

OREGON
Right to Life

HB 2801 Public Testimony
House Subcommittee on Health Care Access
April 9, 2007
By: Gayle Atteberry

1. HB 2801 is unethical

- Each embryo is a unique human life. Each embryo at the blastocyst stage, even though very tiny, is a unique human life. Embryonic stem cells can ONLY be obtained by killing a living human embryo at the blastocyst stage. Each of us in this room was once a blastocyst and none of us would be alive if we had been used for stem cell research. Deliberately killing innocent human life, no matter how small and even with the HOPE that someone might be helped, is unethical.
- Embryonic stem cell research is a highly divisive issue, one that hundreds of thousands of Oregonians find morally offensive. While, unfortunately, embryonic stem cell research and human cloning is legal, using taxpayer dollars for this unethical research is highly offensive to a majority of Oregonians. In our zeal to find cures for diseases, it is critical that we do not lose sight of the inherent value of each human life.

2. HB 2801 is unnecessary

- So far, years of embryonic stem cell research have not produced one single cure or treatment.¹ One substantial problem with embryonic stem cells is their rapid growth rate, causing tumors in test animals.²
- While research with embryonic stem cells has so far been unproductive, adult stem cells have been successfully saving lives for years. Adult stem cells are readily available in bone marrow, blood, fat, nasal tissue, umbilical cord blood, and amniotic fluid, and do not require the destruction of any human. Adult stem cell research is ethical AND successful research. Stem cells from these sources are already known to have cured or controlled 72 different diseases, including many types of leukemia and cancers. (*Attachment A*) New breakthroughs with adult stem cell treatments are being published on a regular basis. Time does not

permit detailing all the exciting news that is coming from adult stem cell research, but I have included in your packet two examples: The *Journal of Cellular Physiology* (*Attachment B*) published an article detailing an advance whereby

¹ White House Domestic Policy Council Report, "Advancing Stem Cell Science Without Destroying Human Life", January 2007, pg 12.

² *Nature Medicine*, November 2006, "Bittersweet News for neural stem cell grafts", pg 1259-1268.

brain cells were created from stem cells derived from skin. Long-term possibilities include healing treatment for Parkinson's disease. Cord blood stem cells recently healed a child suffering from leukemia.

- We ALL want to find cures for debilitating diseases—and adult stem cell research is on the fast track to finding these cures. Using tax payer dollars for unethical embryonic stem cell research which, after years of research has failed to produce any breakthrough is completely unnecessary.

3. **HB 2801 is unconscionable**

- The seldom mentioned reality of embryonic stem cell research is that there are not enough frozen embryos stored in in vitro clinics for research. Currently approximately 400,000 embryos are stored in clinics around the U.S. Most of those are being held by families for future use, leaving only a tiny fraction of that amount available for research.³ Even by factoring the creation of new embryos by couples going through in vitro, embryos available for research will soon run out. Thus the REAL need in embryonic stem cell research is to make more embryos by cloning them.
- The initial cloning process for both “reproductive” cloning and so-called “therapeutic” cloning is identical. Cloning always creates a live human embryo. In reproductive cloning, the live human embryo is placed in a mother's womb; in therapeutic cloning the live human embryo is placed in a scientist's test tube. In “therapeutic” cloning, the embryo is created for the sole purpose of being experimented upon.
- The “whereas” on page 2, line 1 and 2 touts so-called “therapeutic cloning”, while in the same sentence condemns cloning humans as morally and ethically unacceptable. This is an incompatible statement. So-called “therapeutic” cloning produces a human being the same as “reproductive” cloning.
- Section 1, subsection 4 speaks as though “therapeutic cloning” is just another way of saying “somatic cell nuclear transfer”. This is just plain wrong. Somatic cell nuclear transfer always produces a live human embryo.⁴ **It is unconscionable for**

³ The RAND Law and Health Initiative, “How Many Frozen Human Embryos Are Available for Research?” (2003), at www.rand.org/publications/RB/RB9038/

⁴ “Even James Thompson, the first scientist to isolate and culture embryonic stem cells, scoffed in a 2005 interview at the idea that there was “no embryo” involved in SCNT. ‘If you create an embryo by nuclear transfer, and you give it to somebody who didn’t know where it came from, there would be no test you could do on that embryo to say where it came from,’ he said. ‘...[Y]ou’re creating an embryo. If you try to define it away, you’re being disingenuous.’” : *National Review Online*, “Nascent Falsehood”, by David Freddoso, April 2, 2007.

this bill to deliberately imply that reproductive cloning produces a human being but “therapeutic cloning” does not.

