Fetal Tissue Transplants Win U.K. Approval

British review panel separates abortion issue from use of fetal tissue in research—but the U.S. is unlikely to follow suit

London

RESEARCH INVOLVING FETAL TISSUE from induced abortion, a divisive issue in the United States, has been given the green light in Britain.

While the Bush Administration maintains its 16-month-old moratorium on the use of federal funds for transplantation research using fetal tissue from abortions, last week British Health Minister David Mellor announced in the House of Commons that he had accepted the main recommendations of a small blue-ribbon committee set up last year to review guidelines covering the research use of fetuses and fetal material.

The review committee concluded in a report issued on 26 July that it is possible, both at an individual and an institutional level, to make a clear distinction between the issue of abortion and the separate issue of how tissue from a dead fetus should be used. In particular, it says that consent should be given by a mother separately to the abortion, and then to the subsequent use of the tissue from the aborted fetus, with no direct contact permitted between abortion clinics and the institutions using the tissue for research.

To avoid the possibility of "personality transfer" between the fetus and the recipient of brain tissue, the report recommends that, in the case of nervous tissue, "only isolated neurons or fragments of tissue should be used for transplantation."

And the committee suggests setting up a government-backed organization responsible for collecting all such material and subsequently distributing it to research teams. The idea of such an arrangement is to create a buffer between those supplying the tissue and those using it—a proposal meant to address the concern that the research community could exert pressure on women to abort their fetuses for the purposes of medical science.

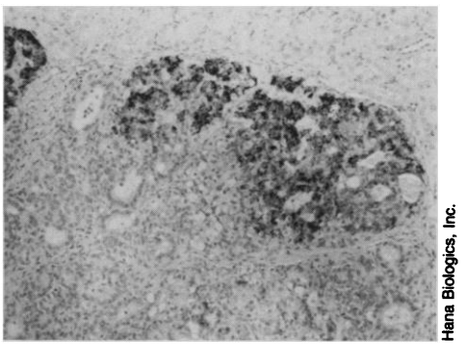
Will this British committee's report—and its acceptance by the conservative Thatcher government—serve as a model for the Bush Administration? Not likely. The U.S. National Institutes of Health established a similar review panel at the request of then assistant secretary for health Robert Windom (*Science*, 23 December 1988, p. 1625). That panel also concluded that so long as abortion was legal, it was acceptable to use tissue from the aborted fetus for research. The NIH panel's recommendations were sent to the office of the assistant secretary earlier this year, but so far there has been no indication that they will be accepted. That hasn't stopped all fetal research in the United States, of course, since privately funded research teams can continue to work with legally obtained fetal tissue. But, without federal funding, progress has definitely been slowed.

And the prospects for the release of federal funds are not good. Health officials contacted by *Science* were pessimistic that the current White House climate would be receptive to supporting research that is opposed by the "right-to-life" movement.

To the relief of British scientists, Margaret Thatcher's conservative government apparently did not feel bound by the moral views of the right-to-lifers. The British Medical Association has put out a statement saying that the recommendations are "entirely compatible" with a voluntary code of conduct which its members have already adopted covering physicians responsible for carrying out abortions, as well as those using fetal tissue to develop new therapies.

Especially happy are those researchers using fetal brain tissue to treat patients suffering from Parkinson's disease. "The recommendations will be welcome to those of us in this field of medical research," said Edward Hitchcock of the Midland Center for Neurosurgery and Neurology, one of the pioneers of this research who has already carried out 20 such transplants.

Sensitive to ethical concerns about his research, Hitchcock added that he and his research teams already take steps to ensure



Hana Biologics, Inc.

Future diabetes therapy? *Human fetal liver cells transplanted into mouse tissue will produce insulin.*

Germany to Ban Embryo Use

Bonn

The West German government has announced that it will introduce strict new legislation that will ban virtually all use of human embryos in biomedical research, and make the manipulation of human genetic material potentially a criminal offense with penalties of up to 5 years in prison.

Only research that does not harm the embryo will be permitted under the new law. Doctors treating patients with artificial insemination techniques would be forbidden to create "spare embryos," at present a standard procedure in many countries and one that allows the implantation of a second fertilized embryo or set of embryos if the first operation fails.

A draft of the new law was approved late last month by the cabinet of the coalition government headed by Chancellor Helmut Kohl. It will be discussed in the German federal parliament, the Bundestag, and is expected to become law early next year.

Its passage will make Germany's embryo law the most Draconian in Europe. Several countries, while proposing to ban the creation of embryos specifically for research purposes, have nevertheless suggested that research should be allowed on "spare" embryos no longer needed by the potential mother up to the fourteenth day after fertilization.

In West Germany, however, sharp memories of the eugenics experiments carried out by Nazi doctors prior to and during World War II have helped to stir up widespread opposition to all such research (*Science*, 25 November 1988, p. 1117). Reacting to this public mood, West Germany's two largest science-funding agencies, the Max-Planck Gesellschaft and the Deutscheforschungsgemeinshaft (DFG), have both stated publicly that they will not support any research using human embryos.

