

CURRENT STEM CELL BENEFITS IN HUMANS

Diseases Treatable With Adult Bone Marrow Stem Cells, Blood Stem Cells or Umbilical Cord Blood Stem Cells Transplant

sources include: www.marrows.org; www.viacord.com; www.cryo-cell.com

Diseases Treatable In Humans With Embryonic Stem Cells: NONE

Diseases Treatable with Adult Stem Cells:

Acute Leukemia's

- Acute Lymphoblastic Leukemia (ALL)
- Acute Myelogenous Leukemia (AML)
- Acute Biphentotypic Leukemia
- Acute Undifferentiated Leukemia

Chronic Leukemia's

- Chronic Myelogenous Leukemia (CML)
- Chronic Lymphocytic Leukemia (CLL)
- Juvenile Chronic Myelogenous Leukemia (JCML)
- Juvenile Myelomonocytic Leukemia (JMML)

Myelodysplastic Syndromes

- Myelodysplastic Syndrome
- Refractory Anemia (RA)
- Refractory Anemia with Ringed Sideroblasts (RARS)
- Refractory Anemia with Excess Blasts (RAEB)
- Refractory Anemia with Excess Blasts in Transformation (RAEB-T)
- Chronic Myelomonocytic Leukemia (CMML)

Hematopoetic Cell Disorders

- Aplastic Anemia (Severe)
- Fanconi Anemia
- Paroxysmal Nocturnal Hemoglobinuria (PNH)
- Pure Red Cell Aplasia

Myeloproliferative Disorders

- Acute Myelofibrosis
- Agnogenic Myeloid Metaplasia (myelofibrosis)
- Polycythemia Vera
- Essential Thrombocythemia

Lymphoproliferative Disorders

- Non-Hodgkin's Lymphoma
- Hodgkin's Disease

Phagocyte Disorders

- Chediak-Higashi Syndrome
- Chronic Granulomatous Disease
- Neutrophil Actin Deficiency
- Reticular Dysgenesis

Inherited Metabolic Disorders

- Mucopolysaccharidoses (MPS)
- Hurler's Syndrome (MPS-IH)
- Scheie Syndrome (MPS-IS)
- Hunter's Syndrome (MPS-II)
- Sanfilippo Syndrome (MPS-III)
- Morquio Syndrome (MPS-IV)
- Maroteaux-Lamy Syndrome (MPS-VI)
- Sly Syndrome, Beta-Glucuronidase Deficiency (MPS-VII)
- Adrenoleukodystrophy
- Mucopolipidosis II (I-cell Disease)
- Krabbe Disease
- Gaucher's Disease
- Niemann-Pick Disease
- Wolman Disease
- Metachromatic Leukodystrophy

Histiocytic Disorders

- Familial Erythrophagocytic Lymphohistiocytosis
- Histiocytosis-X
- Hemophagocytosis

Inherited Erythrocyte Abnormalities

- Beta Thalassemia Major
- Sickle Cell Disease

Inherited Immune System Disorders

- Ataxia-Telangiectasia
- Kostmann Syndrome
- Leukocyte Adhesion Deficiency
- DiGeorge Syndrome
- Bare Lymphocyte Syndrome
- Omenn's Syndrome
- Severe Combined Immunodeficiency (SCID)
- SCID with Adenosine Deaminase Deficiency
- Absence of T & B Cells SCID
- Absence of T Cells, Normal B Cell SCID
- Common Variable Immunodeficiency
- Wiskott-Aldrich Syndrome
- X-Linked Lymphoproliferative Disorder

Other Inherited Disorders

- Lesch-Nyhan Syndrome
- Cartilage-Hair Hypoplasia
- Glanzmann Thrombasthenia
- Osteopetrosis

Inherited Platelet Abnormalities

- Amegakaryocytosis / Congenital Thrombocytopenia

Plasma Cell Disorders

- Multiple Myeloma
- Plasma Cell Leukemia
- Waldenstrom's Macroglobulinemia

Other Malignancies

- Breast Cancer
- Ewing Sarcoma
- Neuroblastoma
- Renal Cell Carcinoma
- Langerhan's Cell Histiocytosis
- Severe Aplastic Anemia
- Diamond-Blackfan Anemia
- Dyskeratosis Congenita
- Amegakaryocytic Thrombocytopenia
- B- Thalassemia (Cooley's Anemia)
- Liposarcoma
- Burkitt's Lymphoma
- Batten disease (inherited neuronal ceroid lipofuscinosis)
- Gunther Disease
- Maroteaux-Lamy Syndrome
- Reticular Dysplasia
- Thymic Dysplasia
- Evans Syndrome

Successful Clinical Trials

Diabetes – Eleven out of 15 diabetes patients are “completely off insulin” after receiving adult Pancreatic cell transplants. (“Cell grafts lend freedom to diabetics,” *Medical Post*, June 19, 2001.)

Diabetes – Researchers at Harvard Medical School used animal adult stem cells to grow new islet cells to combat diabetes. Researcher Denise Faustman recalled, “It was astonishing! We had reversed the disease without the need for transplants.” Plans for human trials are underway. (“Adult stem cells effect a cure,” *Harvard University Gazette*, July 19, 2001.)

Parkinson's Disease – “Jefferson researchers have early evidence of bone marrow stem cells able to become brain cells.” (Thomas Jefferson University news release, Nov. 12, 2001.)

Heart Disease – “Four out of five seriously sick Brazilian heart-failure patients no longer needed a heart transplant after being treated with their own stem cells.” (“Stem cells used to repair heart tissue,” MSNBC News, accessed on September 8, 2003 at <http://www.msnbc.com/news/959999.asp>)

Researchers at New York University School of Medicine announced, “*There is a cell in the bone marrow that can serve as the stem cell for most, if not all, of the organs in the body.... This study provides the strongest evidence yet that the adult body harbors stem cells that are as flexible as embryonic stem cells.*” (“Researchers discover the ultimate adult stem cell,” *Science Daily Magazine*, May 4, 2001.)