

# Embryo Research Panel Ignites Debate

This week, a National Institutes of Health advisory panel released its proposed guidelines for federally funded research on very early human embryos. Panel members said the government should pay for such research as long as it meets certain criteria.

The group's most hotly contended recommendation would allow scientists to create a limited number of human embryos for research. In general, the panel would allow experiments on embryos up to the 14th day after fertilization, a time when the nervous system and various organs start to develop.

The National Right to Life Committee's Michele Arocha Allen called that recommendation "ghoulish." The Washington, D.C.-based group opposes research on human embryos because of its belief that life begins at conception.

That point of view has some support on Capitol Hill. Some conservative members of Congress are already trying to derail the panel's report. Rep. Robert K. Dornan (R-Calif.) and 27 other legislators sent NIH Director Harold E. Varmus a letter urging him to reject the panel's recommendations. Dornan said the panel's effort "shows a blatant disregard for the protection and preservation of human life."

Yet medical ethicists support the report's call for limited embryo research. "I applaud the panel for approving the categories [that] they have," says ethicist Harold Y. Vanderpool at the University of Texas Medical Branch at Galveston. Vanderpool believes that society has much to gain from research on human embryos, including insights into various genetic diseases and cancer.

The United States has had a de facto ban on federal funding of any research involving human embryos since 1980. However, last year Congress passed a law that paved the way for federal review and funding of such projects. Currently, embryo research in the United States is funded privately.

The 19-member panel also recommended federal support for research on "spare" embryos, those that go unused at in vitro fertilization clinics.

An experimental technique called preimplantation diagnosis also passed muster with the panel. The method involves drawing off one or two cells from a very young embryo in order to diagnose certain genetic diseases, such as cystic fibrosis.

The panel okayed the practice of determining the gender of embryos in order to avoid a sex-linked genetic disease, such as hemophilia. The group

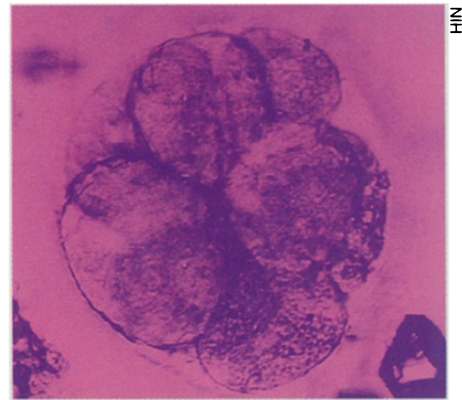
advised against the sexing of embryos for any other purpose.

Another procedure that got the nod from the panel was the creation of "parthenotes," or human eggs that have been stimulated with chemicals or an electric shock to divide. These dividing eggs are not fertilized with a sperm and are grossly abnormal. However, researchers believe studies of such eggs may lead to a better understanding of the paternal role in fertilization.

A number of research practices require further review, says the group, including the harvesting of eggs from the ovaries of an aborted fetus.

The panel came out against the transfer of human embryos to the wombs of animals for further development and urged a prohibition on crossing human and animal sex cells.

The panel also recommended against providing federal money for twinning, or cloning human embryos, which could result in the birth of identical twins or triplets. Gary Hodgen of the Jones Institute for Reproductive Medicine in Norfolk, Va., believes that such a ban would be an unwarranted reaction to the uproar



Human embryo at the eight-cell stage.

that resulted last year when a pair of U.S. researchers reported "cloning" human embryos (SN: 2/5/94, p.92).

The panel's report does not represent the last word on federal funding policy. First, the report gets passed on to another NIH advisory committee, which will consider the initial panel's recommendations as well as public comments. It will then send its recommendations to Varmus, who will make the final decision.

— K.A. Fackelmann

## Team unearths oldest known human ancestor



*A. ramidus* child's jaw, still containing two teeth.

common ancestor of apes and humans lived in Africa no more than 6 million years ago.

The scientific team that found the new fossils, led by Tim D. White, an anthropologist at the University of California, Berkeley, assigns them to a new species, *Australopithecus ramidus*. For nearly 20 years, the earliest hominid remains were those of "Lucy" and other members of *A. afarensis*, a species that lived from 4 million to 3 million years ago (SN: 4/2/94, p.212).

A description of *A. ramidus*, a dating analysis of associated volcanic ash, and evidence that this hominid inhabited

forests rather than savannas appear in the Sept. 22 NATURE. The fossils may display enough anatomical differences to qualify as a new genus distinct from *Australopithecus*, argues Bernard Wood, an anthropologist at the University of Liverpool in England, in an accompanying comment.

"Whatever you call this creature, it was Lucy's ancestor, and it was considerably more primitive [anatomically] than Lucy," White contends.

Investigators discovered the fossils near the village of Aramis, about 45 miles south of Hadar, where Lucy and her kin were found. White and his coworkers uncovered the remains of 17 individual hominids. These specimens consist of skull fragments, teeth, arm bones, and part of a child's lower jaw. Carnivores apparently broke apart most of the bones before fossilization.

*A. ramidus* displays several differences from all other hominids: smaller cheek teeth, relatively larger canine teeth, thinner tooth enamel, and a cranial base and deciduous first molar tooth more like those of chimpanzees.

Yet three nearly complete bones from an *A. ramidus* individual's left arm look much like those of *A. afarensis* (SN: 11/20/93, p.324). Both hominids pos-