■ DON KIRK

that "there is no contact between the mother of the aborted fetus and the research team requiring fetal tissue." Commenting on the terms of the voluntary code of practice recommended by the committee, he said he did not believe his research team's work on the treatment of Parkinson's disease would be adversely affected by the recommendations. "On the contrary, I believe that they will allow us to continue our work along the lines we have been pursuing since the start of our program."

The review committee was set up last year following protests about such research by British antiabortion groups. Physicist and theologian John Polkinghorne, recently appointed president of Queens College, Cambridge, chaired the committee, which took issue with the notion put forward by a 1972 review committee that there could be a distinction between a "viable" and a "previable" fetus on the basis of its ability to survive outside the womb.

The Polkinghorne report took a different tack. It suggested that from the 14th day after conception the fetus should enjoy the same moral status as a fully developed human subject, with the only important question being whether it is "alive" or "dead." But the Polkinghorne committee explicitly rejected the argument of right-to-life groups on both sides of the Atlantic that there is an inherent immorality in using tissue from an aborted fetus. The questions faced by a woman in deciding whether to abort a fetus are highly complex, it says. "We do not believe that in circumstances of such moral complexity it is right to regard the termination of pregnancy as inevitably so heinous that any subsequent use of the fetal tissue thereby made available is morally disqualified."

Arguments based on this line of reasoning aren't likely to win over enough hearts in the United States to end the moratorium first imposed by the Reagan Administration last March and now being maintained by the Bush Administration. In fact, many of those anxious to see an end to what at first appeared to be a temporary moratorium now believe that it may be preferable to put up with a moratorium on such research, rather than risk a permanent ban. Says Sarah Carr of the Association of American Medical Colleges: "We agree there's a danger of pushing things too far."

So, in the United States researchers will wait anxiously for a change in the political climate. Perhaps if results from Britain—or Sweden or Mexico—prove that fetal tissue can have enormous therapeutic benefit, the U.S. government will be persuaded to look at fetal transplant research more favorably.

■ DAVID DICKSON

Funding Fight Over Facilities

On its face, the exchange between two congressmen on the floor of the House of Representatives in late July was a brief spat, amicably resolved. But the skirmish over the use of National Science Foundation funds for university research facilities could be the forerunner of an impending battle over whether NSF should pay for a congressionally mandated program to upgrade research laboratories at educational institutions across the country.

On 20 July, Representative Robert Roe (D–NJ), chairman of the Science, Space, and Technology Committee, tried to pave the way for NSF funds allocated in 1990 to be used to modernize university research laboratories. To do this, he tried to remove language in NSF's 1990 appropriations bill that blocked implementation of the Academic Research Facilities Modernization Act. Passed by Congress in 1988, the modernization act is meant to provide badly needed funds for upgrading research laboratories in colleges and universities.

But Roe's motion was immediately opposed by an outraged Representative Bob Traxler (D–MI), chairman of the appropriations subcommittee that oversees NSF's budget. Traxler warned that dollars specifically intended for research might be diverted to modernize laboratories. In making this assertion, Traxler was arguing on the side of well-heeled research universities whose need for laboratory equipment is less pressing than their need for research dollars.

Flourishing letters of support from the Association of American Universities and the National Association of State and Land Grant Colleges, Traxler urged legislators to "resist any effort" to reallocate funds from NSF's research accounts. Although it is NSF's charge to implement the modernization act, Traxler said the agency does not have enough money in its present budget to go forward. He wants the Bush Administration to put separate money in its budget proposal for NSF to fund the modernization program.

Thus did the *Roe* v. *Traxler* tussle bring to the halls of Congress long-simmering tensions between first tier research universities and less competitive colleges and universities over the distribution of NSF funds. The top tier universities have been able to maintain their research facilities by winning the lion's share of competitive grants, whereas second tier universities feel they will never be able to compete unless they are given money to upgrade their facilities.

That's why Roe reminded Traxler that the intent of the legislation is not just to finance costly buildings, but also to provide basic instruments such as microscopes. Roe suggested that NSF probably has the money somewhere: "I am not so sure that the $2 billion that we provide a year to the National Science Foundation is being spent in the most efficient way," he said.

Backing Roe were the American Council on Education and the United Negro College Fund (UNCF). The UNCF attacked NSF's failure to support small institutions, complaining that agency funding has, "by executive fiat, been focused on the top 500 large research institutions."

In the end, Traxler gave in after extracting a promise from Roe not to interfere with the NSF authorization bill which Roe's committee handles. But the struggle between the "have" and "have-not" universities is not over. Some lobbyists predict that, Senator Barbara Mikulski (D–MD), chair of the Senate appropriations subcommittee that oversees NSF's budget, could act in September to allocate a symbolic $5 million or so to get the facilities improvement program going.

And next year the battle to implement the modernization act is likely to get even hotter. Roe already has his staff going over NSF's grant records to build a case for more agency spending on modernization. NSF's own National Science Board in June advised NSF director Erich Bloch that additional funds should be sought to upgrade research facilities. D. Allan Bromley, President Bush's nominee to be the White House science adviser, calculates the cost at about $10 billion. He advocates spending $1 billion a year for 10 years with half the cost to be covered by the university sector.

But curbing the federal deficit may rate higher in the minds of many legislators than improving research laboratories. The ultimate resolution, says one NSF official, "could depend on how skillful the science adviser is in handling the issue."

■ MARK CRAWFORD