

# The NIH Record

## Fortieth Features

### NINDS Builds Cadre of Scientists for the Next Century

By Stephanie Clipper



Second in a series to commemorate  
the 40th anniversary of the NINDS

"They've been teaching me more about the material that we've been studying than I could ever have dreamed, and they've taught it with style, professionalism, and a lot of care."

That is how David Lozar described his work this summer in the National Institute of Neurological Disorders and Stroke (NINDS) Laboratory of Neurobiology. Such high praise is not unusual to hear from the students who come to work each year in laboratories under the institute's Summer Program in the Neurosciences.

"When I go back to school, I can teach other people what I've done here," said Jennifer Payne, who worked in the NINDS Laboratory of Central Nervous System Studies. "I really had a nice experience here, not just on a scientific level, but on a personal level, too."

Over the 6-year-long history of the program, the institute has offered hands-on experience to hundreds of high school, undergraduate, graduate, and medical school

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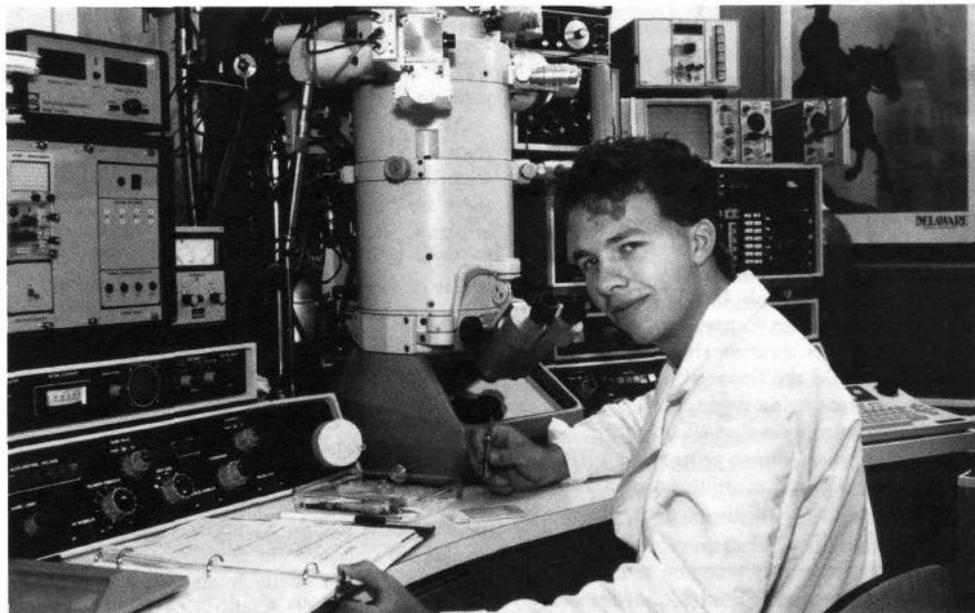
### Dr. DeWitt Stetten Jr., Dies; Shaped NIH for More Than Three Decades

Dr. DeWitt Stetten Jr., NIH deputy director for science, emeritus, and senior scientific advisor to the NIH director, died Aug. 28 of congestive heart failure at Fernwood Nursing Center in Bethesda.

Born May 31, 1909, in New York City, Stetten, known affectionately to his friends as "Hans," was the second child of a prominent surgeon. As a boy he attended Horace Mann School, an experimental school associated with Teacher's College of Columbia University. In 1930, he received his A.B. degree magna cum laude from Harvard College and was named a member of Phi Beta Kappa. Although his first love was biochemistry, he was persuaded by his Harvard tutor and mentor, Frank Fremont-Smith, to attend medical school before embarking on a laboratory research career.

In 1934, Stetten took his M.D. degree at the College of Physicians and Surgeons of Columbia University, after which he did his internship and residence at Bellevue Hospital in New York City. There he first encountered another NIH luminary, James A. Shannon, who enjoyed a reputation as something of a

(See **STETTEN**, Page 6)



David Lozar (Laboratory of Neurobiology), a sophomore at the University of Illinois, studied and prepared nerve tissue using the technique of slam freezing. "I wasn't sure initially if I was going to enter clinical or basic research, and I thought this would be a good way to find out. It's an opportunity to get a better idea of what science is really like. A lot of what we're doing here is on the forefront of technology."

### All Employees Can Help

#### NIH Takes Steps To Improve Waste Recycling, Reuse

By Rich McManus

Just as it excels in so many other areas, NIH is also a champion when it comes to trash. Some 30 tons of nonhazardous solid waste accumulate every day on campus, most of which gets trucked to a county landfill for burial.

But in the wake of Earth Day 1990 and new economic and environmental realities, NIH is planning to escalate its program for recycling waste that can be reused. A plan for recycling drafted by the Division of Safety's Environmental Protection Branch is currently under review in Bldg. 1. Most offices can participate in volunteer paper recycling immediately (see sidebar on Page 10), although the Transportation Branch does charge for pickup.

The proposed plan has three main features: collecting and removing office white paper; buying recycled paper for office use; and adding more items to the list of recyclables—aluminum cans, glass bottles, metal, plastics, corrugated containers, wood pallets and polystyrene.

At the moment, NIH has in place a modest recycling program focusing on obvious sources of high-quality paper—DCRT, with its reams

of computer paper, NLM, and the Printing and Reproduction Branch, whose battalions of Xerox machines are constantly producing fodder.

Between 20 and 25 tons of solid waste—most of it white paper—are currently recycled each month at NIH. Waste managers at the Division of Safety say about 80 tons of high-grade office white paper could be recovered without undue financial or employee strain each month if their pilot program for recycling takes effect campuswide

(See **RECYCLING**, Page 8)

### Furlough Possibility Still Looms

As the *NIH Record* went to press, the possibility of a furlough for NIH employees still loomed, although an effort was under way to reduce the duration of the layoff from a possible 22 days to only 13.

