

CALIFORNIA RIGHT TO LIFE

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ADULT Stem Cells Used in Treatment of Heart Disease - the # 1 Killer in the United States

By John Naughton

We once again welcome John Naughton to share some of his research on recent successes with Adult Stem Cells. This month John writes of "cures" for heart disease, which is the #1 killer in the United States.



1. Bone Marrow Stem Cells Heal Hearts Even Years After Heart Attacks -

Left ventricular function and exercise capacity increased, while the area of heart muscle damage shrank in 18 patients given infusions of their own bone marrow stem cells up to eight years after a heart attack. *Journal of the American College of Cardiology*, Nov. 1, 2005).

The researchers harvested bone marrow from the hipbones of the patients, so there was no threat of transplant rejection. Stem cells from the marrow were infused using a catheter into the coronary artery where the heart attack occurred. "This new therapy is able to treat until now irreversible complaints ...in patients with chronic coronary disease ... Therefore there is hope for a large number of patients ... with non-treatable complaints," said Bodo E. Strauer, M.D. from the Heinrich-Heine-University in Düsseldorf, Germany. Larger trials are already under way. Meanwhile, researchers continue to refine the harvesting, processing and delivering stem cells into the damaged tissue of heart attack patients.

2. Patients' Blood Treats Several Heart Conditions

"VesCell™ uses adult stem cells harvested from approximately ½ pint of the patients own blood to treat heart conditions. The cells are differentiated and expanded at TheraVita's Labs in Israel. They are ready for implantation in about one week.

Dr. Amit N. Patel, Director of Cardiac Stem Cell Therapies at the University of Pittsburgh Medical Center and Dr. Kitipan V. Arom, Chief Cardiac Surgeon at Bangkok Heart Hospital, described the minimally invasive technique of endoscopic injection

that is used to inject stem cells directly into the heart muscle at the International Society for Heart and Lung Transplantation Fall Education Meeting, Nov 21, 2005.

Dr. Patel received approval from the US FDA to initiate clinical trials using adult stem cells derived from bone marrow to treat heart patients at UPMC. However, in Thailand, he observed the procedures performed by Dr. Arom using VesCell. Dr. Patel believes that VesCell is as safe as cells taken directly from the patient's bone marrow – and safer than cells from muscle tissue.

3. Patients' Heart Cells - Adult Stem Cells Repair Heart Damage

Stem cells derived from human heart tissue develop into multicellular, spherical structures called cardiospheres that express the normal properties of primitive heart tissue, smooth muscle and blood vessel cells, according to a study by Johns Hopkins researchers. In a related study, cells grown in the laboratory from these cardiospheres and injected into the hearts of mice following a lab-induced heart attack migrated straight to damaged tissue and regenerated, improving the organ's ability to pump blood throughout the animal's body. Results from both studies were presented (Nov. 14, 2005) at the American Heart Association's annual Scientific Sessions in Dallas. "The findings could potentially offer patients use of their own stem cells to repair heart tissue soon after a heart attack, or to regenerate weakened muscle resulting from heart failure, perhaps averting the need for heart transplants," says Eduardo Marbán, M.D., Ph.D., senior author of both studies and professor and chief of cardiology at The Johns Hopkins University School of Medicine and its Heart Institute. "By using a patient's own adult stem cells rather than a donor's, there would be no risk of triggering an immune response that could cause rejection."

4. Bone Marrow Progenitor Cells - Stem Damage After Heart Attack

(HealthDay News Nov 14, 2005) -- When infused with progenitor bone marrow cells, patients showed almost double the improvement in the heart's ability to pump blood as did patients who were given a placebo. The benefit was most pronounced in patients who had had large heart attacks with greater damage to the heart muscle. "It's a very exciting first study, but there

are still some things that need to be defined by a greater number of patients," Dr. Timothy Gardner, medical director for the Center for Heart and Vascular Health at Christiana Care Health Services in Wilmington, Del. "It's startling in that the concept works," added Dr. Robert Bonow, chief of cardiology at Northwestern University in Chicago and past president of the American Heart Association.

The study authors distinguished between progenitor cell therapy and stem cell therapy. While similar, stem cells are "early" cells that can develop into any other kind of cell in the body. Progenitor cells, by contrast, have already started to differentiate into specific cells.

5. Another Autologous Adult Stem Cell of Treatment of Disabling Angina

(Pharmaceutical Business, 18 Nov 2005) - The researchers investigated the benefits of using a patient's own (autologous) selected adult stem cells to treat coronary artery disease. A total of 24 patients suffering from disabling angina attacks, the most severe chest pain, were studied. After six months, more than 80%, or 15 of the 18 patients who received the autologous adult stem cells, reported feeling better with reductions in chest pain and improved exercise capacity.

