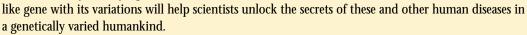# NIEHS Launches the Comparative Mouse Genomics Centers Consortium

The NIEHS has announced the establishment and funding of five academic research centers to develop and breed mice with key genetic variations similar to those of humans. These multidisciplinary, multi-institutional centers will provide special mutant mice for use by scientists throughout the NIH and for other research programs as well.

NIEHS director Kenneth Olden said, "Mice and humans have many similar genes, and by adding a gene, we can make mice even more similar in their susceptibility to human diseases. We can use these mouse models to understand human variabilities to environmental factors that may have a role in human diseases like diabetes, Alzheimer's and Parkinson's diseases, arthritis, and heart disease."

Many cases of human disease can be triggered when a natural or man-made substance in the environment causes a genetic mutation or a disturbance in cell growth. Variations in a person's genes make the person more or less sensitive to these substances, or more or less able to resist or repair the damage. Modeling the human variations in the mouse by modifying the mice to add or subtract a human-like gene with its variations will help scientists unlock the secrets of these and other human diseases in a genetically varied humankind.

The selected NIEHS centers will sequence mouse genes and compare them to human genes and their sequences, produce mice with mutations or missing genes (knockout mice), and maintain breeding colonies to supply test rodents and breeding stock to other scientists. The NIEHS will spend up to $5 million per year for five years under cooperative agreements to create the centers and carry out the work.

The NIEHS mouse centers will support and supplement a $21 million NIH-wide effort, announced 5 October 1999, to map the genes of the mouse via a Mouse Genome Sequencing Network. The effort by the NIEHS will emphasize finding a better understanding of the variations in the genes that make some individuals more sensitive than others to environmental exposures.

The centers named by the NIEHS are:

- **The University of Texas, M. D. Anderson Cancer Center**, Houston, Texas
  David Johnson, principal investigator
- **Albert Einstein College of Medicine of Yeshiva University**, Bronx, New York
  Raju Kucherlapati, principal investigator
- **University of Washington**, Seattle, Washington
  Warren Ladiges, principal investigator
- **University of Cincinnati**, Cincinnati, Ohio
  Peter Stambrook, principal investigator
- **The University of Texas Health Science Center at San Antonio**, San Antonio, Texas
  Jan Vijg, principal investigator

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