"We have asked the department (HHS) for approval of a budget plan that includes 13 days of furlough," said Stephen C. Benowitz, director of the Division of Personnel Management  
(See **FURLOUGH**, Page 2)

## FURLOUGH

(Continued from Page 1)

ment. We all hope that a furlough won't happen."

When first informed of the possibility of a furlough, NIH institutes, centers and divisions scrutinized their budgets to see where money could be saved without resorting to furlough.

All NIH employees received notice in late August of the possibility of a furlough and all were required to sign papers acknowledging their vulnerability to such a measure.

In addition, Dr. Joseph E. Rall, who was acting NIH director while Dr. William Raub was on vacation in late August, circulated a memo to employees assuring them that all efforts to minimize the financial consequences of a furlough were being made.

"I want to assure you that all of us are doing everything we can to protect the NIH, its various research and training programs, and its staff from undue hardship in the coming weeks," wrote Rall.

## Tickets to Moscow Circus

See one of the world's most beautiful and spectacular circuses, the Moscow Circus. R&W has discounted tickets for performances Friday, Oct. 12 through Sunday, Oct. 14 at the George Mason University Patriot Center. Save \$3 off regular ticket prices. Tickets are available through all R&W locations. Call 496-4600 for more information. □



Dr. Mary Jane Stephens has recently joined the NIGMS Office of Review Activities as executive secretary of the Minority Biomedical Research Support review subcommittee. Stephens comes to NIGMS from the Food and Drug Administration, where she served as a senior staff fellow in the division of microbiology. She has also done research in the microbiology department at George Washington University. Stephens has a Ph.D. in molecular genetics from the University of Georgia.

## STEP Lecture Explores Real Science, Pseudoscience and Dumb Luck

This year, the STEP Science for All series will present one lecture entitled "Real Science, Pseudoscience, and Dumb Luck." The talk will be presented on Oct. 11 from 1 to 3 p.m. in Wilson Hall.

As laypeople and scientists, we are constantly barraged with claims that pose as scientific facts. We are asked to believe that there are cures for baldness or that large doses of certain vitamins or minerals will make us healthy. We are expected to evaluate the effects of food additives, industrial wastes and radon on our health. How can we tell fact from fiction? Indeed, what is a scientific fact? How do scientists, using the scientific method, go about answering questions? And how important are luck, creativity, and imagination in scientific research?

STEP is delighted that Dr. Donald Coffey of Johns Hopkins University has agreed to speak on how science is conducted and how we can tell science from pseudoscience. Coffey is deputy director of the Johns Hopkins Oncology Center. He is also director of the research laboratories of the department of urology. He received the outstanding alumnus award from East Tennessee University in 1979 and the distinguished scientist award, State of Tennessee in 1986.

An outstanding scientist, he has made major contributions to our understanding of both prostate cancer and lung cancer and has characterized the nuclear matrix, a framework that organizes and regulates DNA in the cell. Coffey is the Catherine Iola and J. Smith distinguished professor at Johns Hopkins and is the recipient of two NIH Merit Awards.

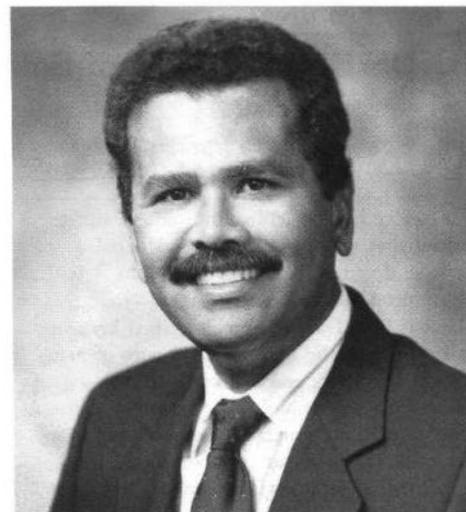
He is also well-known as an interesting and provocative lecturer who can delight both scientific and lay audiences with his commentary on science, philosophy and society.

Advance registration is not required, nor is continuing education credit available. For additional information, contact the STEP program office, 496-1493. □

## Perinatal Conference, Sept. 24-25

The NICHD is sponsoring a research conference on "Endothelium-Derived Vasoactive Substances in Perinatal Research" on Monday and Tuesday, Sept. 24-25, at the Radisson Plaza Hotel in Alexandria, Va. The meeting will be chaired by Drs. Chaudhuri and Ignarro of University of California, Los Angeles.

For further information contact Jack Harvey, 986-4886 or Dr. Donald McNellis, 496-5575. □



Dr. Jose Velazquez-Lozada has recently joined the Minority Biomedical Research Support (MBRS) Program at NIGMS. Prior to this appointment, Velazquez was chairman of the department of anatomy and cell biology at the Universidad Central del Caribe School of Medicine in Cayay, Puerto Rico. From 1985 to 1989, he directed the MBRS program at Cayey University College of Puerto Rico, where he earlier had served as chairman of the biology department. Velazquez has a Ph.D. in cell biology from the University of Chicago. His research has focused on heat shock proteins.

## The NIH Record

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## Change in Single Amino Acid

### Osteoarthritis Gene Found by NIAMS Grantees

By Lauren E.D. Ward

For the first time, a gene has been found that causes osteoarthritis, the most common form of arthritis, according to a report released recently in the *Proceedings of the National Academy of Sciences*.

The research team was composed of collaborating scientists at two institutions, and their work was funded by the National Institute of Arthritis and Musculoskeletal and Skin Diseases. The scientists included Dr. Darwin J. Prockop and his colleagues at Thomas Jefferson University, Philadelphia, and Dr. Roland W. Moskowitz and his colleagues at Case Western Reserve University, Cleveland.

