disease.

Diseases From Other Animals

Animal sources may be used to provide nutrients to stem cells that are being cultivated in the laboratory. These sources could contain various diseases that may then be passed on to humans receiving cell-based therapies. A concern is that screening is currently insufficient to detect known diseases that may be present. Also, there may be diseases we are still yet unaware of that could be passed on to humans.

Uncontrolled Growth

One concern with embryonic stem cells is related to the very quality that makes them so useful and versatile. Embryonic stem cells are 'young' cells and tend to grow quickly; the fast growth must, however, be carefully guided by scientists. These stem cells need to be cultivated and directed into specialised cells with great care because the potential for remaining stem cells to grow uncontrolled could be disastrous. These uncontrolled cells could eventually form tumours.
Misdirected Growth

The possibility of transplanted stem cells differentiating into the wrong type of tissue is yet another concern regarding therapeutic stem cell use. Once stem cells are cultivated in a laboratory, researchers need to control and direct their growth into desired tissue cells. Scientists are attempting to overcome this problem by inducing partial stem cell differentiation prior to transplanting it into a patient. This would hopefully limit the capacity of the cells to differentiate into undesired tissue types once implanted



Thomas A. Gionis, MD JD MPH

While millions of dollars are being spent by most States each year on stem cell research, and while the National Institute of Health (NIH) spends \$1 Billion dollars per year on stem cell research, both the lay public and medical professionals continue to wonder: Where are we? How much have we learned? Are we making progress introducing stem cell therapy to the public?

Recommended Sites

http://www.stemcelltherapy.tv/

www.stemcelltherapy.tv



log

The Future of Medic

StemCell Therapy

Page 1 1 2 3 4 .. 10 20 .. »

Genetic and Genomic Healthcare: Ethical Issues of ...

November 5th, 2015 5:45 am

Dale Halsey Lea, MPH, RN, CGC, FAAN The complete sequencing of the human genome in 2003 has opened doors for new approaches to health promotion, maintenance, and treatment. Genetic research is now leading to a better understanding of the genetic components of common diseases, such as cancer, diabetes, and stroke, and creating new, gene-based technologies for screening, prevention, diagnosis, and treatment of both rare and common diseases. Nurses are on the forefront of care, and therefore will participate fully in genetic-based and genomic-based practice activities such as collecting family history, obtaining informed consent for genetic testing, and administering genebased therapies. Search this blog

Categories

Arthritis (96) Biotechnology (91) Blindness (61) Death by Stem Cells (172) Dental Stem Cells (146) Diabetes (74) Eye Sight & Vision (36) Fat Stem Cells (222) Gene therapy (150) Genetic Engineering (44) Genetic medicine (80) Genetics (47) Immune System (81) Integrative Medicine (140) Legal Issues Genetic Medicine (24)

http://www.stemcellpaintherapy.com/

www.stemcellpaintherapy.com



NEWS * Dr "Ty" has begun treating patients from around the world in his Orange County locations. *

Stem Cell Program



Stem Cell Process



Video Center



Get Started Today



http://www.stem-cell-treatment.com/

www.stem-cell-treatment.com



Treatments Using StemCells Contact Home

Categories

- Aesthetic Medicine
- Aesthetic Surgery
- FDA Stem Cell Trials
- Gene Therapy Trials
- Pet Stem Cell Therapy
- Retinitis Pigmentosa
- Stem Cell Clinical Trials
- Stem Cell Experiments
- Stem Cell Human Trials
- Stem Cell Injections
- Stem Cell Transplant
- Stem Cell Treatments

Stem Cell Search: Find	Archives Select Month
Page 1 1 2 3 4 10 20 »	Recent Posts Village Pointe Aesthetic Dreams MedSpa Or Challenges in Gene The Learn Genetics
Village Pointe Aesthetic Surgery & Dreams MedSpa Omaha, NE	 Understanding Stem Ce Transplant VICC Mome Stem Cell Transplant, B

Posted: November 4, 2015 at 12:42 pm

Village Pointe Aesthetic Surgery is proud to have four of the best board-certified plastic surgeons in Omahaand the surroundingregion.

