



## Smart Life Forum

David Steenblock, MS, DO

### *The Science and Politics of Umbelical Stem Cell Therapy*

Thursday, June 16, 2006  
7:00 PM

Cubberly Community Center  
4000 Middlefield Road, Room H1, Palo Alto, California



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#### **Future Speakers:**

• **July 20** - Dr. Dale Bredesen

*Latest Research on Anti-Aging from Buck Institute in Novato, California*

• **August 17** - David Stetzer and Martin Graham, PhD  
*Electrical Pollution; RF Frequencies and Your Health*

• **September 21** - Bruce Ames, PhD  
*Increasing Longevity by Tuning up Metabolism*

**FMBR Meeting Notice:** Friday, May 26, 2006 -

Dr. Patricia Norris, PhD. will speak about her experience assisting clients to develop self regulation and healing using biofeedback. Since 1978 she has worked with clients that had cancer, autoimmune disorders (MS rheumatoid arthritis, etc.) and AIDS She was past president of ISSSEEM, and of the Association for applied Psychophysiology, and currently an Associate Professor at Holos University Graduate Seminary. For details go to <http://www.FMBR.org>

### ***Meet David Steenblock***

Dr. Steenblock is the Founder and Director of The Brain Therapeutics Medical Clinic in Mission Viejo, California which began in 1978. . His undergraduate work at Iowa State University was in neuro-muscular synaptic physiology. In graduate school (1964-1967), he was awarded an NIH Cardiovascular Fellowship and earned his Master's Degree in Biochemistry.

Dr. Steenblock later graduated from the College of Osteopathic Medicine in Des Moines, Iowa. His post-doctoral training included a clinical Rotating Internship at Providence Hospital in Seattle, Washington, three years at Case Western Reserve University 's Medical Center and one year at the Oregon Health Sciences University.

For the past fourteen years, Dr. Steenblock has been a pioneer in creating and implementing a comprehensive rehabilitation program for stroke and brain injured patients using hyperbaric oxygen, pulsed electromagnetic therapy, neuro-biofeedback, acupuncture, electrical stimulation, physical therapy and external counterpulsation, an FDA approved non-invasive device for angina and congestive heart failure. He has also been successful with other tough cases, including autism, cerebral palsy, MS, ALS, Parkinson's Disease, macular degeneration and memory loss.

## ***Main Presentation***

For the past three years The Steenblock Research Institute has been doing follow-up interviews with patients who have gone to Mexico and other countries to have umbilical cord stem cell treatments for neurological injuries and disorders. These stem cells are derived from healthy newborn babies and no sacrifice of life is required for their use. The placenta-cord unit provides an average of about 300,000 stem cells but is usually thrown away after the birth of the child.

While the scientific community seems to be pushing for embryonic research rather than umbilical cord stem cells and the regulating agencies seem to be lumping all stem cells, (except bone marrow) into one forbidden category, umbilical cord stem cells are being lost in the confusion. They are not considered as a major player in regenerative medicine.

Dr. Steenblock would like to change that scenario and advance a tier approach to stem cell research.

1. The scientific research is available now to support the treatment of injured but healthy young people with peripheral stem cells from their own blood.
2. The scientific research is available now to support the treatment of those with diabetes, liver disease, osteoporosis, and arthritis with mesenchymal stem cells derived from the patient's own fat tissue. Fat tissue transplants of the patient's own tissue are already being used in plastic surgery. It is also a legal treatment for animals in the United States ([www.vet-stem.com](http://www.vet-stem.com)).
3. The scientific research from animal studies is a strong enough foundation now to support clinical trials in humans to test the safety and effectiveness of umbilical cord stem cells for a variety of disorders, including neurological disorders.

(See Dr. Steenblock's website at <http://www.stemcelltherapies.org>.)

4. Embryonic stem cells will require several more years of research. At the moment, embryonic stem cells have some major barriers to surmount that involve the growth of

tumors in both laboratory animals and humans who have been treated with embryonic stem cells. There may also be a risk of graft versus host disease in tissues treated with embryonic stem cells. In embryonic-derived differentiated cells (also with bone marrow transplants), immune suppressive drugs are required to prevent immune reactions to foreign tissue. However, immune suppressive drugs can be toxic to stem cell growth and may therefore compromise the effectiveness of these types of stem cells for the treatment of a variety of injuries and disorders.

5. Stem cell treatments using fetal tissue should also be put on the back burner as far as feasible therapies at this time. Fetal tissue where blood and immune cells are mixed in with brain tissue can cause severe graft versus host disease. In this regard, it is buyer beware.