In the study, genetic material was examined from 19 members of a three-generation family, including nine family members affected with osteoarthritis. Using techniques of molecular biology, Prockop, Dr. Leena Ala-Kokko, and their associates at Thomas Jefferson isolated and characterized a faulty gene for collagen II, a protein that strengthens the cartilage that covers and cushions joints and that typically breaks down in osteoarthritis. The faulty gene directed the substitution of one amino acid, cysteine, for another, arginine, in a protein composed of more than 1,000 amino acids. The single amino acid mutation was found in all affected members of the family but not in

any of the unaffected members tested or in 57 unrelated individuals.

"This elegant study strongly supports the idea that a single genetic flaw can cause at least one form of osteoarthritis and perhaps can cause others," said Dr. Lawrence E. Shulman, NIAMS director.

The family members studied showed early expression (as early as 16 years of age) of clinical symptoms of primary generalized osteoarthritis. The cause of primary generalized osteoarthritis has remained unknown; it can affect many parts of the body including the hands, feet, hips and knees. Osteoarthritis can also be secondary to known specific causes, including joint injuries and congenital bone defects.

Osteoarthritis causes the protective cartilage to fray, wear, ulcerate, and, in extreme cases, to disappear entirely, leaving a bone-on-bone joint. Individuals with the disease suffer pain, stiffness and, often, limitations in mobility that get worse over time. Osteoarthritis is a major reason for the more than 150,000 total joint replacement procedures performed each year in the United States.

The authors believe that primary generalized osteoarthritis, which usually affects people at age 55 or thereafter, may result from

this or other genetic defects that can be fully explored with the molecular approaches employed in this study.

According to Dr. Arthur I. Grayzel, senior vice president for medical affairs for the Arthritis Foundation, "This research may change the attitude toward osteoarthritis from one of passive acceptance to a search for active intervention." The Arthritis Foundation is a national voluntary organization that is concerned with more than 100 arthritis-related diseases.

"From a clinical perspective, I think that the most exciting aspects of this finding are the prospect of recognizing who is at risk for osteoarthritis and, with future research, the development of measures to prevent joint breakdown," Moskowitz said. Current therapies for osteoarthritis are generally limited to medicines that relieve pain and inflammation, physical therapy, and joint replacement.

Moskowitz concluded, "We must keep in mind the complexity of osteoarthritis. Studies in our laboratories and elsewhere suggest that multiple factors, which are still not well understood, initiate and perhaps work together to break down joint cartilage." □

## Medicine for the Public

### NIH Scientists Share Expertise with the Community

The 1990 Medicine for the Public (formerly Medicine for the Layman) lecture series will begin this month with the overall series topic—the human body. The lecture series, now in its 14th year, features physician-scientists working at the frontiers of medical research at NIH. The series helps people to understand the latest developments in medicine—new therapies, diagnostic procedures and research. The emphasis is on current topics, with colorful graphic slides designed to complement each lecture and speakers who can relate to the lay public.

The lecture series is held in the Clinical Center's Masur Auditorium, Bldg. 10, on Tuesdays at 7 p.m. The following topics will be covered in the upcoming series:

Sept. 25 — "Allergic Diseases" Dr. Michael A. Kaliner, head of the allergic diseases section, NIAID, will discuss different types of allergies, including symptoms, preventive measures and new treatments.

Oct. 2 — "Understanding Seizure Disorders" Dr. William Theodore, chief of the

clinical epilepsy section, NINDS, will discuss the latest medical advances in understanding epilepsy, as well as successful treatment options.

Oct. 9 — "AIDS: The Benefits of Early Intervention" The speaker, Dr. Henry Masur, chief of the critical care medicine department, Clinical Center, is studying the effects of early treatment for AIDS patients.

Oct. 16 — "Diet and Cancer" Dr. Peter Greenwald, director of the Division of Cancer Prevention and Control, NCI, will explain the role diet plays in the prevention and development of cancer. He will also discuss designer foods, NCI dietary guidelines and current research.

Oct. 23 — "Disorders of the Thyroid: Facts and Myths" Dr. Bruce D. Weintraub, chief of the Molecular, Cellular and Nutritional Endocrinology Branch, NIDDK, will be the speaker. While 10 to 20 percent of women over 40 have some type of thyroid disorder, only 10 percent of these women show any symptoms.

Oct. 30 — "Breast Cancer: What Every Woman Should Know" Dr. Susan E. Bates, senior clinical investigator of the Medicine Branch, NCI, will discuss her current research that includes crucial areas of growth factors and multidrug resistance in breast cancer.

Nov. 13 — "Lyme Disease" Dr. Lawrence E. Shulman, NIAMS director, will discuss the Lyme tick that causes the disease, symptoms that occur, treatments available and preventive measures people should take.

Nov. 20 — "Coping with the Changing Seasons" Dr. Norman E. Rosenthal, chief of the unit of outpatient services, NIMH, will explain how changes in the weather and season can alter the brain's chemistry, thereby affecting the way one eats, sleeps and copes with everyday stress.

The Medicine for the Public lecture series is sponsored by the Office of Clinical Center Communications; for a more complete list of related booklets and fact sheets you may write to OCCC, Bldg. 10, Rm. 1C255. □

## NINDS

*(Continued from Page 1)*

students. Students are selected by NINDS laboratory and branch chiefs who review applications, letters of introduction, recommendations and academic records. The summer students represent many of the country's leading academic institutions—including NINDS grantee institutions—and they come to the NIH from as far away as California and Puerto Rico.

