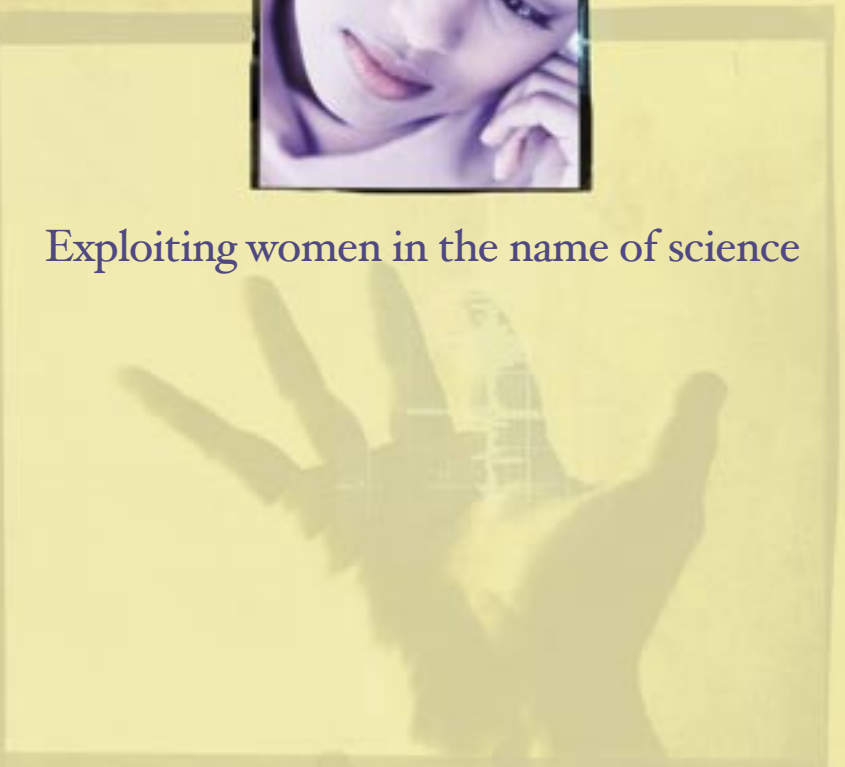




# Women's voices against cloning



Exploiting women in the name of science

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## Exploiting women in the name of science

*"This is very much a woman's issue. I'm trying to get the word out to the world that there is a very strong pro-choice liberal contingent that believes there is something wrong with embryo cloning."*

—Judy Norsigian, author, *Our Bodies, Ourselves*

## *A Message to Missouri Voters*

### **You stand at a crossroads.**

The controversial issue of human cloning and stem cell research has come to your state.

One side of the debate wants you to support a ballot initiative to make it a constitutional right to conduct this research with taxpayer dollars.

The other side wants you to oppose this ballot initiative.

There is, however, another aspect to this initiative that you may not know: **the risks that this measure poses to women's health.**

Human cloning for stem cell research requires a vast number of women's eggs and harvesting these eggs is an essential step in this research. **Egg harvesting for cloning experiments is the same process that women undergo for fertility treatments — and the medical risks to women in this procedure are well known.**

What is less well known is that cloning for stem cell research — the issue at the heart of this ballot initiative — requires women to take these risks.

Many voices will compete for your attention and your vote leading up to the November election. We invite you to consider a perspective that may be lost in the clamor — **the voices of women** with serious concerns about this issue. Voter approval of this measure could have grave repercussions for women in Missouri, across the country and around the world.

Thank you for taking a moment to read this booklet — and hear the voices of women concerned about this important women's health issue.

## *Marilyn Anne Irwin desperately wanted a baby.*

So did **Gillian Norris**.

Both women turned to fertility treatments, taking drugs to stimulate egg production in the hope of becoming pregnant. **Both women died** as a result of complications from ovarian hyperstimulation syndrome (OHSS) — a condition associated with stimulating the ovaries for excess egg production.