- Surgery naha, NE
- rapy -
- -11 ntum
- one Marrow Transplant | Patient
- Stem cell transplant Canadian Cancer Society

http://sinostemcells.com/

inostemcells.com



Home Stem Cell Treatment Patient Experiences News Contact Us



STEM CELLS THERAPY

Effective stem cells therapy, extensive rehabilitation, professional patient services make our treatment facilities home away from home.

PATIENT EXPERIENCES

Stem cells therapy is effective in treatment of various of neurological and optic conditions. Learn about the treatment outcomes from here.

MORE INFORMATION

Contact us to get more information for your particular condition. Use our contact form, we will get back to you with details.

http://www.stemcellsresearch.tv/

www.stemcellsresearch.tv



Home Contact Us

Master of Science in Biotechnology | Advanced Academic ...

Register for November 12 MS in Biotechnology, MS in Bioinformatics, and Certificate in Biotechnology Education Open House in Baltimore.

The Johns Hopkins MS in Biotechnology offers a comprehensive exploration of basic science, applied science, and lab science, with an industry focus. The program gives you a solid grounding in biochemistry, molecular biology, cell biology, genomics, and proteomics.

This 10-course degree program is thesis-optional, part-time, and can be completed fully online. Our curriculum will prepare you to engage in research, lead lab teams, make development and planning decisions, create and apply research modalities to large projects, and take the reins of management and marketing decisions.

Many students like the flexibility of the general degree; it allows them to tailor the coursework to meet

Search

Categories

- Biotechnology
- Cell Medicine
- Cell Therapy
- Gene Therapy
- Genetic Engineering
- Genetic Medicine
- Genetics
- Integrative Medicine
- Molecular Genetics
- Nano medicine
- Pet Stem Cell Therapy
- Preventative Medicine
- Regenerative Medicine
- Stem Cell Therapy
- Stem Cells

http://www.explorestemcells.co.uk/

www.explorestemcells.co.uk



search explorestemcells

Expert Advice on Stem Cells (for Beginners)...

f you are finding it difficult to understand stem cells, you should know that many other people share your struggle. To make it easier for everyone, we have created a website that covers all you need to know about the topic. With regular updates and a language that speaks clearly, we hope that you will understand the potential of stem cells and how they might play a role in your life or that of someone you know.

December's Most Popular Articles...



Therapeutic Cloning: When people think of the word 'cloning' they are often hit with frightening images of duplicate human beings being created in somewhat of a mad scientist style... [2788 views in Dec]



Stem Cell Controversy: Mention the word 'foetus' and heated controversy is likely to soon follow. This is particularly the case in the field of embryonic stem cell research. Embryonic... [2196 views in Dec]



History of Stem Cell Research: Stem cells have an interesting history that has been somewhat tainted with debate and controversy. In the mid 1800s it was discovered that cells were... [1958 views in Dec]

Latest Comments

Q

A December 2015 namrata <u>Re: Stem Cells and Autism</u> is it possible to cure Autism by using Plant cell products? 2 2 December 2015

Explore StemCells Re: Ovarian Function and Stem Cells

Doca - Your Question:I'm 42 with hypothyroid therapy, and I'm interested in participating in your trial. I' ve had 4 natural...

Explore StemCells Re: Stem Cells and Same Sex

www.stemcellresearchfacts.org

→ C D www.stemcellresearchfacts.org/what-is-a-stem-cell/ ☆ ♥



www.stemcellsportal.com

www.stemcellsportal.com C



December 7, 2015 Normal and Leukemic Stem Cells Fight for a Place to Call Home In the News >

December 23, 2015 Study shows Vitamin A effective in

Sepsis: Cell therapy to repair muscle long-term

drug (SD & Nat Med)

← → C △ https://stemcells.wisc.edu ☆ Wisc.edu

About

Faculty

Research

Home

The mission of the University of Wisconsin-Madison Stem Cell and Regenerative Medicine Center (SCRMC) is to advance the science of stem cell biology and foster breakthroughs in regenerative medicine through faculty interactions, research support, and education.

Video welcome from our Co-director, Timothy Kamp.



