# Briefings

*edited by CONSTANCE HOLDEN*

## NIH Left Peerless for Genome Centers

The National Institutes of Health is having a hard time coming up with conflict-free scientists to review the flood of applications for its new genome research center grants. "It would be easier if everyone wasn't interrelated," says Jane Peterson of NIH's National Center for Human Genome Research. "It's such a small community."

When the 1 February deadline for grant applications arrived, Peterson found herself inundated by requests for funding. Three center grants, of $2 or $3 million apiece, will be awarded next September. Eventually, NIH plans to spend about half of its budget, which is expected to climb to around $200 million a year, on the centers. Each will tackle one of the major objectives of the genome project, such as completing the physical map of one human chromosome or sequencing a model organism (*Science*, 13 October 1989, p. 204).

The exact number of applications is confidential, but it seems that almost everyone in the field has either applied for a center grant or is working with someone who has. The interrelatedness problem is also aggravated by the fact that each center is supposed to serve as a sort of research hub, interacting with all the other researchers working on, say, chromosome 11.

Finding reviewers "is going to be a real challenge," says Peterson. Now she is sifting through lists of scientists, looking for people who are well versed in the genome project but not actively involved in it—and who also understand the role the centers can play in big science. And if all else fails, says Peterson, "we can use people from abroad if we absolutely have to."

## Biotechnology: Manpower-Starved?

In 10 years the nation will need twice as many new biomedical researchers as are currently being produced, according to the National Research Council. A report to Congress says most new jobs will be in industry, where demand is growing at twice the rate in academia. More than one-third of biotechnology firms are reportedly already having difficulty filling vacancies.

The report calls for a 41% increase in federal support for predoctoral students in biomedical sciences. That would mean raising the number of predoctoral positions supported from 3700 to 5200.

The report, which also covers needs in behavioral research, says no new money is needed in that area "considering the relatively stable market for nonclinical psychologists and other behavioral scientists during the 1980s."

## Ecologists Honored

Population biologist Paul Ehrlich of Stanford University and entomologist Edward O. Wilson of Harvard will share this year's Crafoord Prize in Population Biology and the Conservation of Biological Diversity.


The prize, this year amounting to $240,000, is awarded by the Royal Swedish Academy of Sciences, which administers the Nobel Prizes. The Crafoord Fund, established in 1980, supplies awards in areas not covered by the Nobels—such as astronomy, the geosciences, and ecology. Last year's prize went to James Van Allen, discoverer of the radiation belt of that name.

According to the Academy, Wilson is being honored for research on species diversity and, in particular, his theory of island biogeography. Ehrlich is cited for research on the dynamics and genetics of fragmented populations and how population distribution patterns affect survival.

## *Scientific American* Discovers TV

*Scientific American* is headed for the airwaves—sort of. That venerable magazine will be lending its name and prestige to the 5-year-old weekly public television program *Discover: The World of Science*. Until now the television show has been associated with *Discover* magazine.

The GTE Foundation is expected to continue its financial support for the show, and Boston-based Chedd-Angier Productions will continue to produce it. The show's name will probably change.

## Superconductor Partners

The Pirelli Group, the world's second largest manufacturer of cable and wire for power applications and telecommunications, is betting that major breakthroughs lie ahead for high temperature superconductors. The giant conglomerate has entered into what appears to be the first joint venture of its kind in the superconductivity arena—a 3-year R&D program with a tiny U.S. firm, American Superconductor Corporation (ASC) of Watertown, Massachusetts.

Founded in 1987, ASC has developed processes for forming relatively flexible, high-temperature superconducting wires and welding those wires together. In the next few years Pirelli and ASC plan to produce sample batches of power transmission and magnet-type cable for life-cycle testing.

ASC President Greg Yurek says his firm still is many years away from having a real product. But while the current-carrying capacity of ceramic superconductors still needs improvement, ASC and Pirelli say it is not too early to start perfecting manufacturing processes. Yurek predicts that nitrogen-cooled superconducting ceramic cables will be on the market by the late 1990s.

In exchange for its financial support of several million dollars, Pirelli has acquired a small stake in ASC—less than 10% of the privately held company's stock.

**Laser Record Set.** *Scientists at General Electric have achieved the laser world's equivalent of the 4-minute mile—an average power output of 1000 watts from a single solid-state laser head. The "face-pumped laser," which delivers its energy through an optical fiber, will enable development of industrial laser systems that can cut and drill metals and alloys with unprecedented speed and precision, says GE. The record-setting team was headed by Joseph P. Chernoch whose original 1972 invention put out only 10 watts.*