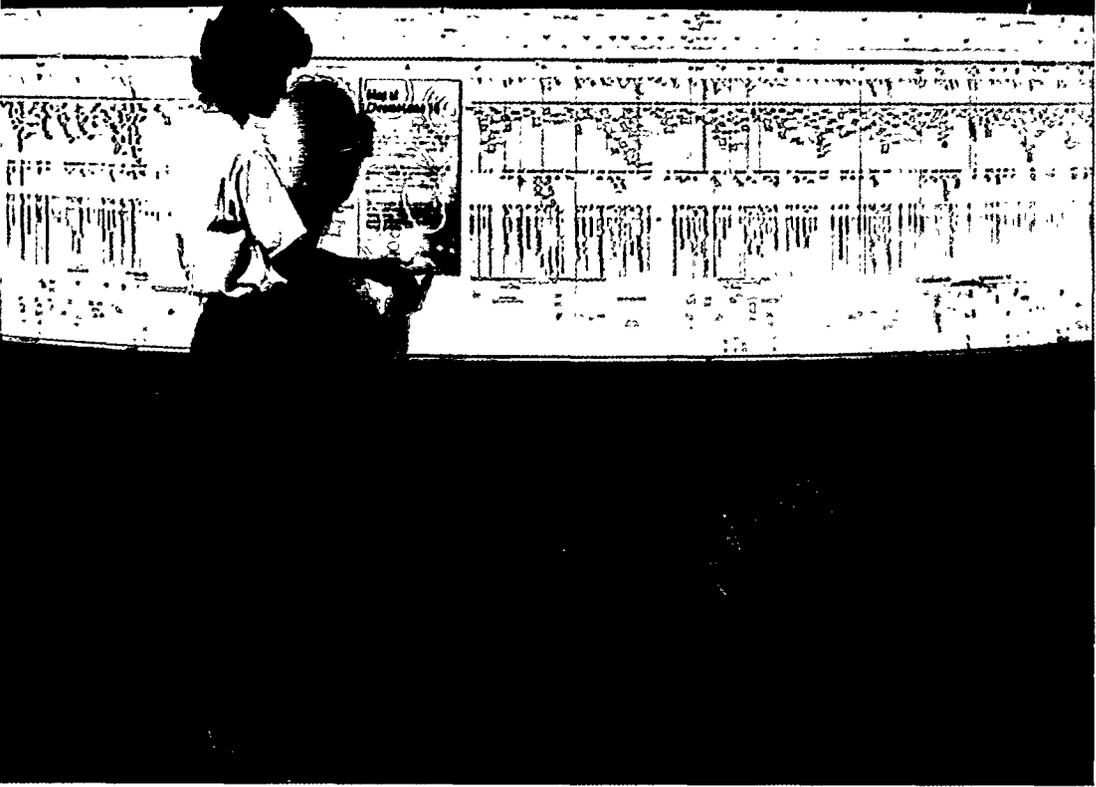


THE HUMAN GENOME PROJECT

One goal of the Human Genome Project is to understand how the human genome affects behavior, aging, and disease.

Understanding Our Genetic Inheritance

If we eventually understand the information in the human genome, we will have at our disposal what will almost certainly be the most powerful resource for biological and medical research ever developed.



The exhibit "Understanding Our Genetic Inheritance" at the Bradbury Science Museum in Los Alamos, New Mexico, describes the LANL Center for Human Genome Studies' contributions to the Human Genome Project. The exhibit's centerpiece is a 16-foot-long version of LANL's map of human chromosome 15. [Source: LANL Center for Human Genome Studies]

- J.H. Jett, M.L. Hammond, R.A. Keller, B.L. Marrone, and J.C. Martin, "DNA Fragment Sizing and Sorting by Laser-Induced Fluorescence," United States Patent, S.N. 75,001, allowed May 1996.
- James H. Jett, "Method for Rapid Base Sequencing in DNA and RNA with Three Base Labeling," in preparation.
- Development license and exclusive license to LANL's DNA sizing patent obtained by Molecular Technology, Inc., for commercialization of single-molecule detection capability to DNA sizing.

Future Plans

LANL has joined a collaboration with California Institute of Technology and The Institute for Genomic Research to construct a BAC map of the *p* arm of human chromosome 16 and to complete the sequence of a 20-million-base region of this map.

In its evolving role as part of the new DOE Joint Genome Institute, LANL will continue scaleup activities focused on high-throughput DNA sequencing. Initial targets include genes and DNA regions associated with chromosome structure and function, syntenic break-points, and relevant disease-gene loci.

A joint DNA sequencing center was established recently by LANL at the University of New Mexico. This facility is responsible for determining the DNA sequence of clones constructed at LANL, then returning the data to LANL for analysis and archiving.

Patents, Licenses, and CRADAs

- Rhett L. Affleck, James N. Demas, Peter M. Goodwin, Jay A. Schecker, Ming Wu, and Richard A. Keller, "Reduction of Diffusional Defocusing in Hydrodynamically Focused Flows by Complexing with a High Molecular Weight Adduct," United States Patent, filed December 1996.
- R.L. Affleck, W.P. Ambrose, J.D. Demas, P.M. Goodwin, M.E. Johnson, R.A. Keller, J.T. Petty, J.A. Schecker, and M. Wu, "Photobleaching to Reduce or Eliminate Luminescent Impurities for Ultrasensitive Luminescence Analysis," United States Patent, S-87, 208, accepted September 1997.