**Temilola Akinbolagbe** also wanted to have a child. She received her first injection of egg-stimulating drugs and days later developed complications. Within hours, the 33-year-old woman was **dead** from a massive heart attack.

Doctors gave 26-year-old **Jo Ann Harris** the long-awaited news that she was pregnant just hours before she **died** from OHSS complications. Her brother, John, said, “Jo Ann was never told that other people had died from this condition. If she had been, she might not have gone ahead with the treatment.”

Angela Hickey responded with the same shock after her 33-year-old daughter, **Jacqueline Rushton**, **died** from similar complications several months after beginning fertility treatment. The grieving mother said, “Jacqueline desperately wanted a baby but she didn’t realize the dangers. She didn’t expect to lose her life.”

*“In advocating the creation of embryos for stem cell research by means of somatic cell nuclear transfer, [proponents] overlook the fact that human embryos must be created from the eggs of women. Producing eggs engenders increased risks for women. Hyperstimulation can lead to liver damage, kidney failure or stroke, and ovulation-stimulating drugs have been associated with ovarian cancer, according to some studies.”*

—**Cynthia B. Cohen, Ph.D., JD, Kennedy Institute of Ethics, Georgetown University**

In their efforts to conceive a child, these women subjected their bodies to a procedure called **ovarian hyperstimulation**.

During this process, a woman is injected with powerful hormones that cause her ovaries to produce more than the usual one or two eggs per month. Then, she is put under anesthesia so that a doctor can surgically extract her eggs.

### **Egg harvesting is risky business.**

Studies report that anywhere from 5 to 14 percent of women who undergo ovarian hyperstimulation experience severe complications. These can include blood clots, kidney and liver damage, future infertility and death.

*What does egg extraction have to do with cloning for stem cell research? Most people are unaware that egg harvesting and cloning experiments go hand-in-hand.*





## Cloning and Women's Eggs

**What does egg extraction have to do with cloning for stem cell research?** Most people are unaware that egg harvesting and cloning experiments go hand-in-hand. Here's why: The method currently used by scientists for cloning research requires women's eggs. This cloning method — called somatic cell nuclear transfer (SCNT) — was the method used to create Dolly, the sheep. There are two necessary components of SCNT: a body cell (like a skin cell) and a woman's egg.

**This brings us full circle to ovarian hyperstimulation and egg harvesting — the only way to get the eggs.**

## Hear Women's Voices

The indisputable connection between human cloning for stem cell research and harvesting women's eggs makes many people uncomfortable.

This concern extends into segments of the abortion-rights community. In fact, some leading women's health advocates are speaking out against cloning research because of the threat to women's health and lives.

As the number of cloning experiments increases, so does the demand for women to subject their bodies to the risks of egg harvesting.

### Cloning as a method of embryonic stem cell research

*One type of stem cell research involves the use of stem cells from human embryos.*

- *Some scientists use stem cells extracted from existing embryos created through **in vitro fertilization**.*
- *Other scientists are attempting to use cloning to create new embryos for stem cell research. The primary technique for human cloning is **somatic cell nuclear transfer**.*

## In response, women are speaking out:

*“As a society we are at a turning point in our relationship to science. We are being asked to make **women the servants of biotechnology**, rather than insisting on a biotechnology that promotes the well-being of all people.”*

—Diane Beeson, Ph.D., medical sociologist, professor emerita, California State University

*“We believe that current biopolitics are separating men and women from natural reproduction and are **robbing women of their biological tissues for experimental technoscience**. We will fight together with other feminists for the freedom of women and the welfare of future generations.”*

—Paola Tavella and Alessandra Di Pietro, feminist authors, Italy

*“There is a **disturbing lack of attention to the risks to women's health** posed by the advent of embryo cloning. . . . Omitted from the polarized debate is any discussion of the thousands of women who will need to undergo egg extraction procedures for such embryo cloning.”*

