

Publisher: Richard S. Nicholson
Editor: Daniel E. Koshland, Jr.
Deputy Editor: Ellis Rubinstein
Managing Editor: Monica M. Bradford
International Editor: Alun Anderson
Deputy Editors: Philip H. Abelson (*Engineering and Applied Sciences*); John I. Brauman (*Physical Sciences*); Thomas R. Cech (*Biological Sciences*)

Editorial Staff

Assistant Managing Editor: Dawn Bennett
Senior Editors: Eleanore Butz, Martha Coleman, R. Brooks Hanson, Barbara Jasny, Katrina L. Kelner, Linda J. Miller, Phillip D. Szurmi, David F. Voss
Associate Editors: Pamela J. Hines, Suki Parks, L. Bryan Ray
Letters: Christine Gilbert, *Editor*; Steven S. Lapham
Book Reviews: Katherine Livingston, *Editor*; Claire Wilson
Contributing Editor: Lawrence I. Grossman
Chief Production Editor: Ellen E. Murphy
Editing Department: Lois Schmitt, *Senior Copy Editor*; Julie W. Albers, Valerie Jablow, Harry Jach
Copy Desk: Douglas B. Casey, Joi S. Granger, Beverly Shields, Kirsten L. Wall
Editorial Support: Sherryf Farmer, *Supervisor*; Carolyn Kyle, Diane Long, Michele Listisard, Patricia M. Moore, Melissa Quackenbos, Kameaka Williams
Administrative Support: Sylvia Kihara, Jeanette Prastein

News Staff

Managing News Editor: Colin Norman
Deputy News Editors: Tim Appenzeller, John M. Benditt, Jean Marx
News and Comment/Research News: Ivan Amato, Faye Flam, Troy Gately (copy), Ann Gibbons, David P. Hamilton, Constance Holden, Richard A. Kerr, Eliot Marshall, Joseph Palca, Leslie Roberts, Richard Stone, John Travis (intern)
Bureaus: Peter Aldhous (London), Marcia Barinaga (West Coast), Michelle Hoffman (Northeast), Anne Simon Moffat (Midwest)
Contributing Correspondents: Joseph Alper, Barry A. Cipra, Robert Crease, Elizabeth Culotta, Robert Pool, M. Mitchell Waldrop
Administrative Support: Fannie Groöm

Art & Production Staff

Production: James Landry, *Director*; Wendy K. Shank, *Manager*; Catherine S. Siskos, *Assistant Manager*; Scherraine Mack, *Associate*; Linda C. Owens, *Macintosh Operator*
Art: Amy Decker Henry, *Director*; Diana DeFrancesco, *Associate*; Holly Bishop, *Graphics Assistant*
Administrative Support: Leslie Blizard

Associate Publisher: Beth Rosner

Circulation Director: Michael Spinella
 See page 1743 for additional Advertising and Circulation Staff

Science Editorial Board

Charles J. Arntzen	John J. Hopfield
Elizabeth E. Bailey	F. Clark Howell
David Baltimore	Paul A. Marks
William F. Brinkman	Yasutomi Nishizuka
E. Margaret Burbidge	Helen M. Ranney
Pierre-Gilles de Gennes	Robert M. Solow
Joseph L. Goldstein	Edward C. Stone
Mary L. Good	James D. Watson
Harry B. Gray	

Fetal Tissue Research

For the second year in a row the National Institutes of Health budget authorization has been subject to a rider that approves fetal tissue research, but as a result the entire bill is threatened with a presidential veto. This mixture of politics and research is illogical and likely to damage both research and good political practice.

Fetal tissue research should have as little relation to the abortion issue as organ transplants have to automobile accidents or suicides. Tissues and organs from automobile accident victims played a major role in the development of sound organ transplant therapies, but no one argued that such research justified or legitimized automobile accidents. In the same way, the decision to use fetal tissue for research is made separately from the decision of an individual to have or not to have an abortion. No scientist should be involved in soliciting an abortion in order to obtain material for research, but to limit materials for research on the grounds that one is taking a stand on the abortion issue is an illogical and counterproductive path that can only damage all participants. Research on fetal tissue should be placed in the same category as research on cadavers, on the use of tissues from victims of accidents, and so forth. It is a situation in which the fundamental decisions have already been made, and the scientist is then in the position of making the best of the consequences of a previous history. The commission appointed by President Reagan considered the issue carefully, did not condone abortion, but made clear that the issue of abortion should be separated from these issues of fetal tissue research.

Fetal tissue is of enormous value and can be used in actual therapy for certain illnesses like Parkinson's disease. Because fetal tissue is still undergoing growth differentiation, it is particularly valuable for understanding these processes and can be more easily adapted to diverse experimental circumstances than is adult tissue. Human fetal tissue has been introduced into mice to study the interactions of the AIDS virus with the human immune system, a situation that would be impossible to study in human volunteers because of the fatal characteristics of the AIDS virus and because there is no good animal model. Fetal tissue was also important in developing the polio vaccine. In the long run, fetal tissue will never be such an abundant source as to be used routinely for therapy, but it could lead to the development of cell lines or drugs that could be the basis of large-scale therapy.

Another advantage to studying fetal development and fetal tissue is that new procedures are developed that work best or only during gestation to treat disease conditions in fetuses. There are also new techniques for direct intervention during the pregnancy period, such as procedures that will assist in organ transplants at a later time. The injection of cells of a diseased organ, for example, the liver, before the twelfth to thirteenth week of pregnancy has the potential to induce a state of tolerance that diminishes or prevents rejection of the transplantation of that organ later in life. Thus, fetal research may be of particular benefit to those women who are agonizing over the heartrending decision between abortion and bringing a child with predictable lifelong difficulties into the world. The compromise requiring that only tissue from natural abortions be used in research and treatment is not a real option, because such tissue is usually received in poor condition and is frequently inherently unusable for the reason that the natural miscarriage is caused by fetal malfunctions that might be viewed as nature's way of eliminating a potentially defective child.

The sooner this particular game of politics is ended the better. Research on fetal tissue has great promise of benefit to all. It neither justifies nor negates the highly personal individual decision to have an abortion, and therefore the use of those materials should be termed as unrelated to the political issues. Research on cadavers is neither pro- nor antideath. It treats death only as a fact after which as much constructive future knowledge as possible could be built. In the case of fetal tissue research, a death is preordained outside the research world, but proper timing and intervention can develop knowledge and therapy for future benefits. It is time to proceed with those constructive approaches with professionalism and without emotionalism.

Daniel E. Koshland, Jr.