Ethics of using employees’ eggs in cloning research

SIR — The front cover highlights issues in human egg donation that were not addressed in previous issues of *Nature* and *Nature Medicine* (Nature 439, 253; 2006). Developing clones with eggs obtained from employees raises serious ethical concerns (see D. Magnus and M. K. Cho Science 308, 1177–1178, 2005).

First, there is considerable risk that the decision to donate is made under pressure and is not entirely voluntary. Second, donors may not be adequately informed. For example, if they are unguardedly taught that research provides research for their benefit, they do not need to know that they will not be used to develop therapies. Scientists, like all professionals, have an ethical imperative to ensure that certain socially valuable goals, but they must not violate others’ autonomy in the pursuit of those goals. Finally, eggs are not easily obtained: the process requires steps such as a clinic, ultrasound scans, invasive attempts to stimulate egg production, and, when appropriate, having a proof with an attached needle guided by ultrasound inserted through the vaginal wall into the ovary to retrieve the egg. Researchers using human eggs should be independent of any fertility clinic to ensure that the woman from whom the eggs come. That way, women are less likely to feel that donating their eggs, and it helps ensure the clinical decision is not coerced by either scientific or financial goals in the pursuit of these unique stem cells. Cloning protocols should include close information about the steps taken to ensure that donors give their informed and voluntary consent to donation. 

Suzanne Hamer, Judith Dolan

Latter & Stumfrett-Genetti Cell Culture, Wistar Institute of Medical Research, 3601 Spruce Street, Philadelphia, PA 19104, USA


CORRESPONDENCE

Ethics: China already has clear stem-cell guidelines

SIR — As scientists and ethicists who are keen on stem-cell research in China, we disagree with the statement in your news story “Poor clarification of science” (Nature 440, 253; 2006) that “China has no clear policies with different institutes following different rules.” In fact, Chinese government has issued several guidelines to regulate human stem-cell research. There are guidelines on human-assisted reproductive technologies issued by the Ministry of Health in July 2003, and ethical guidelines for research on human embryonic stem cells jointly issued by the Ministry of Science and Technology and the Ministry of Health in December 2003. Both explicitly prohibit human reproductive cloning, and the latter is similar in principle to the guidelines proposed by the UK National Academies (Nature 440, 253; 2006). In our view, stem cell research in China is not in conflict with any international standards or with any national or international guidelines. Stem-cell science needs sweeping changes

SIR — Your News story “Stem-cell research: government approval for change” (Nature 440, 132–133, 2006) touches on the situation and potential growth of scientific research in a single country, but the issues are relevant to all of the former Soviet bloc.

The facts are shocking. Although the average national product per capita in these countries is only a few times lower than the rate of North Korea, the average university ranking is an order of magnitude poorer in the same Academic Ranking of World Universities, only one of the top 150 universities is from the former Soviet bloc. Pumping extra money into the system would make little difference. As a member of the Independent Academic Forum (www.independent-aca- demicforum.org), I — a group of Polish scientists aiming to promote changes to higher education, leding to the EU model — believe the only real hope lies in creating a new generation of dynamic scientists to trust the pace of academic life, which means supporting the best of the best. Such is the old guard, who attuned their positions and influence under the old regime, are not up to the scientific challenges of today and they resist any change.

Theresa W. Buhler

Bari Systems Analytical Solutions, USA

Marcelle da Silva d’Etiolles, USA

Eastern European science needs sweeping changes

SIR — Your News story “Stem-cell research: government approval for change” (Nature 440, 132–133, 2006) touches on the situation and potential growth of scientific research in a single country, but the issues are relevant to all of the former Soviet bloc. The facts are shocking. Although the average national product per capita in these countries is only a few times lower than the rate of North Korea, the average university ranking is an order of magnitude poorer in the same Academic Ranking of World Universities, only one of the top 150 universities is from the former Soviet bloc. Pumping extra money into the system would make little difference. As a member of the Independent Academic Forum (www.independent-academicforum.org), I — a group of Polish scientists aiming to promote changes to higher education, leding to the EU model — believe the only real hope lies in creating a new generation of dynamic scientists to trust the pace of academic life, which means supporting the best of the best. Such is the old guard, who attuned their positions and influence under the old regime, are not up to the scientific challenges of today and they resist any change.

Theresa W. Buhler

Bari Systems Analytical Solutions, USA

Marcelle da Silva d’Etiolles, USA

Reviewers peering from under a pile of 'omics data

SIR — An increasing problem for reviewers, in providing adequate reviews for science journals, is not simply fraudulently data submission or manipulation (see Correspondence Nature 439, 785–786, 2006), but the information density and sheer bulk of data that now have to be supplied in part of publishing modern biological science. This is particularly true with 'omics' type data sets (transcriptomics, proteomics, metabolomics and so on), which are now collected in parallel in systems-biology studies. Many reviewers are experienced and trained scientists, but they are also very busy people who may well get several papers a week to review. Do we really have time to read the 60 plus pages of supplementary data that often accompany a major paper? Do we even have the tools and expertise needed to analyse and check the veracity of raw 'omics' data sets? A typical data set formatted to meet MIAME (minimum information about a microarray experiment) standards may contain millions of discrete data. To check whether the data have been biased, normalised and processed correctly — within a data set that might have taken a couple of products two years to produce — is a difficult task, even if the reviewer has the time, the knowledge and the will to review.

To the data-rich 'omics world of today, the referees' tools have become more complex and challenging that could have been envisaged only a few years ago.