—Judy Norsigian, author, *Our Bodies, Ourselves*

*“Soon it will be clear that the ethics of cloning depend not just on how we treat embryos, but also on **how we treat the women put to risk by the procedure**.”*

—Rebecca Dresser, professor of ethics in medicine, Washington University, member of the President's Council on Bioethics



*“Women can die from egg harvesting, or suffer irreversible infertility, and long-term effects of the drugs which are used in the process are still being questioned. **None of these issues has been adequately addressed by the stem cell scientists eager to get their hands on women’s eggs and ovaries.** And all for scientific research which still remains in the realm of hypothetical benefit.”*

—Josephine Quintavalle, spokeswoman,  
Comment on Reproductive Ethics,  
United Kingdom

*“Biotechnological research and development often affect women more directly than men. **In the case of human embryonic cloning, women’s health and safety have already been affected — adversely.** Sadly, there have been too many instances of coercion and deception, and violations of informed consent. Left uncontrolled, research demands will place undue burdens on young, poor women. We deserve a biotechnology that is not degrading and destructive to women’s health.”*

—“Hands Off Our Ovaries” Manifesto

These voices, and those of other women’s advocates around the world, raise concerns that are far from hypothetical. Recent events in South Korea reveal that the exploitation of women for cloning experiments is a real danger.

## *Lessons from South Korea*

Woo-suk Hwang had the scientific world by the tail. The South Korean researcher made international headlines with claims that he successfully cloned human embryos for stem cell research. His landmark studies were government funded and published in prestigious medical journals.

All of this came to a screeching halt in late 2005 when an investigation revealed that virtually all of Hwang’s cloning claims were fraudulent. His scientific papers were retracted and he faced an investigation for the misuse of millions of dollars in government funding.

A critical part of the story, however, didn’t make news headlines: **The voices of South Korean women exploited** for Hwang’s experiments. Faced with a critical shortage of women’s eggs, Hwang’s research team took ethical shortcuts and safety risks when they recruited women for egg harvesting.

During a government investigation, officials uncovered some disturbing facts:

- Two of Hwang’s junior female researchers donated their own eggs — violating international ethics guidelines to prevent senior researchers from pressuring younger assistants to be research subjects.
- Twenty women were paid for undergoing egg extraction, including women in debt who sold their eggs for money. (Such payments are now banned in South Korea.)
- Researchers did not fully explain to women ahead of time the possible dangers involved with egg harvesting.

*“If I were a woman, I would definitely donate my eggs to scientific research without hesitation.”*

—Woo-suk Hwang,  
discredited South  
Korean scientist

*“Manipulating a woman’s physiology to make her produce large numbers of eggs for research, while encouraging her to do so by paying for them, raises questions of medical and scientific exploitation and ethics that have hardly been discussed.”*

—Ruth Hubbard, Ph.D.,  
biologist, professor  
emerita, Harvard  
University



- Hwang and his team misrepresented the number of women's eggs obtained for research. They harvested nearly five times more eggs than stated in published reports.
- In total, more than 2,000 eggs were harvested from 129 women.
- Of those women, almost one in five suffered complications and were hospitalized for treatment.

*“Why should women believe anything that researchers with vested interests and conflicts of interests have to say about the risks and benefits of egg extraction?”*

—From [www.handsoffourovaries.com](http://www.handsoffourovaries.com)

South Korean women's groups responded by demanding that the government compensate these women for their mental and physical suffering, as well as cover future medical bills associated with the egg harvesting disaster.

Sadly, South Korean scientists are not the only ones paying women for eggs in order to conduct human cloning experiments. A Massachusetts-based company, Advanced Cell Technology, attempted cloning for stem cell research by harvesting 71 eggs from seven women. To recruit women to participate in the experiment, the company advertised for women's eggs in local newspapers, offering to pay each woman \$4,000.

We know some women will **subject their bodies** to egg harvesting for a price. But do they know the risks? Will their bodies become part of an assembly line for human cloning experiments? Will researchers with a vested interest in achieving success make protecting women's health a priority?

