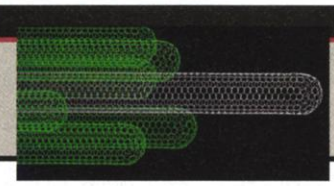

PAGE 246
Mass production of carbon nanotubes?

247
Dreaming of Tetris

GENOMICS

Public-Private Project to Deliver Mouse Genome in 6 Months

Research on the mouse genome lurched into the fast lane last week, as private donors joined the U.S. government to step on the gas. A public-private consortium announced on 6 October that it's kicking $58 million into a new fund that will pay to sequence the DNA of the "black six" (C57BL/6J) strain of laboratory mouse. The consortium aims to produce a draft version of the genome by the end of February.

Scientists say the project will be a valuable tool for finding genes and other control regions in the human genome. But the venture may not thrill everyone: It will erode the exclusive position of Celera Genomics in Rockville, Maryland, which this year sequenced the genomes of three mouse strains and is selling viewing rights.

Celera president Craig Venter, who was quoted in *The New York Times* as saying that public funds would be better used on polishing the unfinished human genome, is now taking a cooler view: "I want to stress the positive," he told *Science*. The public project will "complement" Celera's work, he says, because it will focus on a mouse strain that differs from the three being sequenced by Celera (129, A/J, and DBA/2J). Venter says Celera researchers are finding an "extraordinary" amount of variation among the three strains, much more than they had expected. As *Science* went to press, Celera was planning to announce that it had completed 9 billion base pairs of mouse sequencing—three genomes at a single pass. Venter added, "I applaud the public effort" for releasing more raw data than in the past; he says this will enable Celera to improve the quality of its own database.

MOUSE SEQUENCING CONSORTIUM

Sponsor	Support ($ millions)
Affymetrix Inc.	3.5
Merck Genome Research Institute	6.5
SmithKline Beecham	6.5
U.S. National Institutes of Health	34.0
Wellcome Trust	7.75
TOTAL	58.25

Sequencing lab	Director	Budget ($ m)
Sanger Centre	Allan Bradley	9.8
Washington University	Robert Waterston	13.6
Whitehead Institute	Eric Lander	35

Partnership. Consortium will sequence the "black six" mouse (*right*).

The nonprofit "Mouse Sequencing Consortium," in fact, is promising an unprecedented degree of public access. It intends to release the data in real time and put even the "traces" from DNA sequencing machines in a public database within a week. The human genome project didn't go this far, although it did release results every day.

Researchers are delighted. "It's cool," says Carol Bult, head of a bioinformatics group that works on mouse genomics at the Jackson Laboratory in Bar Harbor, Maine. She predicts that, as the data tumble out, "you'll be able to do all kinds of gene hunting studies in silico," downloading mouse and human DNA from databases and comparing them. "Having the mouse really will help" make sense of how human genes function, she says.

Richard Klausner—director of the National Cancer Institute, one of the six institutes at the National Institutes of Health that pledged $34 million to this venture—says the decision to back the project reflects "the outcome of several years of discussions about the importance of the mouse sequence." It will not divert attention from the human genome, he added, as that work is supported independently by the National Human Genome Research Institute (NHGRI). The new project, he says, "gives us the ability to see what's highly conserved" in mouse and human DNA, and by comparing the two, "to define [genes] and the borders of regulatory sequences."

According to NHGRI director Francis Collins, the SmithKline Beecham (SKB) pharmaceutical company of London initiated the mouse consortium in talks beginning about 2 months ago. The company donated $6.5 million itself and helped bring in other supporters, including The Merck Genome Research Institute in West Point, Pennsylvania ($6.5 million); the DNA chip–maker Affymetrix Inc. of Santa Clara, California ($3.5 million); and the Wellcome Trust ($7.5 million), a British charity. SKB spokesperson Rick Koenig says that the company's research chief, Tadataka Yamada, felt that it was important to "pool our resources to accelerate the sequencing of the mouse genome."

CREDIT: THE JACKSON LABORATORY

Nobel Prizes

As this issue of *Science* went to press, the Nobel Prize in physiology or medicine was awarded to Arvid Carlsson of the University of Gothenburg, Paul Greengard of Rockefeller University, and Eric Kandel of Columbia University for their work on signal transduction in the brain. The Nobel Prize in physics was awarded to Jack Kilby of Texas Instruments for his part in the invention of the integrated circuit, and to Zhores Alferov of the A. F. Ioffe Physico-Technical Institute in St. Petersburg, Russia, and Herbert Kroemer of the University of California, Santa Barbara (UCSB), for developing fast micro- and opto-electronic components. The chemistry prize went to Alan Heeger of UCSB, Alan MacDiarmid of the University of Pennsylvania, and Hideki Shirakawa of the University of Tsukuba for the discovery and development of conductive polymers. See *Science*NOW (sciencenow.sciencemag.org) on 10 October for coverage of these announcements. Full reports will appear in next week's issue of *Science*.