"Students come in here at all different educational levels and leave with an understanding of science that they didn't have when they arrived," said Victoria Pelak, a medical student at Wayne State University who worked this summer in NINDS' Laboratory of Neuroimmunology.

Under the program, each young scientist is assigned to a lab and given a project. For example, Pelak worked with an antigen—a substance that is foreign to the host animal and stimulates the production of antibodies—important in multiple sclerosis. The aim of her project was to assist in cloning the antigen. Once the cloning has been completed, the antigen will be transferred into human tissue and studied for its effects on the immune system. "We're almost there," Pelak said.

A former participant in the program, Guy McKhann, earned Yale University School of



Tarik Walker (*Laboratory of Central Nervous System Studies*), a junior at Morehouse College in Atlanta, studied the pathogenesis of progressive encephalopathy in rhesus monkeys infected with simian immunodeficiency virus (SIV). "It strengthened my level of discipline. I see researchers here not only during the week but on weekends. That's how much dedication they have. It's more serious."



Jennifer Payne (*Laboratory of Central Nervous System Studies*), a senior at Hampton University in Hampton, Va., learned techniques for investigating infections and their effects on the brain. "Now I'm definitely going to pursue an M.D./Ph.D. career because I like to find answers rather than receive them. Medicine is more to me than having someone prove a theory and then you accept that theory. I want to prove my own theory."

Medicine's top research award for his thesis, which was based on his summer work in NINDS' Laboratory of Central Nervous System Studies. The paper focused on the isolation and characterization of the human T-cell lymphotropic virus type-1 from patients with tropical spastic paraparesis. McKhann graduated summa cum laude from Yale and is now completing his residency in neurosurgery at the University of Washington in Seattle.

Throughout the summer, the students also attend seminars at which investigators from around the country discuss their work in clinical and basic neurosciences.

"We feel that by exposing these young people to the vastly exciting field of neuroscience research, the institute is inspiring a future generation of scientists," says NINDS director Dr. Murray Goldstein.

This year's class was one of the largest in the program's history. Of the 600 students who selected NINDS as their first choice, 86 were accepted. Two students were named research scholars and received additional support from the Society for Neuroscience. The scholars were chosen on the basis of their academic records, letters of recommendation and eagerness to pursue careers in the neurosciences.

"This is the student's first exposure to the rigor and richness of laboratory science investigation," Goldstein adds. "I am confident that we are attracting the brightest young minds through this program. That is critical to our ability to conquer the many devastating neurological disorders that affect millions of Americans."

Two success stories to emerge from the program are Drs. Estrada Bernard and Reginald Cole. Six years ago, they both started out as students in the NINDS Summer Program in the Neurosciences. Today, Bernard is a neurosurgeon at the University of North Carolina at Chapel Hill. Cole has returned to the NIH campus and serves as a clinical associate in NINDS' Medical Neurology Branch.

## Profile of Two Students: Zayd and Basil Eldadah

When you ask Basil Eldadah what the difference is between his brother, Zayd, and him, he replies, "About two-and-a-half years."

Indeed, the two brothers bear a close resemblance to one another, not only in their physical appearances, but in their levels of accomplishment as well.

Basil, 17, is a musician and published writer who also painted a mural on the wall of his high school. He traveled this summer to Orlando, Fla., to compete in the National Tournament of Academic Excellence and was chosen by *USA Today* to be a member of its 1990 All-USA High School Academic Team. An accomplished keyboardist, he wrote the theme music for a television quiz show and composed a song about French history while studying the language in school.

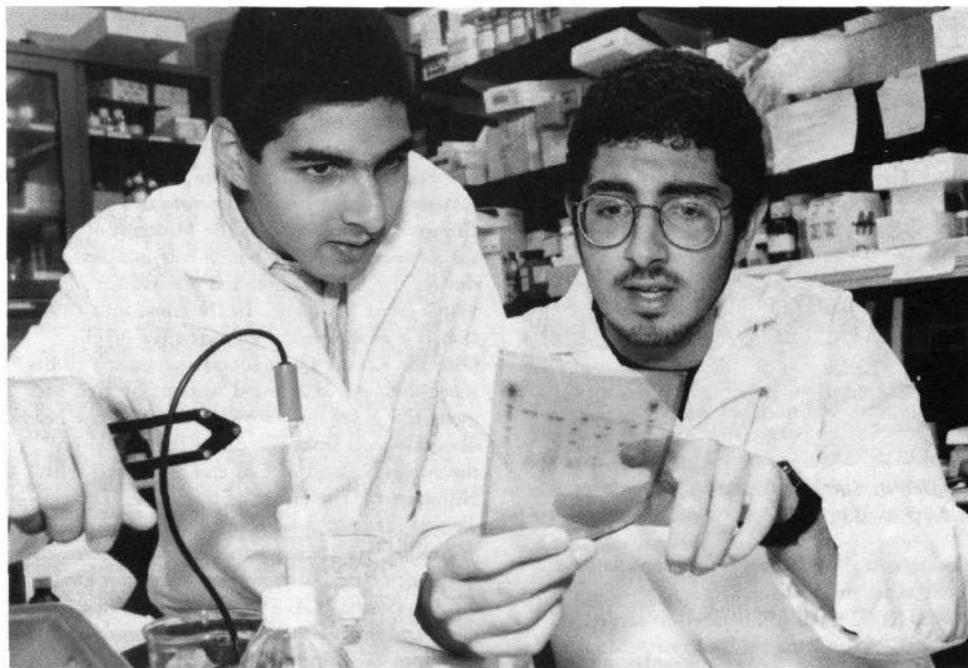
Basil is most proud of his writing, which includes poetry and a novel called, *The Greatest Act*. "It's a book about one character's experience on the stage of life," Basil explains. "He exits the stage and people give him a final accounting of his performance. There are a few personal experiences I put in there, but it's more evocative of man in general than a specific character," he continues.