Public Resources

Education

Search

Contact

SCRMC UPDATES

Support swells for vital university research using fetal tissue and cells

15th December 2015

Nearly 1,000 scientists and staff at the University of Wisconsin–Madison joined a growing chorus of objections to a state proposal to ban the use of fetal tissue in life-saving biomedical research by...

First serotonin neurons made from human stem cells

14th December 2015

Su-Chun Zhang, a pioneer in developing neurons from stem cells at the University of Wisconsin-Madison, has created a specialized nerve cell that makes serotonin, a signaling chemical with a broad...



www.nyscf.org

$extsf{abs} \leftarrow \rightarrow \mathbf{C} \quad \texttt{D} \quad \mathsf{nyscf.org}$

☆ Ų

Q

Donate Now >>

Search.

NYSCF The New York Stem Cell Foundation

Accelerating Cures Through Stem Cell Research



NYSCF Research Innovators Other State O

EXPLORE NYSCF ...

www.stemcellsinc.com

ŵ

Ψ

← → C D www.stemcellsinc.com/News-Events/Highlights

STEM	CELLS	Groundbreaking science. Break	through medicine . [∞]		3 ¢ i
ABOUT US	SCIENCE	CLINICAL PROGRAMS	NEWS & EVENTS	INVESTORS	CONTACT
Vews & Events Events n the Media Video Library	NEWS	& EVENTS			
	On the horizon, is the great promise of stem cell therapeutics to treat, and possibly cure, a broad range of human diseases. Follow our progress as we work to make this vision a reality.			Media Contacts StemCells, Inc. Investor Relations (E-mail) +1 (510) 456-4128	
	Latest News		Email Signup We invite you to join our mailing lists		
	11/19/2015	StemCells, Inc. Interim Trial Data	Show Motor Improvement in	reports and events	

C 🗅 www.ucdmc.ucdavis.edu/stemcellresearch/





Health System | News | Careers | Giving | UC Davis

Disease Teams 👻 🔿

Clinical Studies Cores -

Newsroom Our Team

Training Giving Cord B

g Cord Blood Collection



SUPPORT FOR IND-ENABLING STUDIES

Support for IND-enabling studies available for academic and industry partners

Pause

Welcome to the UC Davis stem cell program

For patients and families suffering from chronic disease or injury, the promise of stem cell therapies offers great hope. UC Davis is a leader in advancing that promising goal.

It has brought together physiciana research estentiate his medical environment

Videos

- Bringing stem cell cures to the clinic
- CIRM Spotlight on Cardiovascular Therapies

¥ 🌵

Q



VANDERBILT 😽 UNIVERSITY



organize, share & archive your data

ন্দ্র



The mission of the Vanderbilt Center for Stem Cell Biology is to learn more about the biology of stem cells and mechanisms for directing their differentiation to specific cell fates.

Embryonic stem cells are able to differentiate into any of the many different cell types found in the body. A great deal remains to be learned about them, and how to convert them into various tissue and cell types that can be used to treat a variety of human diseases.

The Vanderbilt Center for Stem Cell Biology is home for the Coordinating Center for the Beta Cell Biology Consortium. A major goal of this consortium of scientists is to learn how to make pancreatic beta cells, which are destroyed in Type 1 diabetes, from embryonic stem cells.

Faculty



Aaron Bowman, Ph.D.

Faculty Member Member since 2009









Robert Coffey, MD Faculty Member Member since 2010





DC

Mark de Caestecker, M.B., Ph D



Ian Macara, Ph.D.

News

Sep. 28, 2015

VCSCB Staff Member Recognized for 40 Years of Service

Sep. 24, 2015

Welcome New VCSCB Faculty Members

Sep. 21, 2015

Welcome New Faculty Recruit, Vivian Gama, Ph.D.

View all news

Core Facilities





References:

http://stemcellofamerica.com/ http://thestemcellshow.com/ http://www.stemcellhistory.com/ http://stemcellpodcast.com/ http://www.explorestemcells.co.uk/ www.ukscf.org www.chinastemcell.com.cn http://www.wellcome.ac.uk/ http://stemcells.nih.gov/