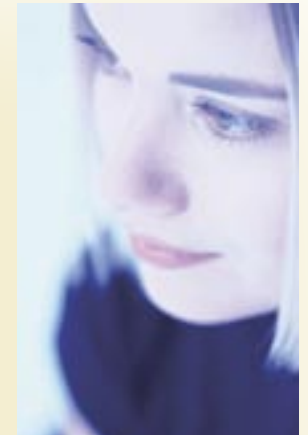
## *How many eggs are we talking about?*

*“It would take ‘thousands of eggs on an assembly line’ to produce a custom therapy for a single person.”*

—Thomas Okarma, Geron Corporation

*“Where do you source that many eggs? Sourcing human eggs is a contentious issue in itself.”*

—Alan Robbins, BressaGen Limited



The number of eggs required for cloning research is a daunting obstacle for biotechnology companies.

Biologist and former stem cell researcher David Prentice, Ph.D. recently examined how many eggs would be required to create enough cloned embryos to treat a single disease: diabetes. Here's a portion of his March 2002 testimony before Kentucky state lawmakers:

*“A calculation based on the published scientific literature for cloning animals and derivation of embryonic stem cells, both extremely inefficient procedures, reveals that **to treat just one patient group**, the 16 million diabetes patients in the U.S., **will require at least 800 million human eggs** or approximately 80 million women of childbearing age to ‘donate’ eggs. As the NAS [National Academy of Sciences] panel points out, this subjects a large number of women to adverse health effects. The result will be that human eggs will also become a commodity, with the resultant exploitation of disadvantaged women in this country and abroad.”*

In 2004, the U.S. Census Bureau reported 61 million American women in their reproductive years — women who could qualify for egg extraction. It's safe to expect that only a fraction of these U.S. women would subject their bodies to the drugs and surgeries of egg extraction for cloning research — falling far short of the required number of eggs for a single disease. Scientists may then look overseas for women to supply the remaining eggs, often in countries with less economic prosperity and stability than the U.S.

Cloning experiments for stem cell research **put women at risk**, threatening to subject millions of women to the dangers of egg harvesting. Scientists, with cash in hand and desperate for eggs, may find young and low-income women as eager participants.

*Cloning exploits  
women in the name  
of science, and  
it's wrong.*

*“Women’s bodies and  
women’s eggs are the  
raw materials of  
these new human  
biotechnologies —  
what forms of violence  
are they and will they  
perpetuate against  
women, and against  
future generations? . . .  
We are looking at one  
of the new forms of  
violence against women.”*

—Sujatha Jesudason,  
domestic violence  
prevention expert,  
U.S. Women  
Without Borders

*“The commodification of women’s bodies, their  
eggs and possibly their uteruses, is a very real  
concern that we all share; and it is yet another  
reason why we must ban all human cloning,  
and why we must do so now.”*

—Democratic United States Senator  
Mary Landrieu of Louisiana

**The physical risks of egg  
harvesting are great:**

- **Blood clots** • **Liver damage**
- **Kidney failure** • **Stroke**
- **Future infertility** • **Death**

Since egg harvesting and cloning for stem  
cell research go hand-in-hand, what will  
cloning research mean to women you  
know?

To women you don’t know?

To your daughters and granddaughters?

To you?

Women’s bodies are not biological objects  
for scientific use. Women deserve protec-  
tion from the threat of scientific violence  
that comes from cloning experiments.

**The voices of women and their  
advocates must be heard!**

**Women and men of Missouri,  
you have an opportunity and responsibility to  
protect the women of your state, and those  
beyond your borders.**

**Please vote NO on the  
Missouri cloning initiative.**

**Women’s health and lives hang in the balance.**

For more information on the Missouri cloning  
initiative and citations for this booklet,  
visit [www.votenocloning.com](http://www.votenocloning.com).

*Too many questions,  
too much risk*



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“Cloning exploits women in the name of science” is a service mark of Focus on the Family

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