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Supporting Stem Cell Research

Dear Colleague:

Attached you will find an excellent analysis of current stem cell progress. Dr. David Prentice of Indiana State University explains that stem cell research is delivering medical hope and cures, but it is not the controversial embryonic stem cells that are making such a difference. Rather, ethically sound and more effective adult stem cell research is being done in both animal and human trials.

Less promising embryonic stem cell research is not banned under the current policy. In fact it is completely legal in the United States. The debate over stem cells is strictly limited to a question of what the taxpayers should fund. Considering the ethics of sacrificing unborn lives for science and the progress that Dr. Prentice outlines, the choice is clear. The current policy, articulated by President Bush in August 2001 and in effect since then, must be maintained.

I urge you to take the time to review the attached article and to support the President's stem cell policy.

Sincerely,



W. Todd Akin
Member of Congress

http://www.healthnewsdigest.com/news/hlth_stemcell-17.html

The Real Promise of Stem Cell Research
Dr. David Prentice

(HealthNewsDigest.com)...I am in favor of stem cell research. In fact, I don't know anyone who is opposed. If this sounds startling or puzzling, it's because many people don't know that they need to look for an adjective that should always be present in a discussion of stem cell research. Without an adjective defining the source of the stem cells, the term is misleading and spreads confusion.

There are many sources of stem cells, but the two most often discussed are embryonic stem cells and adult stem cells. Embryonic stem cells come from early embryos within the first few days of life. Obtaining them requires the breaking apart of the embryo, which necessarily results in death. By contrast, adult stem cells can be found in virtually all tissues of the body from birth onward (as well as in umbilical cord blood and placenta) and harvesting of these cells does not harm the individual from whom they are obtained.

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Despite the hype surrounding them, embryonic stem cells actually have little to offer for treatment of disease. Their supposed advantages - unlimited growth and potential for forming all tissues—are hindrances when it comes to transplants to repair damaged tissue. When transplanted into experimental animals, these cells generally continue this untamed behavior, with a tendency to form tumors or various unwanted tissues.

A recent attempt to treat diabetes in mice using embryonic stem cells showed that the cells did not form insulin-secreting cells, but did form tumors. Experiments at treating Parkinson's disease in animals gave a slight benefit, but also killed 20% of the animals with brain tumors caused by the embryonic stem cells.

The scientific literature is filled with similar results, even after over 20 years of research with mouse embryonic stem cells. Cries for more human embryonic stem cell lines to be made available for federal funding are unjustified, as research on current lines shows insufficient evidence that they are either safe or effective. Proponents are playing on the emotions of the vulnerable—lacking facts and making empty promises.

In contrast, adult stem cells (including umbilical cord blood stem cells) have already shown effectiveness in treating disease. It may be surprising to know that there have been hundreds of quiet advances in adult stem cell research while the loud praise heaped on embryonic stem cells lacks scientific credibility.

The successes of adult stem cells have been documented repeatedly in an avalanche of published scientific papers over the last several years. In animal tests, adult stem cells have successfully treated:

- Diabetes;
- Parkinson's;
- Stroke;
- Heart disease;
- Spinal cord injury.

In human patients, adult stem cells have already demonstrated success for:

- Multiple sclerosis;
- Lupus;
- Sickle cell anemia;
- Repairing cartilage damage;
- Growing new corneas to restore sight to blind patients;
- Growing new blood vessels to rescue legs from gangrene;
- Repairing heart damage
- Alleviating symptoms of Parkinson's disease;
- Restoring movement to spinal cord injury patients.

These successes, using the patients' own adult stem cells, are advancing rapidly and producing the therapies about which embryonic stem cell advocates can only speculate. (An extensive list of the adult stem cell literature can be found at: http://bioethics.gov/reports/stemcell/appendix_k.html)

Even proponents of embryonic stem cells admit that adult stem cells are successful: In a UPI story published October 12, 2003, Robert Lanza of Advanced Cell Technologies noted that "there is ample scientific evidence that adult stem cells can be used to repair damaged heart or brain tissue*if it works, it works, regardless of the mechanism."

I am in favor of stem cell research—adult stem cell research. It is daily proving itself more capable of cures without moral and political difficulties. If we are truly interested in providing treatments for suffering patients, we should rapidly pursue that which shows real promise.

*Dr. David Prentice is Professor of Life Sciences at Indiana State University, Adjunct Professor of Medical and Molecular Genetics for Indiana University School of Medicine, and a Founding Member of Do No Harm: The Coalition of Americans for Research Ethics.