In those patients with degenerative diseases, transplants using umbilical cord stem cells from healthy newborns offer the safest and most effective treatments now available for brain repair. However, some myth-busting must prevail in the minds of the scientific community, the public, the legislators and the regulatory agencies.

**A. Belief:** Umbilical cord stem cells are only hematopoietic (blood producing) stem cells. They have no potential in non-blood related conditions.

**Fact:** Umbilical cord stem cells are multipotent and capable of differentiating into non-blood cell types, such as neurons (Kao, 2001, Peterson, 2004; Rogers, 2003). ***Umbilical cord blood cells have the ability, when stimulated by neural growth factors, to produce neural and glial cells*** (Bicknese, 2002). Sanchez-Ramos and his coworkers concluded in 2001 that umbilical cord stem cells “appear to be more versatile than previously known and have therapeutic potential for neuronal replacement or gene delivery in neurodegenerative diseases, trauma, and genetic disorders” (Sanchez-Ramos, 2001).

Additional animal studies demonstrate the potential of cord stem cell use in heart regeneration (Kao 2001), immune enhancement against viruses (Sun, 1999), gene insertion therapy (Meagher 2002), therapy for type 1 and type 2 diabetes (Ende et al 2004a; Ende 2004b), therapy for muscular dystrophy (Kong 2004) and therapies for brain injuries and disorders (Chen 2001, Ende 2001a, Ende 2001b).

B. **Belief:** Umbilical cord stem cells are not able to get through the blood brain barrier.

**Fact :** According to the medical literature, those who have brain injuries and disorders also have compromised blood brain barriers from increased free radical production and inflammatory cytokines (Chen 2006; Yenari 2006; Pan 2006). Chen and co-workers (2001) gave human umbilical cord blood cells intravenously to rat models of stroke paralysis. Within 24 hours, the rats receiving the cord blood cells were showing significant improvements in motor function. This 2001 study demonstrated that the ***cord stem/progenitor cells could enter the brain, migrate to the injury and improve functional recovery in this stroke model.***

More recently, Vendrame (2004), Taguchi (2004), Peterson (2004), Newman (2003; 2004) and Willing (2003a, 2003b) have reported neurological improvements in stroke animal models using human umbilical cord blood derived stem/progenitor cells.

C. **Belief:** Embryonic stem cells are more effective for neurological disorders.

**Fact: *Umbilical cord stem cells are the safest and most effective stem cell now available for transplants.*** They result in little or no graft versus host reactions, especially when separated from blood and immune cells that contain antigens (Rubinstein 1998, Gluckman 1997, Kurtzberg 1996, Wagner 1996, Wadhwa 2002). Cord blood also contains primitive cells comparable in versatility and potency to embryonic stem cells (Tian 2005; Leung 2005; Summers 2004; Bonanno 2004). Umbilical cord blood, which includes stem cells, also has a seventeen year track record of safety in both adults and children with leukemia.

According to Dr. Steenblock: "From our own observations of patients who have received cord stem cell treatments in Mexico , we were able to write a book on the success stories. One of the most profound changes was a four year old child who was unable to see, talk, or walk was beginning to do all three after several treatments."

He has also been working with other scientists to push the envelope in cord stem cells being safe carriers for genetic therapies. Dr. Steenblock recently designed a genetically transfected stem cell specifically for prostate cancer which has shown promising results in several patients. This opens an entirely new field of clinical research, with possibilities of greater assistance for those with muscular dystrophy, sickle cell anemia, autism, Alzheimer's disease, ALS, Huntington's Disease, and other genetically related disorders.

Dr. Steenblock will be discussing these issues in his lecture, June 15 th , including the types of stem cells, the benefits and challenges of each, the processing of cord stem cells for ensuring purity and potency, and the advances being made in case studies from Mexico. Summaries of research from the medical literature on treatments using umbilical cord stem cells are available at <http://www.stemcelltherapies.org>. Additional information on stem cell therapies in Mexico is available in an 89-page handbook written by Dr. Payne and Dr. Ramirez at <http://www.ramirezdelrio.com>.

The 192 page book “Umbilical Cord Stem Cell Therapy, the Gift of Healing from Healthy Newborns” by Drs. Steenblock and Dr. Payne is now available from the publisher at <http://www.basichealthpub.com> as well as through <http://www.amazon.com> (also has used copies available).

If you would like to make a donation to Steenblock Research Institute, a California 501(c)(3) non-profit corporation, to help promote Dr. Steenblock's work in Regenerative Medicine, please call 800-288-7016.

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