edited by JOCELYN KAISER

NIEHS to Study Genes for Environmental Risk

Hoping to jump on the genomics bandwagon, the National Institute of Environmental Health Sciences (NIEHS) plans to invest at least $60 million over several years in an Environmental Genome Project. According to NIEHS director Kenneth Olden, the new program would fund studies on human genes that increase the risk for diseases triggered by exposure to chemicals.

NIEHS wants to train its sights on scores of relatively common genes that confer vulnerability to chemical insults. For example, people with certain variants of the enzyme paraoxonase have trouble breaking down nerve agents and organophosphate pesticides. And 20% of the U.S. population lacks GSTT1—a gene that aids in detoxifying chemicals—putting them at increased risk for a cancerlike bone marrow disease. There are at least 200 suspected "environmental" genes affecting 1% or more of the population, Olden told a congressional committee last week.

The plan is to collect DNA from about 1000 people from major ethnic groups and sequence 200-plus critical genes from each person. Then, extramural scientists would study the genes' functions and conduct population surveys to seek links between genes and high disease rates.

The project could result in "enormous" savings in health care costs by helping vulnerable people avoid environmental risks, says Leland Hartwell, director of the Fred Hutchinson Cancer Research Center in Seattle. "[It's] not only doable now but likely to provide great insights into susceptibility to common diseases," he says.

NIEHS hasn't yet offered a price tag on the project, but the sequencing alone would cost $60 million, Olden says. He hopes to launch the project in 1998 with as much as $10 million. Some funds will come from NIEHS, but Olden hopes to attract backers from other parts of the National Institutes of Health next month, when he will give a sales pitch to NIH director Harold Varmus and the chiefs of the cancer and genome institutes.

J. KURTZ/IMPACT VISUALS/PNI

Risk factors. New project will study genes affecting responses to hazards such as pesticides.

Boston Cardiologist Heads for Prison

The long legal odyssey of Bernardo Nadal-Ginard, the prominent Boston cardiologist who has been free on bail since his May 1995 conviction for embezzling $117,000, has ended. A Massachusetts appeals court upheld the guilty verdict in January, and on 24 February, the state's supreme court declined to review the case, forcing the former Harvard Medical School professor to begin a 1-year prison sentence.

Children's Hospital, where Nadal-Ginard was formerly chief of cardiology, had no comment. Neither he nor his attorneys could be reached for comment.

Nadal-Ginard had published dozens of papers on heart cell gene expression when he was charged in 1994 with diverting funds from the Boston Children's Heart Foundation, a group practice affiliated with Children's Hospital, into his personal bank account. Defense attorneys argued that his misdeeds should be excused because he suffers from bipolar disorder, a mental illness marked by severe mood swings, but the jury found otherwise. Nadal-Ginard, who lost his medical license in 1995, resigned from Harvard last July.

The foundation also alleged Nadal-Ginard pocketed several million dollars as part of an unauthorized severance package. Two years ago, a federal judge ordered Nadal-Ginard to repay $6.5 million, but instead, the foundation has acquired his art collection. The 250 works have been appraised at $4 million to $6 million by Sotheby's, which will auction them beginning in May.

Science Board Wants Bigger Policy Role

In numbers, there is strength. That inversion of an old saying is one mechanism that the 24-member National Science Board, which oversees the National Science Foundation (NSF), may use to exert more influence on federal science policy.

Every 2 years, NSF publishes the popular *Science and Engineering Indicators*, a 630-page tome rich in statistics on the state of U.S. science but silent on science policy. Adding policy recommendations to the report is just one way the science board could come closer to meeting its original mission of advising the president on national science policy as well as overseeing NSF, says board president and Stanford chemist Richard Zare. Last month, Edward David Jr. and Frank Press, two former presidential science advisers, urged the board at its regular meeting to take on such a role, with David noting that "its charter is far broader than its activities have been" and Press suggesting that the board could be a "corporate monitor" of the overall health of U.S. science.

"I was delighted to have them challenge us to do more," says Zare. He notes that the idea of adding commentary to the *Indicators* report was received warmly at a 1-day board retreat just after the meeting. The next *Indicators* report is due out in the fall of 1998.

Fisher Absolved of Scientific Misconduct

University of Pittsburgh cancer researcher Bernard Fisher has been cleared of 3-year-old federal charges that he published falsified data. Earlier this week, the Office of Research Integrity (ORI) informed Fisher's attorney that it had "not made a finding of scientific misconduct" against Fisher, former chair of the breast cancer study known as the National Surgical Adjuvant Breast and Bowel Project (NSABP), and two colleagues.

The case stemmed from Fisher's discovery in 1991 that Montreal physician Roger Poisson had falsified documents to allow women who did not meet the study's protocol to be included. When ORI concurred in 1993 that Poisson was guilty of misconduct, it ordered Fisher to publish a reanalysis of the data. Fisher insisted that excluding the false data didn't change the study's conclusions.

After Representative John Dingell (D–MI) held hearings on the matter, ORI began an investigation of Fisher because he had submitted papers for publication that included Poisson's patients. Fisher's reasoning was that the rules of clinical research (the "intent-to-treat" principle) demanded that he not exclude any patients from the statistical calculations. Fisher says he was bound by an ORI gag order not to reveal the ongoing investigation of Poisson in his publications, but notes that he fully informed government officials of his plans to continue using Poisson's data.

Comparing himself to a victim of an anti-Communist witch hunt in the 1950s, Fisher said "I feel somewhat startled, gratified, and uplifted by this [vindication]. I've waited a long time." This concludes the last of the inquiries stemming from Dingell's accusations of fraud in science, all of which have ended in exoneration. Meanwhile, Fisher is suing the government for injuring his reputation.