

"Somebody's pulses must be getting longer."

Wayne Knox came up with the idea for the paper and recruited the other authors for their name value: he refers to his project as a Knox-Knox-Hoosc-Zare joke.

HUGO Gets \$1 Million from Hughes

The Howard Hughes Medical Institute has awarded a \$1-million grant to the Human Genome Organisation (HUGO). The 4-year grant will help pay for programs and operations at HUGO's Americas office in Bethesda, Maryland, as well as related international activities including council meetings, workshops, and a scientist exchange program.

The new donation comes on top of HUGO's first big grant, from the Wellcome Trust in London, which in February gave \$350,000, the first installment of a 3-year donation.

HUGO's president Walter Bodmer, director of research at London's Imperial Cancer Research Fund, says "I'm absolutely delighted" with the Hughes grant, which "reflects HHMI's support for the Human Genome Project as a whole." Hughes donated \$100,000 in services in 1989.

Other Hughes news: Irving S. Shapiro, former chief at Du Pont, has been elected to succeed George W. Thorn as chairman of the trustees.

Welch Award

Two pioneers in physical chemistry have won this year's prestigious Welch Award in Chemistry. The international award, which carries with it \$225,000, will be given to William von Eggers Doering, emeritus professor at Harvard, and John D. Roberts, emeritus professor at the California Institute of Technology, at a ceremony in Houston to be held on 22 October.

Roberts is cited for "initiat-

The PHS's Animal Offensive

In the category "Scientists Fight Back," two offices are currently being set up to promote science education and to coordinate policies and develop information on the use of animals in research.

Frederic Goodwin, head of the Alcohol, Drug Abuse, and Mental Health Administration (ADAMHA), is the main figure behind the new initiatives.

One is the Office of Animal Research in the Public Health Service. Headed by Louis Sibal of the National Institutes of Health, it will pursue a variety of recommendations proposed by a committee set up last year to advise Health and Human Services Secretary Louis Sullivan on animal issues. It will be responsible for coordinating ADAMHA and NIH policy and providing information on animal research to address public, congressional, and scientific concerns. It will also have a hotline for researchers targeted by animal activists.

Broader in scope will be the Office of Science Education in ADAMHA, which will be promoting science education in schools and with the general public. That will include a grants program to enable investigators to spend part time

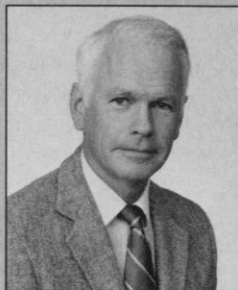
in public science education activities. The office will also take over a contract that has been already let to a private firm to develop materials for college and precollege science education.

Goodwin says his agency has committed up to \$2 million to the education office for fiscal 1990, and he expects the figure to go up to \$25 million by fiscal 1992. He hopes for contributions from NIH that will be "comparably larger."

In a separate development, ADAMHA is now notifying its grantee institutions that grants can't be returned to the government in response to political pressure. If that happens, all PHS grants to that institution will be reviewed. That's to prevent what happened at Cornell University 2 years ago (see *Science*, 6 January 1989, p. 17) when a grant approved by the National Institute on

Drug Abuse was returned following pressure from animal activists.

Goodwin sees all these initiatives as part of a broad response to deeper issues that animal activism has highlighted: the lack of interest in science by the young and the erosion of intellectual values both within and outside academia. "The history of science might turn out to thank the animal rights movement for waking us up" to these problems, he says.



Fred Goodwin.
ADAMHA chief says academic values are under siege.

Budding Biologist Says No to Frog Lab



Jennifer Routh.
Antidissectionist?

A sample of the kind of thinking Fred Goodwin wants to straighten out has been suppoed by a prospective biochemistry major who doesn't want to dissect preserved frogs in biology class.

Jennifer Routh of Riverhead, Long Island, a vegetarian sophomore at the State University of New York at Stony Brook, is suing the university, claiming that the requirement violates her First Amendment rights.

A SUNY spokesman says students are advised at the beginning of the term that the introduc-

tory course, required for biology and biochemistry majors, involves the dissection of simple organisms including earthworms, starfish, and sea urchins. But Routh drew the line at frogs. She also rejected the option of observing while a partner did the dissecting.

There have been a number of cases in which high school students have sued over animal dissection requirements. But Routh's lawyer, Gary Francione of Rutgers University College of Law, says this is the first case involving a university.

Francione is already involved in other animal-related actions involving SUNY Stony Brook. Last spring, he represented activist groups in a suit that resulted in the release of 700 research applications by the university's animal care and use committee (see *Science*, 4 August 1989, p. 472). The university is still appealing that case. A spokesman says the university will be filing a response to Routh's suit in a couple of weeks.

ing and developing many of the important techniques of modern physical organic chemistry," including the use of isotopic labeling in studies of organic reaction mechanisms. Doer-

ing developed new methods of synthesis in organic chemistry, and participated in the first total synthesis of quinine in the 1940s, which "is credited with ushering in the era of natural

product synthesis."

The Welch Foundation, founded by businessman Robert A. Welch, funds chemistry research in Texas colleges and universities.