

The Huffington Post

This is the print preview: [Back to normal view »](#)



[Susan L. Solomon](#) | [BIO](#) | [I'M A FAN OF THIS BLOGGER](#)

The Stem Cell Wars Are Not Over

Posted November 30, 2007 | 11:08 AM (EST)

Read More: [Embryonic Cell Research](#), [Embryonic Stem Cells](#), [Induced Pluripotent Stem Cells](#), [IPS Stem Cells](#), [Stem Cell Cloning](#), [Stem Cell Controversy](#), [Stem Cell Research](#), [Stem Cells](#), [Stem Cells Religion](#), [Tom Harkin](#), [Breaking Politics News](#)



By *Susan L. Solomon and Zach W. Hall*

Nothing would give the millions of people afflicted with heart disease, diabetes, cancer, Parkinson's disease, Alzheimer's disease and spinal cord injuries a greater thrill than to be able to rejoice that the debates around stem cell research are finally over, and "the Holy Grail has been achieved," as Charles Krauthammer put it [in an astonishing piece in the Washington Post](#). Krauthammer said that last week's announcements that researchers from Wisconsin and Japan had discovered how to reprogram adult skin cells to resemble embryonic stem cells means that George Bush was right, that we have now found a way to create "a magical stem cell that can become bone or brain or heart or liver" without using human embryos.

It is not true. It is not even close to true. The new "induced pluripotent stem cells" (IPS for short) that scientists have now figured out how to make will be powerful tools for scientists studying the mechanisms of human diseases in their laboratories, and there is no doubt that this is an important scientific event. But these reprogrammed cells cannot be used to treat human patients in the clinic, because they were created using genes and retroviruses that can cause cancer in humans. Moreover, even if other, safe ways of producing these new IPS cells are found, no one yet knows the extent to which these new cells will behave like true human embryonic stem cells. Krauthammer and others who are seeking to justify current federal restrictions on embryonic stem cell research would like to think that IPS cells are exactly the same as embryonic stem cells, but they are not. We know now that human embryonic stem cell lines, both those that are recognized by the 2001 federal guidelines and those that have been developed since then, come in many different types and vary greatly from one to the other, most importantly in their ability to form differentiated cells (heart, pancreas, neurons) of a particular type that can be used for therapy. Will the new IPS cells be able to do this? We do not yet know. This new technique of developing stem cells is only a way station in a much longer journey, not a destination.

To suggest, as Krauthammer and others have, that we now have no need to work with stem cells created from embryos is to say that we can put aside the research that remains the most promising and important. It is a conclusion based on political, not scientific, considerations. Unfortunately, those political considerations seem to have motivated much of the reporting on these new discoveries -- even though one of the scientists who discovered the new technology, Shinya Yamanaka, felt so strongly that his work did not pre-empt other kinds of stem cell research that he co-authored a letter with several colleagues published in the journal *Cell Stem Cell* titled "New Advances in IPS Cell Research Do Not Obviate the Need for Human Embryonic Stem Cells." [Yamanaka and his colleagues wrote:](#)

"We hold that research into all avenues of human stem cell research must proceed together. Society deserves to have the full commitment of scientific inquiry at its service. And science is a practice that works best when it is approached with an open and creative mind. Research into one approach can inspire new ideas in unpredictable and exciting ways."

Of course he is right. It is crucial to our ultimate success to allow wide access to all of the stem cell lines that have already been created from embryos as well as to continue to create new lines for comparative and other purposes, including the research that can only be done with human embryonic stem cells. To gain the most benefit from the new discoveries, it is urgent -- as urgent as it was before these announcements -- that the current federal restrictions be lifted. For many kinds of research, there is still no substitute for actual human embryonic stem cells, and these new discoveries simply don't change that fact.

The greatest loss of all would be if these exciting new discoveries were allowed to create the false belief that the kind of research opposed by the Bush administration -- research involving actual human embryonic stem cells rescued from frozen embryos that would otherwise have been discarded -- was no longer necessary, and if the funds needed to advance that research, which have been hard enough to raise in the absence of federal support, were to become scarcer still. If it becomes even harder to fund human embryonic stem cell research in light of these new discoveries, they will, ironically, end up being as much a roadblock to scientific progress as an advance, which is something the researchers behind them never wanted to see happen. **The only voices saying that these new discoveries have made the debate over stem cell research moot are the voices that were opposed to human embryonic stem cell research all along.**

Senator Tom Harkin of Iowa once said that science is like looking for a treasure behind closed doors that can only be opened by experiment. Since we don't know which door conceals the treasure, it is important to open as many as possible. "It is like you have got 10 doors that are closed and you do not know behind which door may lie the answer. If you [only] look behind one door, you have got a 10-percent chance of finding that answer," he has said. And last week, referring to Yamanaka and Thomson's discoveries, Senator Harkin said, "These scientists have performed truly groundbreaking and historic accomplishments. Still, our top researchers recognize that this new development does not mean that we should discontinue studying embryonic stem cells - scientists may yet find that embryonic stem cells are more powerful."

If only science were just a matter of following a single path. Doing all we can to further human embryonic stem cell research will advance the

search for cures of the major diseases of our time, and it should still be the number one priority for researchers, as well as for the private funders who today are the only sources of support for this vital scientific work. It is far too soon to call "Game Over" in the stem cell debates.

Susan L. Solomon
CEO, The New York Stem Cell Foundation

Zach W. Hall
Former President,
California Institute for Regenerative Medicine

Comments for this post are now closed

[More in Politics...](#)



[Obama Photo in Turban, Robe Causes Stir](#)



[Prominent Clinton Supporter Thinks Obama Will Win...](#)



[CNN Re-Legitimizes 'Scurrilous' Obama Email](#)



[Edwardses Join Anti-War Campaign Group](#)

Ads by Google

Detoxamin, PCA-Rx, tests

The winning team: Chelation 1st & rebuild w/ Adult Stem Cell Boosters
www.Oradix.com

Most Current Treatment

Stem Cell Treatment For Parkinson
www.StemCellsPuhua.com

Stem Cell Therapy - MS

Treat Multiple Sclerosis with Stem Cells from your own body!
www.xcell-center.com/Therapy

Site Web

- [Copyright © 2008 HuffingtonPost.com, Inc. |](#)
- [User Agreement |](#)
- [Privacy |](#)
- [Comment Policy |](#)
- [About Us |](#)
- [Powered by Movable Type](#)