- **HB 2801 is unconscionable in that it allows human beings to be created for THE SOLE PURPOSE of killing the embryo for experimentation with its stem cells.**

4. HB2801 is unfair

- HB2801 cruelly holds out hope to those who desperately need hope and healing, when in fact healing through ESCR is too far away to help those sick now—if cures are even to be found at all. The bill’s preamble mentions Alzheimer’s disease. The truth is that Alzheimer’s is a disease which researchers readily admit is one of the least likely diseases to benefit from stem cell research—either adult or embryonic.⁵
- While there have been over 1200 clinical trials related to adult stem cells, there are no know clinical trials related to human embryonic stem cells. Recently researchers from the California Institute for Regenerative Medicine cautioned patients to not be overly anxious for cures because embryonic stem cell research remains in its infancy and potential treatments are many years away. The researchers say that that the public and press have over-exaggerated the nearness of successful embryonic stem cell research.⁶
- As mentioned before, real treatments and cures are thriving through ethical adult stem cell research. HB2801 ONLY grants funds to unethical ESCR and destructive human cloning. It excludes the very research that is actually saving people. Every dollar given to unethical ESCR is a dollar that IS NOT going to ethical, and already successful, adult stem cell research.
- HB2801 is unfair in that it misdirects tax money to a so-far unproductive type of research, while ignoring research that can help those who need help NOW.

When it comes to using tax dollars to fund stem-cell research, there is an ethical way, a way which offends no one’s sensibilities, and a way that already is working; adult stem cell research.

I ask the committee to vote NO on HB2801.

⁵ “I think the chance of doing repairs to Alzheimer’s brains by putting in stem cells is small,” said stem cell researcher Michael Shelanski, co-director of the Taub Institute for Research on Alzheimer’s Disease and the Aging Brain at the Columbia University Medical Center in New York, echoing many other experts. “I personally think we’re going to get other therapies for Alzheimer’s a lot sooner.” : *Washington Post*, “Stem Cells an Unlikely Therapy for Alzheimer’s”, by Rick Weiss, June 10, 2004.

⁶ *Mercury News*, “Institute Report Says Usable Treatments are Years Away”, by Steve Johnson, Oct 5, 2006.



STEM CELL RESEARCH TREATMENTS



**Check the Score: Adult Stem Cells vs. Embryonic Stem Cells
Benefits in Human Patients (from Peer-Reviewed Studies)**

Adult Stem Cells	Embryonic Stem Cells
<p>Cancers:</p> <ol style="list-style-type: none"> 1. Brain Cancer 2. Retinoblastoma 3. Ovarian Cancer 4. Skin Cancer: Merkel Cell Carcinoma 5. Testicular Cancer 6. Tumors Abdominal Organs Lymphoma 7. Non-Hodgkin's Lymphoma 8. Hodgkin's Lymphoma 9. Acute Lymphoblastic Leukemia 10. Acute Myelogenous Leukemia 11. Chronic Myelogenous Leukemia 12. Juvenile Myelomonocytic Leukemia 13. Chronic Myelomonocytic Leukemia 14. Cancer Of The Lymph Nodes: Angioimmunoblastic Lymphadenopathy 15. Multiple Myeloma 16. Myelodysplasia 17. Breast Cancer 18. Neuroblastoma 19. Renal Cell Carcinoma 20. Soft Tissue Sarcoma 21. Various Solid Tumors 22. Ewing's Sarcoma 23. Waldenstrom's Macroglobulinemia 24. Hemophagocytic Lymphohistiocytosis 25. Poems Syndrome 26. Myelofibrosis <p>Auto-Immune Diseases:</p> <ol style="list-style-type: none"> 27. Systemic Lupus 28. Sjogren's Syndrome 29. Myasthenia 30. Autoimmune Cytopenia 31. Scleromyxedema 32. Scleroderma 33. Crohn's Disease 34. Behcet's Disease 35. Rheumatoid Arthritis 36. Juvenile Arthritis 37. Multiple Sclerosis 38. Polychondritis 39. Systemic Vasculitis 40. Alopecia Universalis 41. Buerger's Disease 	<p>Cardiovascular:</p> <ol style="list-style-type: none"> 42. Acute Heart Damage 43. Chronic Coronary Artery Disease <p>Ocular:</p> <ol style="list-style-type: none"> 44. Corneal Regeneration <p>Immunodeficiencies:</p> <ol style="list-style-type: none"> 45. Severe Combined Immundeficiency Syndrome 46. X-Linked Lymphoproliferative Syndrome 47. X-Linked Hyper Immunoglobulin M Syndrome <p>Neural Degenerative Diseases And Injuries:</p> <ol style="list-style-type: none"> 48. Parkinson's Disease 49. Spinal Cord Injury 50. Stroke Damage <p>Anemias And Other Blood Conditions:</p> <ol style="list-style-type: none"> 51. Sickle Cell Anemia 52. Sideroblastic Anemia 53. Aplastic Anemia 54. Red Cell Aplasia 55. Amegakaryocytic Thrombocytopenia 56. Thalassemia 57. Primary Amyloidosis 58. Diamond Blackfan Anemia 59. Fanconi's Anemia 60. Chronic Epstein-Barr Infection <p>Wounds And Injuries:</p> <ol style="list-style-type: none"> 61. Limb Gangrene 62. Surface Wound Healing 63. Jawbone Replacement 64. Skull Bone Repair <p>Other Metabolic Disorders:</p> <ol style="list-style-type: none"> 65. Hurler's Syndrome 66. Osteogenesis Imperfecta 67. Krabbe Leukodystrophy 68. Osteopetrosis 69. Cerebral X-Linked Adrenoleukodystrophy <p>Liver Disease</p> <ol style="list-style-type: none"> 70. Chronic Liver Failure 71. Liver Cirrhosis <p>Bladder Disease</p> <ol style="list-style-type: none"> 72. End-Stage Bladder Disease