Zayd, 20, also has literary leanings and says he would be a writer if he couldn't pursue the sciences. "There are times when I'm in the mood to write analytically and then there are times when I want to write creatively," he explains. "I'm interested in social science writing, political science writing, and the classics. At the moment, I've just started reading *1984*, an interesting work which comes up time and time again."

Zayd has taken his creative talents and applied them to the field of science.

Recently, he presented a paper in Miami at an academic computer conference sponsored by

**(Continued on Page 5)**



*Basil (l) and Zayd Eldadah of NINDS' Laboratory of Central Nervous System Studies collaborate together on a project to detect encephalitis viruses in DNA. The brothers were 2 of 18 students to win this year's Exceptional Summer Student Award under the institute's Summer Program in the Neurosciences.*

**(Continued from Page 4)**

IBM. "There was a neuroscience simulation project I was working on at the University of Maryland," he explains. "We built a computer program that allowed college or graduate neurophysiology students to investigate properties of nerves without having to dissect out the nerve of a frog or rat for nerve conduction experiments. The simulation is a way to not only save a few animals, but is also more convenient and maybe more flexible."

The University of Maryland funded the simulation and has incorporated it into the neurophysiology curriculum this fall. A number of faculty and academicians from around the country also expressed interest in Zayd's project at the conference, so the simulation may be in use elsewhere in the near future.

Neither Zayd nor Basil sees himself as a superachiever. "The things I do are not things I have to do and there's nothing special about them," explains Basil. "They are not things that I achieve in. They're just things I like to do."

Both Zayd and Basil say their parents, Adnan and Siham Eldadah of Rockville, have been extremely supportive of them. Their father is a physician who heavily influenced his sons' desire to pursue careers in medicine.

"I've been interested in medicine ever since I can remember," says Zayd. "My father encouraged us," adds his brother. "Science as a way of life is probably the only direction I would head in, because that's the only career I

can imagine that's geared specifically toward service to the community. One of the good things about science is helping people."

Zayd will begin his studies toward an M.D./Ph.D. at the Johns Hopkins University this fall. His brother isn't sure if he will pursue clinical or basic research, but he is also leaning toward Johns Hopkins University.

The two brothers currently work under Dr. David M. Asher in NINDS' Laboratory of Central Nervous System Studies. Their work focuses on a new technology called polymerase chain reaction (PCR) which enables scientists to amplify sequences of DNA to detect several strains of viruses that cause encephalitis.

"What we find here may not cure a disease, but maybe it's one step along the way, one brick in the wall," says Zayd. "The more we study a disease, the more we find out about it; that may lead us to a vaccine somewhere in the future," his brother adds.

Asher says Basil and Zayd are wonderful additions to his laboratory. His nomination enabled both students to receive the Exceptional Summer Student Award at this year's NINDS Summer Program in the Neurosciences Awards Ceremony.

The two brothers say they are close when working together in the lab. "I've been teaching him some of the techniques I've been working with and we're collaborating on one project," explains Zayd. "We get along the same here as we do at home," his brother adds. "We don't have any special problems or anything. We're friends." □

## Minority Researchers To Meet in Nashville

More than 1,500 students and faculty members from over 125 colleges and universities with substantial minority enrollment will assemble at the convention center in Nashville, Tenn., for a 3-day meeting beginning Thursday, Oct. 11. This meeting, the NIGMS Minority Programs Symposium, is the largest annual gathering of minority researchers. The NIGMS minority programs are the Minority Access to Research Careers (MARC) Program and the Minority Biomedical Research Support (MBRS) Program.

MBRS and MARC are research and research training programs that aim to increase the science career opportunities for underrepresented minorities and to strengthen science teaching and research capabilities at minority colleges and universities.

In the past, the MARC and MBRS programs held separate annual meetings, both of which provided undergraduate and graduate students with an opportunity to meet one another, present the results of their research, and learn how to further their career goals. Because NIGMS, which initiated the MARC program, assumed administration of the MBRS program in 1989, the two programs will now hold a joint meeting.

Although the mechanisms of support differ, the goal of increasing the number of underrepresented minorities in science is the same for both MARC and MBRS. The MARC program primarily awards grants with which minority institutions provide training to their students and faculty. The MBRS program supports research projects at minority institutions that introduce students to scientific research. MBRS also supports research facilities and resources such as shared equipment and animal facilities.

Among the highlights of the meeting are a keynote address by Dr. Stanley Cohen, winner of the 1986 Nobel Prize in physiology or medicine; minisymposia on hypertension, cell growth, parasitology, neurobiology, biotechnology, and drugs; and workshops on molecular biology, computers in the laboratory, and animal research. There will also be platform paper sessions, poster sessions, exhibits and visits to area laboratories.

For further information call 496-7301. □

## NICHD Needs Volunteers

The NICHD seeks healthy volunteers ages 18-45 to participate in evaluation of a new vaccine against *Staphylococcus aureus* infection. Volunteers will be tested for HIV and liver function tests, females will also be tested for pregnancy. Positive test for either will exclude participation. For information call 496-6083 or 496-6141. □

**STETTEN***(Continued from Page 1)*

genius as a visiting physician on Bellevue's renal service. Stetten returned to Columbia to take a Ph.D. in biochemistry under Rudolf Schoenheimer in 1940. His dissertation research, which was published as two papers in the *Journal of Biological Chemistry*, utilized the then-new technique of radiolabeling isotopes and examined the biological interconversion of fatty acids. The following year he married a fellow graduate student, Marjorie Roloff, known as "Marney," thus launching a scientific and domestic partnership that spanned more than four decades, until her death in 1983.

