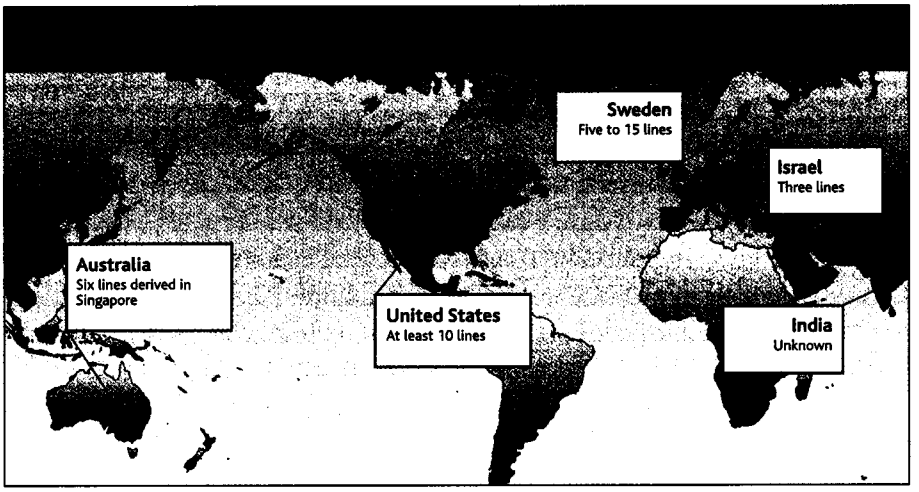
his colleagues at Göteborg University in Sweden have derived five lines and have so far characterized three. Michael Andäng of Huddinge University Hospital outside Stockholm told *Science* that he and his colleagues are characterizing "five to 10 human ES cell lines" they have derived. Roger Pedersen of the University of California, San Francisco (UCSF), has derived at least one.

Science could not confirm reports of work with human ES cells in India. Reliance Life Science of Bombay markets a product called ReliCord, derived from umbilical cord blood. The company was rumored to have ES cell lines, but Anand Rao, research director for cell biology, told *Science* it has none. Manju Sharma, India's biotechnology secretary, says she knows of no ES cell lines in the country.

Pera echoed the general surprise at NIH's total, suggesting that they may still be in early, uncertain stages of derivation. "It is no small chore to derive, cryopreserve, and properly characterize three or four lines," he says. "Someone must have a factory somewhere, or we are talking about *potential* cell lines." But at the briefing Skirboll stood by her number and predicted that even more cell lines would come to light.



Show me the cell lines. Scientists in four countries report developing a total of 34 cell lines, far short of the 60 mentioned by President Bush.

Relaxed requirements

Even as the president sought to limit criticism by opponents of ES cell research, the ethical requirements that he laid down last week are much simpler than those issued last summer by NIH. The new criteria require that cell lines have been derived from embryos that were created for fertility treatments but are no longer needed. In addition, the couples donating the embryos must have given their informed consent, without any financial inducements. By contrast, the NIH guidelines issued last summer stipulated that NIH-approved cell lines must have been derived from frozen embryos, and those doctors procuring the embryos could not also derive the cell lines. In addition, the consent form had to meet certain strict criteria, explicitly stating, for example, that the cell lines "may be kept for many years" (*Science*, 1 September 2000, p. 1442). The NIH guidelines, which were never implemented, would have forced researchers to derive new cell lines, while Skirboll says that all 60 lines meet Bush's looser ethical criteria.

The new policy may also ease some administrative burdens. Skirboll said that NIH was reviewing a prohibition against commingling any federal research funds—even support for building maintenance and upkeep—with private money used for embryo research that NIH is not allowed to fund. That policy has forced some researchers, including UW's Thomson and Pedersen at UCSF, to set up separate laboratory space for their human ES cell work.

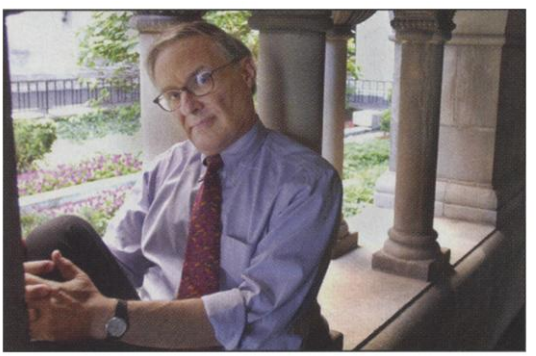
New Chair of Bioethics Panel Wants National Debate on Issues

President George W. Bush's decision on embryonic stem cells may have dimmed the hopes of some federal researchers, but it has given ethicists a new lease on life. The president intends to create a new White House Council on Bioethics, to be chaired by University of Chicago moral philosopher Leon Kass. The new panel will succeed one created by President Bill Clinton—the National Bioethics Advisory Commission (NBAC)—that will disappear on 3 October.

The White House has provided little information on the new council. In a telephone interview, Kass said that he was invited to become its chair only 2 weeks ago. According to the White House, the panel will monitor studies of embryonic stem cells, recommend regulations, and "consider all of the medical and ethical ramifications of biomedical innovation." Kass hopes that its members—numbering "in the teens"—will be named soon.

The panel will include people with a wide spectrum of views and have a "broad mandate," says Kass, adding that it will do what "the president himself did in reaching his decision: namely, consult widely and make sure that all responsible points of view are heard." Regulatory issues will be handled by the National Institutes of Health (NIH), according to a government spokesperson.

With an M.D. from the University of Chicago and a Ph.D. in biochemistry from Harvard University, Kass worked at NIH in the late 1960s and later contributed to the founding of a bioethics research group, the Hastings Center in Garrison, New York. The center's founder, Daniel Callahan, thinks that Kass "will be very careful to get a fair range of people on the council." NBAC's chair, former Princeton University president Harold Shapiro, says that "while I disagree with a lot of things Leon Kass says, I have a lot of respect for him." Shapiro adds that he's glad the president "feels the need for continuing advice" on biomedical ethics.



Moral instructor. Ethicist Leon Kass sees a "pedagogical" mission for the new White House group.

Kass worries that his opposition to human cloning and advocacy of restraints on medical technology will cause some researchers to regard him as "a Luddite." But he expects to prove them wrong by making the council a forum for debate. "People who are nervous about me should wait and see. ... My vision is for this council to become a kind of teacher to anybody who is interested" in bioethics. —ELIOT MARSHALL

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