

Cloning for research 'should be allowed'

[WASHINGTON] The British leader of the research team that cloned Dolly the sheep has strongly endorsed US moves to outlaw the cloning of human beings. But he said that he has no ethical objection to the use of his technique to create for research purposes human embryos that are not implanted.

Ian Wilmut of the Roslin Institute near Edinburgh said it is "entirely appropriate" to decide that cloning human beings is "not socially acceptable and for a law to be passed". Wilmut was speaking last week at a seminar sponsored by the American Association for the Advancement of Science.

His comments came three days after leaders of the world's eight major industrial nations issued a communiqué after their summit meeting in Denver, Colorado, stating agreement on "the need for appropriate domestic measures and close international cooperation to prohibit the use of somatic cell nuclear transfer to create a child".

The heads of government who agreed to the statement came from Canada, France, Germany, Italy, Japan, Russia, the United Kingdom and the United States.

President Bill Clinton has already sent to Congress a bill that would penalize anyone attempting "to create a human being using somatic cell nuclear transfer cloning" (see

Nature 387, 644 & 748; 1997). But anti-abortion advocates have complained that the proposed law — as reflected in the Denver communiqué — would not penalize the use of the cloning technology to create human embryos where such work stops short of implantation.

Wilmut said he would have no ethical difficulties with such research. But he would have a practical objection: "There are a very limited number of oocytes available for research with human embryos. For the foreseeable future this technology would be much more appropriately developed in a laboratory animal."

His comments coincided with reports that many animals pregnant with clones in research laboratories in the United States and Europe are miscarrying, and that some of the surviving fetuses show evidence of subtle genetic abnormalities. Others are growing abnormally large in the womb.

Other speakers at last week's seminar were less sanguine than Wilmut about the prospect of a law banning cloning. Maxine Singer, president of the Carnegie Foundation, warned of a "slippery slope" that could eventually lead to Congress banning other kinds of research. "To make a precedent like this, to have national legislation that would

govern what people can do in labs, would be a very, very big step," said Singer.

Gillian Woollett, assistant vice-president of biologics and biotechnology at Pharmaceutical Research and Manufacturers of America, said one concern is that the Clinton bill and the report from the National Bioethics Advisory Commission on which it is based contain between them "three different definitions of a somatic cell".

The bill defines a somatic cell as "any cell of the body other than germ cells (egg or sperm)". The bioethics commission's 110-page report, published on 9 June, defines a somatic cell in its glossary as "any cell of an embryo, fetus, child or adult not destined to become a sperm or egg cell". And on the first page of the report, the commission defines a somatic cell as "any cell of the embryo, fetus, child or adult which contains a full complement of two sets of chromosomes; in contrast with a germ cell, i.e., an egg or a sperm, which contains only one set of chromosomes".

One influential member of the biotechnology industry argued that federal action to prevent the cloning of human beings would be preferable to a patchwork of state laws. "If there is not a sufficient national response you will find very, very unfavourable, awkward and in some cases very misinformed legislation cropping up in the states," said Carl Feldbaum, president of the Biotechnology Industry Organization.

He cited a bill introduced in the Florida state legislature, which would have inadvertently banned the 'cloning' of human DNA through *in vitro* replication.

But Feldbaum, a criminal lawyer, said that the Clinton bill still needs "enormous work," partly because of its lack of a declaration that it would pre-empt state law. He warned that the bill proposed "draconian" penalties and an indistinct intent clause that could deter legitimate research.

Jeff Smith, the executive director for policy at the White House's Office of Science and Technology Policy, said that the White House had received assurances from James Sensenbrenner (Republican, Wisconsin), chairman of the House Science Committee, that he would produce anti-cloning legislation. "Whether it will be an exact clone of the president's bill is not clear," Smith said. The purpose behind the Clinton bill, he said, was to frame the debate and "get the president's position out in front".



Wilmut: sees only practical objections.

GARY TRAMONTANA/AP

European biotech industry plans ethics panel

[PARIS] Europe's biotechnology industry is seeking to improve its image by setting up a committee of independent experts to advise it on ethical issues and to draft a code of conduct for its members.

The committee is the initiative of EuropaBio, an industry association representing about 600 biotechnology companies and 11 national biotechnology industry associations. Andrew Dickson, the secretary general of the organization, says that the industry felt it "needed not just to be acting responsibly but to be seen to be acting responsibly".

EuropaBio has not yet decided on the final form of the committee. It says it would provide a secretariat but that the eight to ten members of the committee would need to be — and to be seen to be — independent

of industry, with complete freedom in their activities. Dickson says EuropaBio is contemplating asking neutral bodies to help to nominate the members, who would be paid only expenses.

The ethics committee would be modelled on the European Commission's expert advisory group on biotechnology ethics, which is chaired by Noëlle Lenoir, a member of the French constitutional council.

EuropaBio last week issued a draft "core set of ethical values", which it has made available for public comment (website: <http://www.europa-bio.be>) and to which its member companies will be expected to adhere. This would be revised regularly to take into account scientific progress and changes in public perception.

Dickson says it is important for the industry to

take the temperature of "the boundaries which society believes are acceptable" and to act within these if it is to win public acceptance.

The current draft of the code of ethics rejects the use of cloning to reproduce human beings, arguing that this reflects the current consensus. But Jurgen Drews, chairman of EuropaBio and president of research at Hoffmann-La Roche, points out that this consensus may change.

The code also commits member companies not to work on genes of human sperm, eggs or germline cells. It proposes a moratorium on work on the genes of human embryos "until the medical, ethical, and societal issues that may arise from this kind of therapy have been publicly discussed, clarified and resolved and, if applicable, put into legislation".

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