



Fresh Eggs for Sale

*This is not a road-side sign in the country;
this is about human eggs being sold for research.*

One of the side issues of the embryonic stem cell debate is about eggs. The cloning process or SCNT (somatic cell nuclear transfer) requires the use of human eggs otherwise known as oocytes to serve as the vehicle for the nuclear material for cloning. Human eggs or oocytes and sperm are also called gametes. Gametes do not have the full complement of 46 chromosomes; they only contain 23 chromosomes; so when they unite, the tiny embryo that is the result of the cell division that takes place has DNA material from both the egg and the sperm, uniting to make a unique human being with 46 chromosomes. In the cloning process, a body (soma) cell is taken from a donor, and its nucleus is placed inside the denucleated egg (an egg whose nucleus is removed). Either electrical or chemical stimulus is provided, and, theoretically, an almost identical clone of the donor is created.

This process conceivably will require hundreds of eggs if the example of the cloned sheep Dolly is an indicator. Before Dolly actually came into existence, over 400 tries were required. In the case of now disgraced researcher Woo Suk Hwang of South Korea, hundreds more eggs were used than reported: 2061 eggs from 129 women. Many of these were lab workers who, it is rumored, were coerced into donating. According to testimony before the Massachusetts State Legislature's Joint Committee on Economic Development and Emerging Technologies, Pia de Solenni, Ph.D., stated that the highest cloning efficiency with *animals* is 20-30 percent. This means that approximately 50 eggs per animal are required. Given the animal statistics, scientists would have to obtain a minimum of 850 million eggs harvested from at least 85 million women to treat the 17 million Americans with diabetes. According to the U.S. census in 2000, there are 60 million American women of child-bearing age. From where would all these eggs come? Would all these women consent to painful and possibly risky ovarian stimulation to produce the number of eggs needed? Would researchers have to resort to third-world women who would be promised money for allowing their eggs to be harvested? Or would they even be coerced into the painful process?

Protocols for stimulating the development of multiple follicles in the ovaries involve daily subcutaneous hormone injections over a period of 7-10 days. The mature eggs are then harvested with ultrasound guidance by the insertion of a needle through the vagina. This procedure requires anesthesia. As a rule, the Ethics Committee of the American Society for Reproductive Medicine states that egg donors spend "56 hours in the medical setting, undergoing interviews, counseling, and medical procedures related to the process." The injections can be uncomfortable according to an article by Robert Steinbrook, M.D., in the *Journal of the Massachusetts Medical Society*, January 26, 2006. He writes that "the retrieval of oocytes carries risks, such as those of anesthesia and bleeding. Another important risk associated with the

procedures is the development of the ovarian hyper stimulation syndrome. This syndrome represents an exaggerated and usually unpredictable response to ovulation-induction therapy, in which capillary permeability is increased and fluid is shifted from the intravascular space to third-space compartments. In severe cases, hospitalization is required, and complications such as ascites, pleural and pericardial (swelling in the sacs surrounding the heart and lungs) effusions and venous thromboembolism (blood clots in the veins) may develop." [Explanation Added] He also states in the article that there is some evidence that women who undergo multiple cycles of hormonal stimulation may increase their risk of having ovarian cancer later in life. This risk is based on data from animals; to date there have been no conclusive studies in humans. A recent study by scientists at the University of Padua found one in ten women undergoing fertility treatment will suffer milder forms of ovarian hyper stimulation syndrome, while one percent will be at risk for life-threatening blood disorders. Researchers who have analyzed doctors' reports since the early 1960s discovered 60 percent of fertility treatment accidents involved blood clots in the head and neck. The UK Royal College of Obstetricians and Gynecologists wrote in their 2006 guidelines that ovarian hyper stimulation occur in 33 percent of IVF cycles with an estimated 3-8 percent of patients showing moderate to severe reactions.

Alternative solutions for procuring eggs consist of procuring eggs from: cadavers; aborted female fetuses (a fetus has follicles capable of producing eggs in their ovaries even before birth); animals (this would result in creating human embryos containing non-human DNA, not only raising ethical issues, but increasing risk of rejection or auto-immune response); surgically removed ovaries and the production of eggs from existing stem cell lines (which would involve harvesting stem cells from tiny embryos). Researchers agree that there are a number of ethical issues which would need to be addressed concerning procurement of eggs, including payment and the sources of the eggs.

Most agree that women should not be paid to harvest their eggs, but compensation could be paid to cover expenses, according to a National Academies of Science advisory report in April. As we discovered several years ago right here in Kansas, baby body parts from aborted fetuses were being "sold" for a "lab-processing fee" on the open market, so there is no reason to suppose that researchers will be any more ethical in selling and procuring human eggs.

Kansas is on the threshold of decisions about life that will affect generations to come. We can decide to promote ethical adult stem cell research (which includes cord blood stem cells), or we can dive into the bottomless pit of the moral free-fall associated with embryonic stem cell research and human cloning. Moses said many years ago to the people of Israel, "I call heaven and earth to witness against you today; that I have set before you life and death; the blessing and the curse. So choose life in order that you may live, you and your descendants." Deuteronomy 30:19