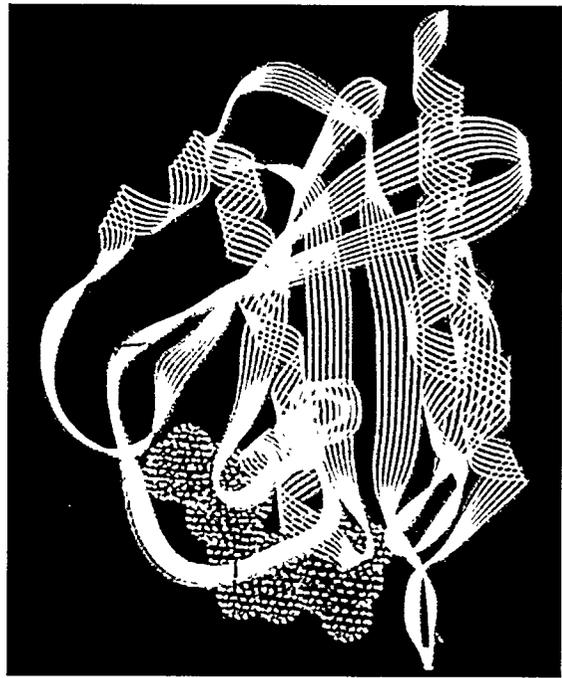


An Enduring Mandate

DOE is carrying forward Congressional mandates that began with its predecessors, the Atomic Energy Commission and the Energy Research and Development Agency:

Contribute to a Healthy Citizenry

- Develop innovative technologies for tomorrow's biomedical sciences.
- Provide the basis for individual risk assessments by determining the human genome's fine structure by the year 2005.
- Conduct research into advanced medical technologies and radiopharmaceuticals.
- Build and support national user facilities for determining biological structure, and ultimately function, at the molecular and cellular level.



DOE user facilities are revealing the molecular details of life. Knowing the 3-D structure of the ras protein (above), an important molecular switch governing human cell growth, will enable interventions to shut off this switch in cancer cells.

Understand Global Climate Change

Predict the effects of energy production and its use on the regional and global environment by acquiring data and developing the necessary understanding of environmental processes.

Contribute to Environmental Cleanup

Conduct fundamental research to establish a better scientific basis for remediating contaminated sites.

Determining the fine structure—DNA sequence—of the microorganism *Methanococcus jannaschii* (pictured at right, top) and other minimal life forms in DOE's Microbial Genome Program will benefit medicine, agriculture, industrial and energy production, and environmental bioremediation. The circular representation of the single *M. jannaschii* chromosome, which was fully sequenced in 1996, illustrates the location of genes and other important features. (Vertical bar represents a portion of a sequencing experiment.)

