

- Topic: Ethical, Theological, and Legal Issues in Human Germline Therapy  
Moderator: Thomas A. Shannon, Worcester Polytechnic Institute  
Presenters: Thomas A. Shannon, Worcester Polytechnic Institute  
James J. Walter, Loyola University of Chicago  
M. Cathleen Kaveny, University of Notre Dame

This presentation first overviewed three developments in genetics that gave an immediate background to the discussion of human germline therapy: (1) transgenic animals, which have had foreign DNA added to their genome which can be passed on to their descendants; (2) knockout mice which have had a particular gene eliminated from their genome, a characteristic which is also passed on to their descendants; (3) germline therapy in mice which was caused by altering the DNA of mice so that the correct genes were replaced in mice which both alleviated the disorder and also allowed this correction to be passed on to their descendants.

The theological issues frame a background which shapes the direction of one's decision about germline therapy which both cures the disease in the patient and passes the new genome on to one's descendants. Walter used the fivefold Christian doctrinal themes of creation-providence, the fall, incarnation, redemption, and eschatology to frame how one would think about the problem. Each of these doctrinal themes has been interpreted and understood in a variety of ways. Different views of each theme were examined and Walter came to two conclusions: (1) We should not perform germline therapy at the present time until various scientific, moral and public policy problems are resolved; (2) Germline therapy is not in itself contrary to God's purposes and thus we are not playing God in that we permanently alter the human genome to prevent or cure genetic diseases.

The ethical arguments supporting germline therapy focus on preventing harm to an individual by preventing the disease from occurring in the first place, relieving one's descendants of reproductive dilemmas relating to passing on genetic disease, removing the need for prenatal diagnosis with selective abortion, and scientific freedom. The arguments against germline therapy focus on harm to descendants if the therapy does not work, the therapy's not being needed because of prenatal diagnosis, the expense to develop it, the allocation of a large amount of money on the needs of relatively small number of afflicted individual, and the current state of ignorance. Shannon concluded that three things need to be thought of with respect to germline therapy: (1) the ethics of creating human embryos for research purposes; (2) the social debate over the nature of disability; and (3) the use of the parable of the talents to support minimally a dynamic understanding of stewardship and maximally to support a positive obligation to develop what we are given.

The legal issues focused on three areas: (1) the limits on the means of the acquisition of the knowledge; (2) how we can and cannot use that knowledge;

(3) understanding genetics as social practice. Kaveny argued that the traditional way to limit knowledge in this area is to restrict federal funding. The use of genetic information is more complex because the new genetic information available radically redefines the context of access to insurance. The issue of use also extends to how and on what basis parents interact with the fetus. The third problem is a shift that the new genetics is causing in medicine: from the autonomous patient to a understanding of the patient in a social context, from disease as caused by external agents to causality by elements of one's own body, from physician-patient relation to the social implication of the information, from consent affecting one's self alone to the impact on one's family and descendants, from test results relating to the patient to test results which now relate to the family. Kaveny concluded by noting the symbolic constitutive function of the law in resolving these issues because the law affects how we think about things such as these, and the analogies that the law makes also gives us a framework for analysis.

THOMAS A. SHANNON

*Worcester Polytechnic Institute  
Worcester, Massachusetts*