



Dedicated to Advancing Stem Cell Research

Coalition for the Advancement of Medical Research

December 7, 2007

Dear Member of Congress:

I am writing to you on behalf of the Coalition for the Advancement of Medical Research (CAMR). Our collective membership is comprised of the broad and diverse community that supports the promise of embryonic stem cell research and regenerative medicine to end disease and suffering.

Recent important discoveries in this field have reenergized the debate regarding the continued need for full federal funding, especially for embryonic stem cell research. We assert that these discoveries provide the most compelling reason to date for the overturn of the presidential veto and enactment of the widely supported Stem Cell Research Enhancement Act.

The similar studies of Drs. James Thomson of the University of Wisconsin and Shinya Yamanaka of Kyoto University, published nearly simultaneously the week of November 19, 2007, both offer a new approach for developing what appear to be pluripotent cells. The cells are called "iPS," or induced pluripotent stem cells. Because the studies use adult skin cells and do not require a human egg or embryo, the discovery has been heralded as an end to the federal stem cell debate. While we join with the research and medical community in commending Drs. Thomson and Yamanaka, we believe it is short sighted and misleading to claim that their work obviates the need for further research.

In fact, Dr. Thomson recently asserted in a Washington Post editorial jointly authored by Dr. Alan I. Leshner, CEO of the American Association for the Advancement of Science, that it is more important than ever to provide unrestricted federal funding for embryonic stem cell research. Attached is the editorial for your review.

We are disappointed that what should be viewed as a hopeful step forward for the over 100 million patients with incurable diseases and conditions is being used as political tool to obstruct scientific progress. We urge you and your colleagues to look beyond the ill-informed arguments that are attempting to divert support for what scientists continue to hail as one of the most promising avenues of biomedical research. On behalf of CAMR and our entire membership, let me assure you that we are united both in our praise to Drs. Thompson and Yamanaka for their incredible discovery and for our continued support for federal funding for embryonic stem cell research. We will continue to work to enact the Stem Cell Research Enhancement Act.

Should you have any questions regarding the recent discovery or any other stem cell issue do not hesitate to contact CAMR. Our membership includes the world's leading researchers and it would be our pleasure to arrange a meeting or briefing for you at any time. Contact Kim Love at 240-475-9424 for assistance.

Sincerely,

A handwritten signature in black ink that reads "Sean Tipton". The signature is written in a cursive, flowing style.

Sean Tipton, President

Standing in the Way of Stem Cell Research
Washington Post / December 3, 2007 / A17

By Alan I. Leshner and James A. Thomson

A new way to trick skin cells into acting like embryos changes both everything and nothing at all. Being able to reprogram skin cells into multipurpose stem cells without harming embryos launches an exciting new line of research. It's important to remember, though, that we're at square one, uncertain at this early stage whether souped-up skin cells hold the same promise as their embryonic cousins do.

Far from vindicating the current U.S. policy of withholding federal funds from many of those working to develop potentially lifesaving embryonic stem cells, recent papers in the journals *Science* and *Cell* described a breakthrough achieved despite political restrictions. In fact, work by both the U.S. and Japanese teams that reprogrammed skin cells depended entirely on previous embryonic stem cell research.

At a time when nearly 60 percent of Americans support human embryonic stem cell research, U.S. stem cell policy runs counter to both scientific and public opinion. President Bush's repeated veto of the Stem Cell Research Enhancement Act, which has twice passed the House and Senate with votes from Republicans and Democrats alike, further ignores the will of the American people.

Efforts to harness the versatility of embryonic stem cells, and alleviate suffering among people with an array of debilitating disorders, began less than 10 years ago. Since then, scientists have continued to pursue embryonic stem cells because of their ability to transform into blood, bone, skin or any other type of cell. The eventual goal is to replace diseased or dysfunctional cells to help people with spinal cord injuries, neurodegenerative disorders, cancer, diabetes, heart disease and other conditions.

Since 1998, many strategies for addressing sanctity-of-life concerns have been pursued. While commendable, these efforts remain preliminary, and none so far has suggested a magic bullet. In the same way, the recent tandem advances in the United States and by Shinya Yamanaka's team in Japan are far from being a Holy Grail, as Charles Krauthammer inaccurately described them ["Stem Cell Vindication," op-ed, Nov. 30]. Though potential landmarks, these studies are only a first step on the long road toward eventual therapies.

Krauthammer's central argument -- that the president's misgivings about embryonic stem cell research inspired innovative alternatives -- is fundamentally flawed, too. Yamanaka was of course working in Japan, and scientists around the world are pursuing the full spectrum of options, in many cases faster than researchers in the United States.

Reprogrammed skin cells, incorporating four specific genes known to play a role in making cells versatile, or pluripotent, did seem to behave like embryonic stem cells in mice. But mouse studies frequently fail to pan out in humans, so we don't yet know whether this approach is viable for treating human diseases. We simply cannot invest all our hopes in a single approach. Federal funding is essential for both adult and embryonic stem cell research, even as promising alternatives are beginning to emerge.

Unfortunately, under the policy President Bush outlined on Aug. 9, 2001, at most 21 stem cell lines derived from embryos before that date are eligible for federal funding. American innovation in the field thus faces inherent limitations. Even more significant, the stigma resulting from the policy surely has discouraged some talented young Americans from pursuing stem cell research.

Discomfort with the notion of extracting stem cells from embryos is understandable. But many of the life-changing medical advances of recent history, including heart transplantation, have provoked discomfort. Struggling with bioethical questions remains a critical step in any scientific advancement.

A solution that might be more comfortable for many people already exists but cannot be pursued unless the Stem Cell Research Enhancement Act becomes law. Some percentage of the hundreds of thousands of frozen embryos from fertility clinics will eventually be destroyed. American couples meanwhile are not being given the choice to donate their frozen embryos to federal research to help others through stem cell advances.

It remains to be seen whether reprogrammed skin cells will differ in significant ways from embryonic stem cells. We remain hopeful, but it's too early to say we're certain.

We hope Congress will override the president's veto of the Stem Cell Research Enhancement Act. Further delays in pursuing the clearly viable option of embryonic stem cells will result in an irretrievable loss of time, especially if the new approach fails to prove itself.

Alan I. Leshner is chief executive of the American Association for the Advancement of Science and executive publisher of the journal *Science*. James A. Thomson is a professor of anatomy at the University of Wisconsin School of Medicine and Public Health. He was the first scientist to create human embryonic stem cells and is the senior author on the recent *Science* paper describing a method for reprogramming skin cells.