Furthermore, there is increasing demand for appropriate papers that cover many types of 'omics trajectory and measurement and interpret statistics at different levels of biological organisation. The scientific community needs to ensure the way it addresses the peer review process, taking into account that referees are only human and are not being asked to do a superhuman task in a near daily basis. 

Jeremy K. Nicholson

Biological Chemistry, Imperial College London, London, UK

Nature Publishing Group
Wombs for rent in India
Women are getting paid as surrogate mothers to help Western couples with infertility problems.
Is such outsourcing a logical outgrowth of India's fast economic growth or an ethically troubling trend?

ANAND, INDIA--As temp jobs go, Saroj Mehli has landed what she feels is a pretty sweet deal. It's a nine-month gig, no special skills needed and the only real labour comes at the end -- when she gives birth. If everything goes according to plan, Mehli, 32, will deliver a healthy baby early next year.

But rather than join her other three children, the newborn will be handed over to a U.S. couple who are unable to bear a child on their own and are hiring Mehli to do it for them. She'll be paid about $5,000 (U.S.) for acting as a surrogate mother, a bonanza that would take her more than six years to earn on her salary as a schoolteacher in a village near here. "I might renovate or add to the house, or spend it on my kids' education or my daughter's wedding," Mehli said. Beyond the money, she added, there is the reward of bringing happiness to a childless couple from the United States, where such a service would cost them thousands and thousands of dollars more, not to mention the potential legal hassles.

Driven by many of the same factors that have led Western businesses to outsource some of their operations to India in recent years, an increasing number of infertile couples from abroad are coming here in search of women willing, in effect, to rent out their wombs. The trend is evident to doctors such as Indira Hinduja, perhaps India's most prominent fertility specialist, who receives an inquiry from overseas every other week. It can also be detected on the Internet, where a young Indian woman recently posted an ad on a help-wanted website offering to carry a child for an expatriate husband and wife.

Then there is the dramatic example of Mehli's family. Two of her sisters have already served as surrogates -- one of them for foreigners -- and so has a sister-in-law. Mehli finally decided to join in, with the enthusiastic consent of her husband, a barber. She is under the care of a local physician who has become a minor celebrity after arranging more than a dozen surrogacies in the past two years, for both Indian and non-Indian couples.

For some, the practice is a logical outgrowth of India's fast-paced economic growth and liberalization of the last 15 years, a perfect meeting of supply and demand in a globalized marketplace. Payment usually ranges from about $2,800 to $5,600, a fortune in a country where annual per capita income hovers around $500.

"It's win-win," said S.K. Nanda, a former health secretary here in Gujarat state. "It's a completely capitalistic enterprise. There is nothing unethical about it. If you launched it somewhere like West Bengal or Assam" -- both poverty-stricken states -- "you'd have a lot of takers."

Others aren't so sure about the moral implications, and are worried about the exploitation of poor women and the risks in a land where 100,000 women die every year as a result of pregnancy and childbirth. Rich couples from the West paying Indian women for the use of their bodies, they say, is distasteful at best, unconscionable at worst. "You're subjecting the life of that woman who will be a surrogate to some amount of risk," said C.P. Puri, director of the National
Institute for Research in Reproductive Health in Mumbai (formerly Bombay). "That is where I personally feel it should not become a trade."

Both sides of the debate agree that the fertility business in India, including "reproductive tourism" by foreigners, is potentially enormous. Current figures are tough to pin down, but the Indian Council of Medical Research estimates that helping residents and visitors beget children could bloom into a nearly $6 billion-a-year industry. "It's definitely going to increase with education and literacy, especially in a country like India," said Gautam Allahbadia, a fertility specialist in Mumbai who recently helped a Singaporean couple find an Indian surrogate. He has received similar inquiries from the U.S., Israel and Spain.

In the vanguard of the nascent industry is this small city, where gynecologist Nayna H. Patel is presiding over a mini baby boom. But eight of her recent and imminent arrivals won't be adding to Anand's population of 100,000: Three of the infants are destined for the U.S., two for Britain and three for other parts of India. (Six more surrogacy attempts were unsuccessful.)

Before Patel's practice began attracting national and international notice, Anand was famous for decades as the silk capital of India, home to the country's most successful dairy farmer co-operative. Now the town also boasts about 20 young women who have volunteered to be implanted with embryos at Patel's clinic. A few have already gone through the process once and are eager for a second go-round.

Prospective foreign clients hear of Patel through word of mouth or informal online networks and websites dealing with infertility issues. By the time they contact her, and spend the time, energy and money to get here, they are usually desperate for children and often emotionally battered from long years of trying and failing.

Patel has set some criteria for those she'll help: only couples for whom the baby would be their first and where the wife is either infertile or cannot physically carry a child to term. Likewise, potential surrogates must be between 18 and 45, and in good health. They also must already be mothers, so that they know what awaits their bodies during pregnancy and are less likely to be troubled about giving up the new baby because they already have kids at home. The egg that contributes to the embryo is never one of their own, coming instead from an anonymous donor or the intended mother, and then usually fertilized in vitro.

Both parties sign a contract under which the intended parents pay for medical care and the surrogate renounces rights to the baby, a provision that relieves the fears of many foreign couples. In the U.S., for example, where laws vary from state to state, the surrogate sometimes has a window of opportunity after birth to stake a claim on the child. In Anand, volunteers are repeatedly reminded by Patel and her staff that the fetuses in their wombs are not theirs. They give up the newborns within one to two days after delivering. Patel said no problems have arisen yet with too strong a bond forming between surrogate and child.