

The Center for Bioethics and Culture

Fact Sheet

“California Cloning: Making Taxpayers Foot the Bill”

The California Stem Cells Research and Cures Initiative Fact Sheet

“The California Stem Cells for Research and Cures Initiative sets aside three billion dollars (over ten years) for stem cell research,” the WEB site promoting the measure states. Other than that sparse description and letters touting the potential for “cures,” interested voters are left totally in the dark about what is actually in the proposed initiative that will probably be on the November 2004 ballot.ⁱ This information blackout has an undemocratic purpose: to keep Californians from actually understanding the proposal that sponsors want them to approve. This fact sheet is intended to fill in this information void.

What would the California Stem Cells Research and Cures Initiative (CSCRC) authorize? The CSCRC is a proposed *state constitutional amendment and bond measure*. It is intended to create a “right” under the California Constitution “to conduct” research into human cloning, human embryonic stem cell research, umbilical stem cells, and adult stem cells.ⁱⁱ It would also require the state to borrow approximately \$3 billion over ten years to pay researchers in the biotechnology industry and universities to conduct research.ⁱⁱⁱ The money would be distributed by a new state agency, the California Institute for Regenerative Medicine.^{iv}

Isn’t stem cell research and “therapeutic cloning” already legal in California? Yes. State law also permits public funding.^v But California is in the throes of a budget crisis and thus there is little money to pay for research into “therapeutic cloning.”

Then why place this measure on the California ballot? Since there is so little money available in the California budget to pay for stem cell research, supporters hope to convince Californians to *borrow* the money, instead.

Why not get private funding? The biotechnology industry has been unable to convince investors to support research into human “therapeutic” cloning and embryonic stem cells because most venture capitalists don’t want to lose money on research that may never provide cures. Thus, they want taxpayers to foot the bill. An article first published in the *Seattle Times* summed the situation up nicely when it found that investors “aren’t committing billions of dollars,” because “society hasn’t clearly decided whether the research is moral,” “the field is too risky, the business model too vague. Researchers don’t know how to control embryonic stem cells...and they don’t know how to do it cheaply, conveniently, or consistently enough to make it a viable business.”^{vi}

In what way does the CSCRC authorize human cloning? The proposal would create state constitutional right to engage in—and it would require the state to borrow money to fund—research into human somatic cell nuclear transfer (SCNT). (SCNT is the scientific name for mammalian cloning. It was the method used to create Dolly the cloned sheep.)^{vii} Specifically, the measure states, “Pluripotent [stem] cells may be derived from somatic cell nuclear transfer...”^{viii} This means that researchers would be authorized to create cloned human embryos and extract their embryonic stem cells for use in research. In other words, it would be legal to create cloned human life solely as an experiment.

Does this measure permit reproductive cloning? The CSCRC would not fund “human reproductive cloning,” which is defined as conducting SCNT cloning “for the purpose of implanting the resulting product [a cloned human embryo] in a uterus to initiate a pregnancy.”^{ix} However, cloned human embryos could be “initially” maintained for “8-12 days after [embryonic] cell division begins,” which is long past the time that the cloned embryos would become implantable in a womb.^x *Thus, the knowledge gained by human cloning research funded by the CSCRC could also be used to learn how to engage in reproductive cloning.* Indeed, Woo-suk Hwang, the South Korean researcher who created the first cloned embryos for use in stem cell research, admitted that his cloned embryos could also have been used for reproductive cloning.^{xi} Moreover, since the time limit is only an initial period, later changes could authorize longer periods for the cloned nascent human life to be maintained, which would require implantation in a natural or artificial uterus.

Isn't therapeutic cloning necessary for obtaining new regenerative medical cures? Enthusiasm is waning for the prospect that human cloning or embryonic stem cells will actually bring about new cures any time soon. For example, an article in the prestigious pro-cloning-for-biomedical research science journal *Nature*, stated, “To the casual observer, it may come as a surprise that *many experts do not now expect therapeutic cloning to have a large clinical impact...* Aside from problems with the supply of human egg cells, and ethical objections to any therapy that requires the destruction of human embryos, many researchers have come to doubt whether therapeutic cloning will ever be efficient enough to be commercially viable”^{xii}

What about adult stem cells? Actually, adult stem cells, umbilical cord blood stem cells, and other non embryonic tissues appear more promising, having shown remarkable successes in animal studies and in early human trials. For example, human cardiac patients' hearts functioned “significantly better” after surgery when also injected with their own bone marrow stem cells than similar patients who had surgery alone.^{xiii} Gene therapy using skin cells has “produced encouraging results” in human trials for the treatment of Alzheimer's disease.^{xiv} Mice with end stage type-1 diabetes have been cured with adult human spleen cells.^{xv}

Wouldn't the CSCRC fund adult stem cell research, too? Such payments would be authorized under the act, but would be far less likely to be funded. Here's why: The CSCRC explicitly gives “priority” in funding to “research opportunities that cannot or are

unlikely to receive timely or sufficient federal funding unencumbered by limitations that would impede the research.”^{xvi} There are no federal funding or significant regulatory impediments for adult stem cell research. But embryonic stem cell research is limited to cell lines in existence before August 2001. And the federal government does not fund research into human SCNT at all. Hence, the measure would appear to require that cloning and embryonic stem cell research receive funding priority over adult stem cell research, umbilical cord blood stem cell research, and other non-embryonic research areas.

