

NIH and DOE Draft Genome Pact

In an effort to ward off congressional meddling, the National Institutes of Health (NIH) and the Department of Energy (DOE) have drafted a memorandum of understanding for interagency coordination on the genome project, the \$3-billion effort to map and sequence the human genome. Final wrinkles in the agreement are now being worked out, and it is expected to be signed soon by NIH director James B. Wyngaarden and Robert O. Hunter, director of DOE's office of energy research.

The agreement sets up a joint mechanism for receiving outside advice and otherwise provides for communication and cooperation between the two agencies, which for the past 2 years have been wrangling over how the genome project should be run and who should lead it.

The memorandum marks a turning point for the agencies, which have consistently maintained that informal cooperation and coordination were sufficient to run the project. Congress, however, worried about accountability and redundancy in this costly effort, has been less convinced and is considering a bill that would set up a formal interagency structure.

Since the specter was raised more than a year ago, both agencies have been vehemently opposed to legislation. The hope among officials in both agencies is that their memorandum of understanding will remove the incentive for this and other bills.

Science obtained a draft copy of the memorandum, which is not expected to be modified in any substantial way. The brief agreement—it is only three pages—calls for the creation of a joint scientific advisory group for both agencies that would draw members from the two existing advisory committees: DOE's Health and Environmental Research Advisory Committee and the newly created NIH Program Advisory Committee on the Human Genome.

The memo also calls for the creation of an Interagency Working Group, again, co-chaired by representatives from both agencies, that would consist of staff from both DOE and NIH.

The draft memo does not mention formal links to the National Science Foundation or the Howard Hughes Medical Institute, the two other key players in the genome project. Rather, it speaks generally of continued coordination with other federal agencies, national and international scientific groups, and private organizations. Other activities include joint sponsorship of an annual symposium to review progress and identify criti-

cal research areas, coordination of schedules for awarding research grants, and general sharing of information and facilities.

Whether this agreement will be sufficient to deter Congress remains to be seen. All along Congress has intimated that if the agencies would get their houses in order, Congress might be willing to back off. Indeed, that sentiment was spelled out explicitly at a 14 July hearing, where it was suggested that if the agencies signed a memorandum of understanding then it might make sense to drop the genome provisions from the Biotechnology Competitiveness Act now before Congress.

Senator Lawton Chiles (D-FL), chief sponsor of the bill, is apparently willing to drop the genome section of the bill if the new agreement between NIH and DOE passes muster. When *Science* went to press, Congress had yet to see the draft agreement.

Meanwhile, in the appropriations bill for the Department of Health and Human Services, which is now awaiting the President's signature, Congress has instructed NIH to establish a National Advisory Panel on the Human Genome, similar to that spelled out in the Chiles bill.

One of the last remaining questions is who will head the stepped-up genome project at NIH. Nobel laureate James Watson is expected to announce shortly that he will take the job.

■ LESLIE ROBERTS

Report Calls for Revamping of EPA Research

Research and development at the Environmental Protection Agency (EPA) should be significantly restructured and expanded, according to a report by the EPA science advisory board that was released last week.

EPA's R&D budget should be doubled over the next 5 years, said the board, whose members include about 40 scientists from industry, academia, and environmental groups, in the report, "Future Risk: Research Strategies for the 1990s."

The agency's R&D has been a major casualty of budget cutbacks since the Reagan Administration took office. The agency's R&D budget is now about 20% smaller in real dollars than it was a decade ago, while the agency's responsibilities have dramatically increased. The situation was even worse under Anne (Gorsuch) Burford, Reagan's

first EPA administrator, when the budget was slashed in half in real dollars. Under her successors, William Ruckelshaus and Lee Thomas, funding improved, but the R&D budget still has not recovered to the fiscal year 1980 level of \$398 million.

For almost two decades, the agency has stressed pollution controls as a way to reduce risk to health and the environment. But, the report said, "we have learned that end-of-pipe controls have tended to move pollution from one environmental medium to another, not eliminate it." One of the key solutions is to stress research to reduce the generation of pollution and waste at the source.

The board recommends the establishment of a new Environmental Research Institute that would carry out a core program in ecological research because current efforts at EPA and other agencies are fragmented. The board said that the Institute should be operated by a contractor, although EPA would be the principal source of funding. The Institute would also study criteria that could be used to measure environmental changes (for example, are mussels a good indicator of estuarine pollution?); and act as a clearinghouse for environmental data collected within and outside the agency.

An increase in funds for R&D should also be used to:

- Train more scientists and engineers in environmental research and expand the agency's grants program.

- Initiate a strong epidemiological research program. The agency needs to increase the use of studies that measure ordinary exposure rather than exposure in the workplace where the concentrations are often much higher and might exaggerate the potential health risk.

- Create a panel that would include top-level EPA administrators to oversee the general direction of agency research. The position of assistant administrator for research and development should be changed from a political to a career post. The report notes that since EPA was created nearly 20 years ago, no assistant administrator for R&D has held the job for more than 3 years. Under the Reagan Administration, no person has stayed in that position for more than 2 years.

The board also strongly urged EPA to carry out a lot more long-term research, which now is "very limited," the report said. For many years, congressional reauthorization committees have said the same thing, but long-term research has always gotten the short end of the funding stick when appropriations bills have passed.

"EPA must fulfill [the responsibility to conduct research] because no one else will," the report says.

■ MARJORIE SUN