From 1938 to 1947, Stetten taught biochemistry at Columbia University, after which he moved for 1 year to Harvard University. The war years brought a variety of students to Columbia. One of these was Juan Salcedo, who later eliminated the nutritional disease beri beri from Bataan province and went on to hold numerous high scientific offices in the Philippines. At Harvard, Gordon Tompkins, who later became chief of the Laboratory of Molecular Biology, NIAMD, enrolled in Stetten's course on the clinical aspects of biochemistry, a decision that contributed to Tompkins' decision to make a career in biochemistry.

From 1948 to 1954, Stetten served as chief of the division of nutrition and physiology of the Public Health Research Institute of the City of New York, a period he described as one of the most productive of his life. His laboratory also attracted a number of postdoctoral fellows, including another future NIH director, James Wyngaarden.

Among his achievements during this period, Stetten elucidated the physiology of gout, showing that patients with gout produce abnormally large amounts of uric acid, the accumulation of which is the cause of all clinical physical difficulty. For his research during this period, Stetten was honored with election to the National Academy of Sciences.

In 1954, Stetten came to NIH as associate director in charge of research at what was then called the National Institute of Arthritis and Metabolic Diseases. He served in this capacity until 1962. During this period he was coauthor on early editions of a standard textbook, *Principles of Biochemistry*. As NIAMD intramural director, Stetten recruited a number of young scientists to Bethesda, including the intramural program's first Nobel laureate, Dr. Marshall W. Nirenberg. Dr. Joseph E. Rall was not only recruited by Stetten but also stayed to follow in his mentor's footsteps, first as intramural director of NIAMD and later as NIH deputy director for science. During this period, Stetten also contributed to the establishment of the Foundation for Advanced



*Dr. DeWitt Stetten, Jr., during an interview at his home in May 1987*

Education in the Sciences, Inc., and later served as its president.

From 1962 until 1970, Stetten served as first dean of the Rutgers University Medical School, returning to NIH in 1970 as director of the National Institute of General Medical Sciences. Among the programs sponsored by NIGMS during his tenure were the Medical Scientist Training Program, which underwrote the educational costs of M.D.-Ph.D. students who planned to make a career in research, and the establishment of eight genetics centers across the nation, which maintained a bank of cell lines representing genetic defects and sponsored basic and clinical programs for the identification of genetically transmitted diseases.

In 1974, Stetten assumed the position of NIH deputy director for science. He served during this time as chairman of the recombinant DNA advisory committee. In response to concern within the scientific community about potential dangers in biotechnology research, this committee drafted guidelines for scientists using the new techniques.

One drawback to moving to Bldg. 1, Stetten always believed, was that the scientific director often found himself isolated from the research he hoped to foster. To counter this, he established a Friday morning seminar series devoted exclusively to the presentation of laboratory and clinical research activities.

In 1978, Stetten asked to be relieved of his duties as deputy director because of deteriorating eyesight caused by macular degeneration, and Dr. Donald Fredrickson, then NIH director, appointed him senior scientific advisor to the director. From an office in Stone House, Stetten took up a number of new projects. He wrote a widely cited letter to the editor of the *New England Journal of Medicine* suggesting that ophthalmologists learn more about advising their visually handicapped patients on services available for the blind. Some years

later, the Library of Congress recognized his efforts on behalf of blind and low vision people by asking him to pose for a poster promoting its Talking Books program.

In another project, undertaken with William T. Carrigan, Stetten edited a book on the NIH intramural program, *NIH: An Account of Research in Its Laboratories and Clinics*. He also founded the Museum of Medical Research at NIH, which was established during the NIH Centennial observance and which bears his name. In the museum's collection is a gavel made by Stetten for NIH Director Robert Q. Marston and passed to his successors. An avid wood worker, Stetten had made the gavel on his own lathe. For the head he used wood from the plane tree found on the Aegean island of Cos and associated with Hippocrates, the father of medicine. The handle was made of American cherry wood.

Among his many awards and honors were the Banting Medal from the American Diabetes Association, DHEW Superior Service and Distinguished Service awards, honorary doctorates from Washington University and from the College of Medicine and Dentistry of New Jersey, and the presidency of the Society for Experimental Biology and Medicine.

"To me, Hans was the epitome of the modern biomedical leader who embodies excellence in scholarship, in academic teaching skills and administrative acumen, and in humanistic sensitivity," said Dr. Philip Chen, NIH associate director for intramural affairs.

"I think his heart really lay with the intramural part of NIH," Chen continued. "He leaped at the chance to become deputy director for science in 1974 when (then director) Bob Stone offered him the job. He had been a scientific director at the arthritis institute and this post allowed him to maintain a close finger on the pulse of the scientific directors.

"It was at this time that he instituted the Friday morning seminars, which were an honored forum for scientists to tell about their work. He continued that tradition even after he stepped down in 1979." The last of the seminars was held June 1, 1990.

Bobbi Bennett, NIH special assistant for scientific information, attended those sessions regularly.

"I was privileged to attend Dr. Stetten's weekly seminars for 10 years and hear the best and brightest intramural scientists describe their research," she said. "It was a fantastic education. Dr. Stetten considered these seminars the best part of his week, and so did I. The speakers came because of their respect for him.

"Dr. Stetten combined brilliance with compassion and gentleness," Bennett concluded. "He was the ideal physician, scientist, teacher and human being."

Commented Dr. Joseph E. Rall, NIH dep-

uty director for intramural research, "Dr. Stetten hired me 35 years ago and has been mentor, friend and colleague ever since. Hans Stetten has been the paradigm of distinguished scholarship and humanitarianism. The NIH has benefitted from his wisdom and insight for over three decades and we shall miss him deeply."