How much would the measure actually cost the people of California? According to the California Legislative Analyst, when expected interest on the bonds is included, the CSCRC would cost Californians \$6 billion over thirty years.

If the state can’t afford to fund the research, can the legislature reduce the amount?

No. The CSCRC is a constitutional amendment. And, it would require funds to “be continuously appropriated without regard to fiscal year, be available only for the purposes provided herein, and shall not be subject to appropriation or transfer by the Legislature or the Governor for any other purpose.”^{xvii} In other words, the measure explicitly removes funding decisions from the California Legislature. This means that regardless of the state of the California economy and the extent of debt—even if schools are closing and an earthquake has destroyed the freeways of Los Angeles—biotech researchers *must* receive about \$295 million in research grants every year, financed by the issuance of bonds to be paid from the general fund.

Aren’t the only opponents to “therapeutic” cloning religious conservatives? No. Polls show that the majority of Americans oppose human cloning for use in research.^{xviii} Moreover, opponents of human cloning range from liberals to the conservatives.^{xix} Moreover, progressive countries such as Australia, Canada, and Norway have outlawed all human SCNT.

Conclusion

The California Stem Cells Research and Cures Initiative is clearly one of the most radical measures ever conceived. It would require California to borrow money to fund research into human cloning and embryonic stem cells, while giving those research areas priority over adult stem cell research that may be more efficient or efficacious.

Approving the proposal would also be economic madness. California is in the midst of the worst budget crisis in its history. The state is already deeply in debt. It can’t adequately fund our schools, provide proper health care for its poor, repair roads, fund services for the developmentally disabled, or adequately prepare first responders in case of a terrorist attack. In March voters were forced to approve a \$15 billion debt restructuring bond issue just to avert bankruptcy.

The last thing the state needs during this time of financial famine is a \$6 billion pork barrel project to fund scientifically problematic and morally controversial research into human cloning.

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- ⁱ <http://www.californiansforcure.com/Ballot%20Initiative.htm>, as of April 28, 2004.
- ⁱⁱ CSCRC, Section 4, Section 4, proposed amendment to the Constitution of the State of California, subsection 5.
- ⁱⁱⁱ CSCRC, Section 3, "Purpose and Intent."
- ^{iv} CSCRC, Section 4, Section 4, proposed amendment to the Constitution of the State of California, subsection 1.
- ^v Ed Fletcher, "Governor Signs Stem Cell Bill," *Sacramento Bee*, September 25, 2003.
- ^{vi} Luke Timmerman, "Stem-Cell Research is Exciting, but Not To Investors," *The Miami Herald*, March 30, 2004, reprinting an article that originally appeared in the *Seattle Times*.
- ^{vii} Ian Wilmut, Keith Campbell, and Colin Tudge, *The Second Creation: Dolly and the Age of Biological Control*, "The Importance of Being Dolly," chapter by Ian Wilmut, (Cambridge, MA, Harvard University Press, 2000).
- ^{viii} CSCRC Section 4, Section 4, proposed amendment to the Constitution of the State of California subsection 5.,
- ^{ix} CSCRC "Definitions," subsection k.
- ^x CSCRC, proposed amendment to *California Health and Safety Code*, section 125281.06 (a) 6.
- ^{xi} Kim Tae-gyu, "Commercial Application of Embryo Cloning Due Within Ten Years; Hwang, *Korea Times*, February 19, 2004.
- ^{xii} Peter Aldous, "Can They Rebuild Us?" *Nature*, Vol. 410, April 5, 2001, pp. 622-625.
- ^{xiii} Helen R. Pilcher, "Bone Marrow Stem Cells Help Mend Broken Hearts," *Nature Science Update*, April 27, 2004.
- ^{xiv} Carl T. Hall, "First-ever Gene Therapy for Treating Alzheimer's," *San Francisco Chronicle*, April 28, 2004.
- ^{xv} Shohta Kodama, et al, "Islet Regeneration During the Reversal of Autoimmune Diabetes in NOD Mice," *Science*, Vol. 302, November 14, 2003.
- ^{xvi} CSCRC, Section 3, "Purpose and Intent."
- ^{xvii} CSCRC, Section 4, proposed amendment to the Constitution of the State of California, subsection 4.
- ^{xviii} An August 2001 poll, published by ABC News, showed that a majority of Americans oppose human cloning for any reason. Two questions were asked: "Should it be legal in the U.S. to clone humans?" Yes, 11%. No, 87% (men 16/82, women 6/93). "Clone humans for medical treatments?" Yes, 33%. No, 63% (men 41/56, women 27/70). A 5/14/03 Gallup Poll disclosed that 90% of respondents believed that "cloning humans" is "morally wrong."
- ^{xix} For example, Jeremy Rifkin, on the Left opposes all human cloning. So does conservative bioethicist, Leon Kass.