Dr Douglas Losordo, chief of cardiovascular research at Caritas St Elizabeth's medical center in Boston said. "While this is very early in the clinical trial process, we are cautiously optimistic as we move into a 150-patient, national multi-site phase II trial early in 2006."

The American Heart Association estimates that up to 250,000 individuals with coronary artery disease develop refractory angina each year. They have exhausted all available treatment options: bypass surgery, angioplasty and stenting, and continue to have disabling angina despite medical treatment. The new procedure involves collecting adult autologous stem cells from the patient's own blood, all but eliminating rejection issues by the body.

6. Adipose (Fat) Stem Cells Improve Cardiac Function

Cytori Therapeutics, Inc. (Frankfurt:XMPA) presented results demonstrating that adipose-derived adult stem and regenerative cells improved blood flow to the site of injury in a preclinical model of a severe heart attack. These data demonstrate a significant increase in capillary density, a measure of the amount of oxygenated blood supplied to surrounding tissue. (AHA Scientific Sessions 2005 in Dallas, TX.

abstract no. 1386).

After twelve weeks, the capillary density in the treated group was greater than 40% than in the control group. Capillary density is recognized as a measure of the quality of tissue perfusion and has been shown to decrease significantly following a heart attack. Increased perfusion helps to reduce progression of a heart attack into more severe cardiovascular disease. Marc H. Hedrick, M.D., President for Cytori Therapeutics said, "This preclinical study illustrates the significant therapeutic potential of adipose-derived stem and regenerative cells in ischemic heart disease for which we expect to initiate European clinical studies next year."

Adipose tissue is an abundant source of stem cells and other regenerative cells that can contribute to the repair and healing of damaged tissue. These cells have been shown to reduce the extent of a heart attack and promote restoration of heart function by a variety of mechanisms, including promotion of blood vessel growth and differentiation into cardiac muscle tissue.

Cytori is developing its proprietary Celution(TM) system to isolate and concentrate a patient's own stem cells in about an hour. This system will dramatically improve the speed in which personalized cell-based therapies can be delivered to patients.

Abortion stops a pre-born beating heart

Adult stem cells can keep a heart beating

7. Another Bone Marrow Study - Treatment through a Coronary Artery

(Genetics - 10 Nov 2005) Researchers at Case Western Reserve University and University Hospitals of Cleveland (UHC) announced that the Food and Drug Administration (FDA) has approved plans to begin a study to evaluate the safety of using adult stem cells from bone marrow to treat chronic ischemia, a serious form of heart disease.

It will involve injecting bone marrow stem cells at varying doses into the coronary arteries of patients suffering chronic ischemic coronary artery disease, a condition in which one or more of the primary arteries supplying blood flow to the heart is clogged. The study will include patients who are not candidates for angioplasty, stent placement or coronary artery bypass grafting. The trial is one of three ongoing studies in the United States to use bone marrow stem cells to treat chronic ischemia. Researchers hope that the new blood vessels will replace or supplement those blood vessels that fail to adequately supply oxygenated blood to heart tissue. The method was developed by Mary Laughlin, M.D., a hematologist, and Vincent Pompili, M.D., a cardiologist, both of Case, UHC and the National Center for Regenerative Medicine.

Calendar of Upcoming Events

If you have any pro-life events you would like us to publicize, send the announcement via e-mail to callife@calright2life.org or call (925) 944-5351.

*** **JANUARY 15**

Fifth Annual "Lights for Life" **Prayer Vigil**

Sunday January 15, 2006 7-8 PM

On the sidewalk in front of 2107 O'Farrell San Francisco (between Divisadero & Broderick)

Candles will be provided.

For more information call (415) 661-6277

*** **JANUARY 20**

Interfaith Committee for Life: **Annual Ecumenical Prayer Service for** **the Sanctity of Life and the Victims of** **Abortion**

Friday January 20, 2006 7:30PM

First Baptist Church of San Francisco
22 Waller St. At Octavia near Market

(Parking lots: near Waller and Haight near Octavia)

*** **JANUARY 21**

WALK FOR LIFE WEST COAST

Saturday, January 21, 2006

11:00 AM – Embarcadero Center
San Francisco

Join us for the biggest pro-life event on the West Coast! Meet at Embarcadero, dress warmly, wear comfortable shoes, and bring a bag lunch. For further information, please visit www.walkforlifewc.com.

