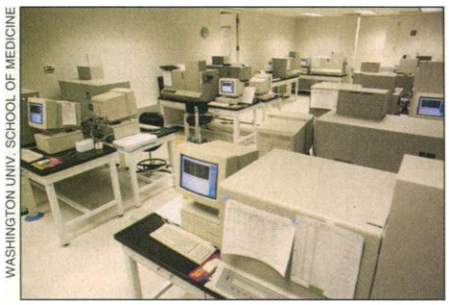
edited by JOCELYN KAISER

Hughes Funds Mouse Gene Sequencing

Taking a leap into targeted research, the Howard Hughes Medical Institute (HHMI) is planning to invest $2.3 million in a hunt for mouse genes, to be carried out over the next 2 years by Robert Waterston and his colleagues at the Washington University School of Medicine in St. Louis. Waterston's team hopes to capture about 400,000 unique molecular identifiers from mouse tissue—known as expressed sequence tags—enabling others to reconstruct entire genes. The ultimate goals are to identify mouse equivalents, or homologs, of human genes, and to create mouse models of human genetic diseases.



WASHINGTON UNIV. SCHOOL OF MEDICINE

The factory floor. Hughes mouse genome grant will buy more of these gene sequencers.

In the past, Hughes has spent most of its genetics funds on individual researchers. But in this new tack, announced last week, the institute aims to create a resource for the entire genetics community that public agencies were unable or unwilling to fund. HHMI President Purnell Choppin says that "before we went forward with this, we had discussions" with Francis Collins, director of the National Center for Human Genome Research, and Harold Varmus, director of the National Institutes of Health (NIH). Their funds "seemed to be committed," says Choppin, and the mouse work "seemed like a wonderful opportunity for Hughes to do something that was important."

NIH is lending a hand, however: It is funding work by Bento Soares's group at Columbia University to prepare mouse DNA clones, the actual material Waterston's team will sequence. Waterston says Soares's first libraries are already made, and "we've got the sequencers on order." The data will soon begin streaming onto the Internet, and Waterston says, "It's going to be lots of fun to see how human and mouse genes compare."

Kinder Radiation Enforcement at NIH

After being accused of laxity in the management of radioactive materials last year and taking a hard line on enforcement, the National Institutes of Health (NIH) has stepped back in recent weeks and has now adopted a more forgiving attitude toward those who violate the regulations.

The change softens what Michael Gottesman, NIH deputy director for intramural research, calls a "much more Draconian" enforcement policy issued after a scientist was allegedly poisoned with the radioisotope phosphorus-32 last summer (*Science*, 28 July 1995, p. 483). Although current Nuclear Regulatory Commission (NRC) rules imply that negligible amounts of unattended radioactive materials or waste don't have to be locked up, since July NIH has required that no matter what the quantity, it has to be kept in a locked room or container. And in October, NIH began imposing a stiff punishment on violators and their lab chiefs: an automatic suspension of 14 to 30 days from ordering or using radioisotopes.

Gottesman doesn't know exactly how many of NIH's 5000 radioisotope users were suspended—bringing some labs' work to a standstill—but he says it was "a statistically significant number." Included was one of the top brass: Rick Klausner, chief of the National Cancer Institute, who was given a 30-day suspension for leaving a freezer containing isotopes unlocked.

The trouble with this policy, says Gottesman, was that in some cases staffers were receiving stiffer penalties than they deserved. For example, Gottesman suggests that it could be wrong to halt research if a cleaning crew left a door unlocked or the lock was broken. So last month, with NRC approval, NIH began allowing people cited for code violations to explain what had happened and make corrections, possibly avoiding suspension. The point is to be "more corrective than punitive," Gottesman says. In December, NIH also decided that rooms posted for radioisotope use—if not being used for that purpose—need not be kept locked. Meanwhile, NIH is working with the NRC on more flexible security measures.

Budget Points to More Clashes Over Science

Despite Republican hostility toward federal applied research and global change programs, the White House intends to continue backing those efforts, according to the 1997 budget request submitted to Congress by President Bill Clinton last week.

Normally the document surpasses a big-city phone book in size, but because much of the 1996 budget remains in limbo, this year's version is a scant 20 pages containing a single paragraph on science and technology. Clinton will support "a balanced mix of basic research, applied research, and technology development," it states. The Administration specifically wants more money for the National Institutes of Health (NIH), the National Science Foundation (NSF), and the Mission to Planet Earth effort at the National Aeronautics and Space Administration. Other winners will be the Commerce Department's Advanced Technology Program and the Defense Department's Technology Reinvestment Project.

With the exception of NSF basic research and NIH biomedical research, all of the programs mentioned have come under intense fire from congressional Republicans. But the exact battle lines will not be clear until Congress and the White House settle the 1996 budget and Clinton submits his detailed budget in March.

Will Japan Disconnect NTT's Research Labs?

The fate of research at Nippon Telegraph and Telephone Corp. (NTT), Japan's dominant phone company, is one of several issues on the table as Japanese officials debate whether NTT should go the way of its U.S. counterpart, AT&T, which was broken up in 1984.

NTT officials say a breakup would lead to a dramatic cut in the company's $2.6-billion-a-year R&D program, which covers topics ranging from how the brain processes information to improved telephone switches, and could threaten Japan's ability to compete globally. But the Ministry of Posts and Telecommunications (MPT) doesn't seem to think the impact would be so severe. It has released data showing that NTT supports two-thirds fewer researchers than does AT&T Bell Labs, with an R&D budget of comparable size, as well as a survey showing the nation's top business managers consider Japan to be far behind the United States in advanced telecommunications research.

It's not clear what might happen to NTT's labs if the company, once a government-owned monopoly but now partly owned by shareholders, is split up. This month an MPT advisory panel is expected to make such a recommendation, which would be followed by a bill drafted by the ministry for submission to the Diet. The idea is strongly opposed by the Japan Telecommunications Workers' Union, which fears that a breakup will lead to a loss of union jobs.