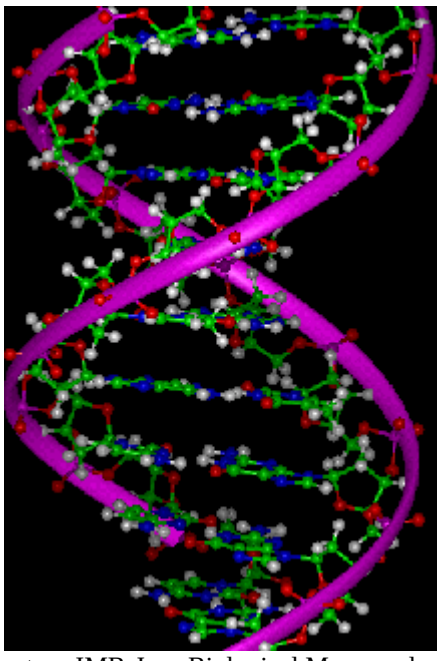
THIS WEEK ON SCIENCE FRIDAY...

Hour Two: The DNA Files: Social and Ethical Implications of Genetic Research

The scientific and medical advances of the biotechnology age have rushed into our lives, seemingly unfettered and with Mercuric speed. And as the millenium comes to a close, the ethical, legal and social ramifications of DNA science and research are being scrutinized as closely as the building blocks of the molecule itself.

Researchers have developed tests for susceptibility to diseases that have a known or suspected genetic link, including Huntington's disease, breast and colon cancers, cardiovascular diseases, schizophrenia and Alzheimers.

Treatment of and testing for genetic disease are two powerful tools to emerge from DNA research. But there is still debate over the efficacy of gene therapy; although a few thousand patients have been treated with the technique, none have been "cured". And genetic manipulation of germ line cells (sperm, egg, or embryonic cells) will create changes that are passed on to future generations. Some geneticists support this technique, saying that it is economically viable and better for the overall health of the population. Others claim that there is not enough technical know-how, making the procedures too risky. And potentially the darkest cloud hanging over the promise of many new advances in DNA science is the threat of genetic discrimination.



(Image courtesy IMB-Jena Biological Macromolecule image database)

Opponents caution that gene therapy and genetic testing may be used as prejudicial tools. Other forms of genetic discrimination, such as refusal of health insurance or employment, are also cited by opponents of other DNA science spin-offs. These include health or DNA databases, such as a national

FBI genetic database proposed for criminals and a medical records database proposed in Iceland.

Is testing for a genetic disease worthwhile before there is a treatment or cure available? Is an individual's "right not to know" more powerful than society's attempts to track the spread of inherited disease? Should we allow human DNA to be patented by companies hoping to turn genome research into profit?

Join host Ira Flatow and his guests this hour of Science Friday to discuss the legal, social and ethical confusion surrounding the applications of DNA research.

Listen to this program in RealAudio!

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Books/Articles Discussed:

Related Links:
The DNA Files
The National Bioethics Advisory Committee
The University of Pennsylvania Center for Bioethics
List of Genetics Societies
The American Board of Genetic Counseling
The Genetics of Cancer

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