Regarding Stetten's nickname, Chen explained: "The name Hans originated with a German housekeeper that the Stetten family had for many years. She called him Hansel and called his sister Gretel. The name stuck."

Concluded Chen, "He had a very broad knowledge of science generally, and an encyclopedic knowledge of biomedical areas. Basically he was a very highly respected, approachable, wise person. His counsel was widely sought. And accepted."

Stetten is survived by his wife, Jane Lazarow Stetten; four children of his first marriage: Dr. Gail Stetten of Baltimore, Dr. Nancy Stetten of Nashville, Mary Stetten Carson of New York City, and George Stetten of Syracuse, N.Y.; two stepsons: Dr. Paul Lazarow and Dr. Normand Lazarow; and eight grandchildren: Elizabeth and Alex Maloney, Anna and Joseph Einstein, Magdalin and Matthew Carson, and Amy and Wendy Stetten.

A memorial service is planned for Monday, Oct. 29 at 3 p.m. in Lipsett Amphitheater, Bldg. 10. All are welcome. □



Randy Schools, general manager of R&W, received a skateboard dubbed "NIH Campus Express" from his staff and board of directors at the R&W annual meeting held recently. Presenting the skateboard is Helen Gift, president of R&W.

**Donate Blood, Win 'Skins Tickets**

Make a date to donate blood for Clinical Center patients in September and you could be the recipient of two tickets to see the Washington Redskins play the Miami Dolphins. Call 496-1048 to schedule an appointment. □



Three new members have joined the National Advisory Dental Research Council. Posing with NIDR director Dr. Harald Loe (second from l), they are (from l) Drs. J. Ricardo Martinez, Roger S.C. Eng and Frederick G. Adams.

**Dental Advisory Council Gains Three New Members**

Three new members have been named to the National Advisory Dental Research Council. They are Drs. Frederick G. Adams, Roger S.C. Eng, and J. Ricardo Martinez.

Adams is commissioner of the Connecticut department of health services, where he is responsible for all public health activities in the state. Before assuming the job of commissioner in 1987, he practiced dentistry and was an administrator and faculty member at the University of Connecticut.

Eng has practiced dentistry in California for almost 25 years, and is a lecturer at the University of California, San Francisco school of

dentistry. He is a fellow in the International College of Cranio-Mandibular Orthopedics, and specializes in craniofacial pain diagnosis as well as general dentistry.

Martinez is vice president for research and education and director of research at the Lovelace Medical Foundation in Albuquerque, N.M. Before joining the foundation's staff in 1988, he taught in the child health and physiology departments at the University of Missouri School of Medicine. Martinez has had a longstanding research interest in the salivary glands and in cystic fibrosis. □

**Schools Have Funds for Free And Reduced-Price Meals**

The NIH Preschool Developmental Program offers free and reduced-price meals for children under the sponsorship of the Child Care Food Program of the U.S. Department of Agriculture; so does the Nettie Ottenberg Memorial Child Care Center.

The same meals are available to all enrolled children at no separate charge regardless of race, color, sex, age, handicap or national origin and there is no discrimination in admission policy, meal service, or the use of facilities.

Any complaints of discrimination should be submitted in writing within 180 days of the incident to the Secretary of Agriculture, Washington, DC 20250.

Eligibility for free and reduced-price meals is based on the following income scales effective to June 30, 1991.

Family Size	Eligibility Scale for Free Meals	Eligibility Scale for Reduced Price Meals
1	\$0-\$ 8,164	\$ 8,165-\$11,618
2	\$0-\$10,946	\$10,947-\$15,577
3	\$0-\$13,728	\$13,729-\$19,536
4	\$0-\$16,510	\$16,511-\$23,495
5	\$0-\$19,292	\$19,293-\$27,454
6	\$0-\$22,074	\$22,075-\$31,413
7	\$0-\$24,856	\$24,857-\$35,372
8	\$0-\$27,638	\$27,639-\$39,331
Each Additional family member add	+ \$2,782	+ \$3,959

The NIH Preschool Developmental Program is located in Bldg. 35, Rm. 1B05. For more information, call Vanessa Fuss, 496-5144. To reach the Ottenberg Center, 5650 Oakmont Ave., Bethesda, call Anne Schmitz, 530-5550. □

**NICHD Seeks Volunteers**

NICHD is seeking volunteers and individuals with depression to participate in a study of the pituitary-adrenal function. Patients will be required to spend 1 night at the Clinical Center. Volunteers will be paid. For further information call Jackie Colli, 496-4686. □

**Dinner Theatre Trip Set**

The comedy/love story *Anything Goes* first appeared on Broadway in 1934 with Ethel Merman leading the cast. With music by Cole Porter, the production is just as popular today as it was then. Join R&W Friday, Sept. 28 for this great show at the Harlequin Dinner Theatre. Cost is \$27 which includes tax and gratuity. Sign up today at the R&W activities desk, Bldg. 10 gift shop or the Westwood R&W. □

## RECYCLING

(Continued from Page 1)

"The problem with recycling is that there is no formal policy at NIH for it," said Ed Pfister, an environmental health specialist in the Environmental Protection Branch. "Therefore it is difficult to commit funds and FTEs (job slots) for recycling."

According to a report by the General Accounting Office, Pfister said, recycling is hampered because "the federal government gives no incentive to the agencies to recycle. We incur the costs of collection but can't profit from sales. We only save money indirectly by recycling, since it reduces our disposal costs."

The 20 tons of paper that NIH recycles monthly (through a GSA contractor) fetch about \$75-\$100 per ton. Because of the appropriation law, however, that money goes not to NIH but to the Treasury.