For references see <http://www.stemcellresearch.org/facts/asc-refs.pdf>
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Adult, Embryonic,
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Neurons Grown from Adult Stem Cells Derived from Skin

The *Journal of Cellular Physiology* has published an article detailing an advance in stem cell research whereby brain cells were created from adult human stem cells. The stem cells were derived from the skin, marking the first time that brain cells have been derived from stem cells in the skin.

According to lead scientist Francois Berthod, this type of technology could lead to revolutionary advances in the treatment of such diseases as Parkinson's disease.

The brain cells, called neurons, were derived from stem cells in the skin isolated and grown *in vitro* under conditions that allowed these cells to differentiate into neurons. The cells were then tested for markers that are unique to neurons. Cells tested positive for the molecules that allow brain cells to transmit electrical impulses typical of neurons.

Neurons typically do not divide in culture, which has forced scientists to use animals in the lab for neurological research. However, this technology could be useful immediately by supplying adult human neurons to scientists in the field of neuroscience research.

In the long term, the possibility of revolutionary new therapies may be possible. Cells from a Parkinson's dis-

See Neurons on page 2

Cord Blood Stem Cells Used to Treat Childhood Leukemia

A three-year-old girl who had been afflicted with leukemia was treated successfully with an infusion of stem cells from her own cord blood. The Illinois girl's case is the first time that a child with leukemia has received a treatment with his or her own cord blood stem cells.

"There's a good chance the procedure saved her life. She is in remission and has an excellent chance of being cured," said Ammar Hayani, the pediatric oncologist who is treating the girl. Today, she is seven years old and lives a normal, happy life.

After a diagnosis of lymphoblastic leukemia in 2003, doctors treated her with chemotherapy, and the leukemia went into remission. However, 10 months later, the cancer returned aggressively. Following additional chemotherapy and radiation treatment, doctors began seeking potential donors for stem cells harvested from bone marrow to replace her blood system. After failing to find a match, the girl's parents decided to risk using her own cord blood, frozen at the girl's birth in 1999 and stored in a private



cord blood bank, as an alternative.

"We were in uncharted territory ... we couldn't predict with any certainty whether the operation would be successful. We had no concrete data, but the parents felt very comfortable with it, so we went ahead," Dr. Hayani said.

After the successful treatment of the blood disorder, Dr. Hayani published the results of the procedure in the January 2007 issue of the journal

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Agency Funds Cord Blood Bank Initiatives

The Health Resources and Services Administration (HRSA), a division of the U.S. Department of Health and Human Services, recently awarded more than \$12 million to cord blood banks to begin collections for the National Cord Blood Inventory (NCBI).

The purpose of the NCBI is to collect and maintain high-quality cord blood units and make them available for transplantation. The HRSA reports that transplants of umbilical cord blood can save the lives of many patients with leukemia, lymphoma, and other blood diseases by replacing a patient's unhealthy blood cells with healthy cells from a volunteer donor.

Recipients of the cord blood banking grants include: M.D. Anderson Cord Blood Bank (Houston, Texas);

The Carolinas Cord Blood Bank at Duke University Medical Center (Durham, North Carolina); The Milstein National Cord Blood Program at the New York Blood Center (New York City, New York); StemCyte, Inc. (Arcadia, California); The University of Colorado Cord Blood Bank (Aurora, Colorado); and the Puget Sound Blood Center (Seattle, Washington).

These grants are part of a larger financial initiative spawned by the HRSA in September 2006 for the purpose of encouraging stem cell donation among the public. In addition to cord blood banking initiatives, the HRSA is also working "to improve and encourage organ, tissue, bone marrow, circulating blood stem cell donations."

Neurons Grown from Adult Stem Cells

From page 1

case patient's own skin could be isolated and used to produce compatible nerve cells that could be used to treat him or her.

Therapy is still a long way off, according to Berthod. Cells derived by this method must be verified for their ability to transmit nerve impulses.

Leukemia Treated with Cord Blood Stem Cells

From page 1

Pediatrics. "It's hard to argue with success. Relapse seems very unlikely at this point, and she has an excellent quality of life, much better than if she had taken stem cells from a donor."

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