

Low embryo count fuels US stem-cell debate

Kendall Powell, Denver

Only about 275 of the roughly 400,000 frozen embryos currently stored in the United States are likely to be of any use in stem-cell research, according to the first comprehensive inventory of the embryos.

The low number gives the lie to the notion that fertility clinics are awash with spare embryos that are suitable for deriving new lines of human embryonic stem cells, opponents of the research say. But its supporters counter that there are not many embryos because so few fertility clinics arrange for patients to donate embryos to research.

According to a survey by Jacob Mayer, an embryologist at the Jones Institute for Reproductive Medicine in Norfolk, Virginia, and colleagues, donors have approved only 11,000 of the embryos for use in research (D. I. Hoffman *et al. Fertil. Steril.* **79**, 1063–1069; 2003).

Many of the 11,000 embryos would not survive freezing and thawing, and only 25% of those that do are expected to develop to the blastocyst stage. Mayer and co-authors estimate that the process is so inefficient that just 275 would lead to new stem-cell lines.

“The American public had the impression that hundreds of thousands of embryos were out there that patients were eager to have destroyed in research,” says Richard Doerflinger, a lobbyist at the US Conference of Catholic Bishops. “This shows that this

is clearly not the case.”

“Fertility clinics may not contain the plethora of material they were expected to,” says Mayer, whose institute conducted the survey of 340 fertility clinics in association with the Society for Assisted Reproductive Technology and RAND, a private non-profit research institution.

Researchers relying on frozen embryos from infertile couples are in for a shock, not only because of the scarcity but also because embryos from infertile couples may be less likely to develop normally, says Amy Sparks, director of the University of Iowa Reproductive Testing Laboratory in Iowa City. Her clinic, where about 300 embryos have been donated to research in the past 15 years, is one of just a handful in the country that has protocols for the use of donated embryos in stem-cell research.

Even a small number of suitable embryos is viewed by researchers as a potentially useful addition to the 11 stem-cell lines already sanctioned by the government for use in research. “That 275 is 20 times what we have now,” says George Daley, a stem-cell researcher at the Whitehead Institute in Cambridge, Massachusetts. Even though thousands of embryos have been designated for research, he says, “there’s no effective way of getting them into researchers’ hands”.

Some researchers predict that donations



Research on ice: less than 3% of frozen embryos in the United States could be used in the lab.

to research will rise as public awareness of stem-cell and other human embryo research increases. But opponents say that the numbers reflect the public’s rejection of the use of embryos in research. “There’s a widespread intuition in the public that embryos belong in uteruses,” says Ben Mitchell of the non-profit Center for Bioethics and Human Dignity in Bannockburn, Illinois. ■

MIT pulls out of Asian Media Lab in argument over role

K. S. Jayaraman, New Delhi

An effort to replicate in India the world-famous Media Lab, run by the Massachusetts Institute of Technology (MIT), has collapsed amid angry recriminations between the Indian government and the original lab in Cambridge, Massachusetts.

Media Lab Asia, which opened in New Delhi amid much fanfare two years ago



(*Nature* **411**, 623; 2001), will continue without MIT’s involvement after an acrimonious meeting last week between Arun Shourie, India’s information-technology minister, and Nicholas Negroponte, chair of the MIT Media Lab’s governing board.

MIT officials say that the decision to end the collaboration came after Shourie said he wanted practical technologies to flow from the laboratory, rather than the futuristic ideas and approaches for which the MIT lab won its reputation as one of the world’s hottest research labs.

A Press Trust of India news agency report from New York quoted Negroponte as saying that MIT pulled out of the project because Shourie wanted to run it like other programmes in India. It said that Shourie does not believe in rural development through information technology, and that he is even less interested in basic innovation.

But Shourie told reporters that MIT’s interpretation of events was “strange”, and that India called off the contract as it “gained nothing” from the collaboration.

Media Lab Asia was MIT’s second Media

Lab outside the United States following Media Lab Europe, which was established in Dublin, Ireland, in 2000. The Asian lab was set up in India after MIT considered offers to host it from several other countries, including China and Singapore. Its board had selected research projects to be carried out at five Indian Institutes of Technology (IITs) in Chennai, Mumbai, Kharagpur, New Delhi and Kanpur.

The initial agreement to run Media Lab Asia expired on 31 March and has not been renewed. Shourie says it failed not because he has no interest in rural development, but “because researchers in the five IITs were unable to quantify the contribution from MIT”. Krithi Ramamritham, head of the Media Lab Asia’s centre at the IIT in Mumbai, says that after the initial planning phase, the project got virtually no technical guidance from MIT.

Shourie adds that the project was failing to attract private funds, and that the Indian government didn’t want to pay US\$5 million over ten years to use the name ‘Media Lab’, to which MIT claims the rights. ■