



# The Ethics of Genes

Our lives literally hang by threads. The 23 pairs of molecular chains (chromosomes) store the sum of all our genetic information (genome) in the form of long, twisting molecules of DNA. The links of the chain are four nucleotide subunits (base pairs); and their order encodes the genetic instructions (genes) for making all the proteins in our body. The Human Genome Project (HGP), the largest biological initiative of our century, seeks to determine the full nucleotide sequence of all 3 billion base pairs in the human genome, to identify all 100,000 or so human genes and to gain insight into the large untranslated segments (introns) in between them. Initiated by the U.S. Government in 1990, this international effort is anticipated to last 15 years and cost over \$3 billion.

The results of the HGP will dramatically increase our ability to understand, monitor and intervene in biological processes at the molecular level. Its future implications for medicine, agriculture and the life sciences are indeed dramatic, but the ethical dilemmas posed by the use and potential misuse of such information and its powerful associated technologies are no less significant.

Who has a right-to-know about hereditary predispositions: family, physicians, present or potential spouses, medical insurers, the government?

What responsibilities do parents with known dispositions have towards their unborn offspring?

Should parents have a right to manipulate the genetic characteristics of their offspring? What are the relative public and private responsibilities for genetic ethics? Is there a unique Jewish moral perspective?

These and many other such issues were addressed at an International Workshop on the Human Genome Project: Legal, Social and Ethical Implications, held in Jerusalem in July 1995, under the auspices of the Israel Academy of Sciences and Humanities. This 160-page Proceedings, edited by Michael Feldman and Yossi Segal, and published by the Israel Academy Press, captures many of the dilemmas that abound at this exciting, perplexing interface between science, society and moral responsibility. Copies of the book may be purchased directly from the Israel Academy Press.



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