*** **JANUARY 22**

Los Angeles March for Life/Life Chain

Sunday, January 22, 2006

Time: 2:00 PM to 4:30 PM

Location: Begins at 2 PM at the Plaza of the Los Angeles Cathedral 555 W. Temple Street, Downtown Los Angeles, followed by a Rosary procession to the historic La Placita/Olvera Street for Life Chain.

- Opportunities to pray for an end to abortion in the Rosary Procession and on the Life Chain route in the busy area of Olvera Street
- Powerful pro-life speakers and testimonies from woman who have suffered from abortions and found healing and hope
- Life Chain signs will proclaim: Abortion Kills Children, Jesus Forgives and Heals, and Abortion Hurts Women - in BOTH English and Spanish

- Information area with pro-life booths next to Our Lady Queen of Angels/La Placita Church to learn how you can continue to defend life
- Bring the whole family! Rain or shine!

Our website, www.hispanicsforlife.org, has flyers available for download as PDF files in English and Spanish. For more info on how you and your church can participate, please call 562-696-1500 or email hispanicsforlife@gmail.com.

*** **JANUARY 22**

Second Annual Interfaith Candlelight **Vigil for Life in Walnut Park, Petaluma**

Sunday January 22, 2006 6:00PM

Reception to follow St. John Episcopal Church (40 5th St.) Last year the gathering prayed for 32 minutes, one minute for each year since Roe v. Wade decision. For further information contact Heidi Tamke: (707) 789-0717 heidi.tamke@comcast.net

*** **JANUARY 27**

Fr. Benedict Groeschel, CFR

Friday, January 27 2006

"Pro Life and Your Spiritual Life - How They Go Together" at 10:30 a.m. at St. Eugene Cathedral, 2323 Montgomery Drive, Santa Rosa, CA 95405. Sponsored by St. Eugene Parish Respect Life and Diocese of Santa Rosa Respect Life. Free will offering; everyone welcome. Fr. Benedict, a prolific author and nationally known speaker, frequently appears on EWTN television. For info, email srdrl@sonic.net or call Betty at 707-542-5060.

*** **JANUARY 30**

Serrin Foster – Feminists for Life

Monday January 30, 2006 7:30PM

Stanford University, Building 200 Room #2

"The Feminist Cases *Against* Abortion

The lecture is co-sponsored by Stanford Students for Life, Associated Students of Stanford University, and Stanford University Speakers' Bureau. For more information, contact Noelle Patno at 650-497-2707.

*** **MARCH 31**

3rd Annual Ramsey Award Dinner

March 31, 2006

Sponsored by the Center for Bioethics and Culture (www.thecbc.org) will be held at The Olympic Club Lakeside, San Francisco on Friday, March 31, 2006. For more information contact Robyn Spitzer at 510-645-9080.

Progress on Stone Soup

As always, a big “THANK YOU” to all our donors, especially our monthly donors and those who sent special year end donations. We received a VERY GENEROUS “In Memoriam” in December that allowed us to finish 2005 with a bit of a surplus. Without this donation we would have had a loss for the year of \$1,600. A comparison of 2005 to 2004 shows a decrease in donations of over \$3,175. In 2005 less than 25% of our membership were active donors. **Thank you to all our donors in 2005, who enable this lifesaving work to continue!** Can we increase our donor percentage?

As we have reported before, we have cut costs as far as we can and still remain viable. Although we have closed our physical office to save rent, we compliment Cecelia on her “creativity” in finding ways to meet the public, including media interviews and student project assistance, without our having a brick and mortar location. **We would like to continue working on our key projects** including maintaining our schedule of mall tables and availability for phone counseling for women considering abortion and students calls in the evenings and weekends requesting assistance on projects.

Can you spare a few dollars to allow us to keep being there to proclaim the message of life, from the single-cell stage to

natural death? **All donations, large or small, are gratefully accepted** and prayerfully put to good use in the cause of Life.

WHO IS CALIFORNIA RIGHT TO LIFE?

This is the newsletter of California Right to Life **Education Fund**, a 501-c-3 organization established to educate the public about pro-life issues. Donations to the EDUCATION FUND are **tax-deductible** and can be sent to P.O. Box 4343, Walnut Creek, CA 94596-0343.

California Right to Life **Committee, Inc.** is a 501-c-4 organization providing information on legislative issues affecting the right to life, and pro-life political advocacy. **CRLC, Inc. is not permitted**, under IRS regulations, to offer a tax deduction for donations. \$24.99 annually is requested for a subscription to the CRLC legislative email updates list and can be sent to 1920 Monument Blvd #309, Concord, CA 94520.

Both are affiliates of American Life League, headed by Judie Brown, and share the same “no-exceptions, no excuses” beliefs and the same dedication to promoting the Culture of Life, respecting all innocent human life from the single-cell stage to natural death.