Counting the cost of transportation, NIH pays about \$90 per ton to dispose of solid waste—mostly office and cafeteria trash, along with animal bedding—in the county landfill at Shady Grove. Every day, NIH fills another 100 cubic yards of the landfill at a cost of close to \$3,000.

Not only are disposal costs rising more than 5 percent each year, but NIH is growing also. Bldg. 49, one of the first campus facilities for which a trash plan has been worked out in advance, will add tons more to the waste load. Owing to a new method of flushing out used

animal bedding with water, trash from 49 will be soggy and, therefore, heavier—no small consideration when you pay by the pound.

While most federal agencies participate in small-scale GSA-sponsored paper and glass recycling, none has a "big, comprehensive program," Pfister noted. "The District government, however, has just made paper recycling mandatory. Montgomery County could have a similar law on the horizon."

Interestingly, at a time when the county is urging its citizens to participate more fully in recycling programs, its contact with NIH waste managers is, according to Pfister, "virtually nonexistent."

Unlike the county resident who worries about where to stash pop bottles, newspapers and lawn clippings, NIH faces a staggeringly



Dry radioactive waste stored in 55-gallon drums in Bldg. 21 awaits removal by a contractor. The waste is compacted then buried in either South Carolina, Colorado or Washington State.



Michael Bradley (r) shovels ash, some of it aflame, out of an incinerator in Bldg. 11. Helping him accomplish the hot, dirty task are (from l) Bobby Fulton and Robert Nicholson. The men must remove "clinkers"—molten glass and metal that has run together and hardened—by hand from the bottom of the furnaces once they cool down.



A scrapyard behind Bldg. 25 is home to used cylinders or reused. Freon from scrapped refrigerators is now collected and released into the air before the danger of that practice is

broad array of waste problems, including radioactive waste, hazardous waste and "mixed" waste—a combination of the first two.

"Our waste stream is so much more complicated than in most large, industrial settings," said Edward Rau, chief of the hazardous and solid waste management section, DS. "We might see only 5 grams of a particular substance each year, but we still need to dispose of it properly."

"Our biggest goal is proper disposal, not recycling," Rau continued. "However when there is an opportunity to recycle within these constraints, we pursue it aggressively."

Because NIH must follow guidelines of both the Environmental Protection Agency and the Nuclear Regulatory Commission when disposing of waste, the paperwork for waste management is measurable, literally, in tons.

"Everything is accountable in hazardous material and radioactive waste disposal," Rau explained, leafing through a multipage manifest describing the fate of several drums worth of hazardous waste.

Whatever becomes radioactive during the course of experiments and must be disposed of is collected by contractors. From their warehouse it is shipped for processing (supercompaction—a way to reduce the volume of waste) in either Tennessee or Illinois then on to burial in either South Carolina, Washington State or Colorado. By law, NIH must account for every stop on this labyrinthine journey, even after the cargo has left the premises.

"NIH is probably among the state's top three sources of radioactive waste," said Sean Austin, a health physicist in the Radiation Safety Branch, who estimates that 70 percent of NIH laboratories use radioactive materials. "The Calvert Cliffs nuclear power plant (in Lusby, Md.) ranks first, followed by NIH and the Aberdeen Proving Grounds.

"Most radioactive waste at NIH is



Old tires, metal and other items that can be recycled are collected in order to protect the environment; it used to be less understood.

extremely low level," Austin assured. "It is very rare to see high levels of radioactivity. We have very few problems picking up the waste. Training is very thorough in how to properly package it."

In the recently completed radioactive waste processing wing of Bldg. 21, some 25,000 cubic feet of dry radioactive waste are collected each year; liquid radioactive waste amounts to 250,000 liters yearly. Contaminated animal carcasses, stored in a large walk-in freezer, fill about 1,000 square feet annually.

While dry waste is stored in color-coded 55-gallon drums, liquid waste remains either in carboys or in nine 2,250-gallon fiber glass tanks underground.

"We hold it until the radioactivity decays, then dispose of it as nonradioactive waste," Austin said.

The tanks are emptied yearly; NRC limits NIH to a total release of 8 curies of radioactivity a year. Materials with long half-lives are sealed in concrete then sent out for burial.

Daily contamination checks assure that employees are never exposed to unsafe radiation, Austin said.

The biggest disposal challenge on campus, he said, is a single dry drum of dioxin that, during toxicology studies, was contaminated with radioactivity. Not one of the 50 states is legally permitted to handle such waste, said Rau, although NIH is permitted to store it.

"We can't get rid of it," Austin admitted. "Radioactive lead is also undisposable at the moment." Both substances are nevertheless in safe storage temporarily.

Where cost is concerned, so-called mixed waste is NIH's biggest challenge. Both chemically hazardous and radioactive, mixed waste requires chemical analysis and incurs high storage and disposal charges; no disposal options currently exist for some of the materials.

Fortunately, many chemicals used com-

monly at NIH are recycled, says Kenny Floyd, hazardous waste chemist in the Environmental Protection Branch. "We're not really keeping track of all that we're recycling," he said. Nonetheless, the high cost of chemical disposal—handled at NIH by a contractor known as GSX, headquartered in Laurel—is being minimized through a number of means.

"We collect high-BTU solvents and chemicals," Floyd explained. "They can be mixed with oils to be used to fire furnaces and cement kilns. It's called 'fuel blending.'"

Motor oil, vacuum pump oil and waste solvents can be bulked and shipped to firms that repurify it for use as a fuel, Rau added. "Significant portions of these items are destined for some beneficial reuse," he said.

Another avenue is a program begun in 1986 in Bldg. 8 where unopened bottles of chemi-



Kenny Floyd (l) and Ed Pfister of the hazardous and solid waste management section, DS, are part of a team that keeps NIH in compliance with a welter of federal regulations governing waste disposal.



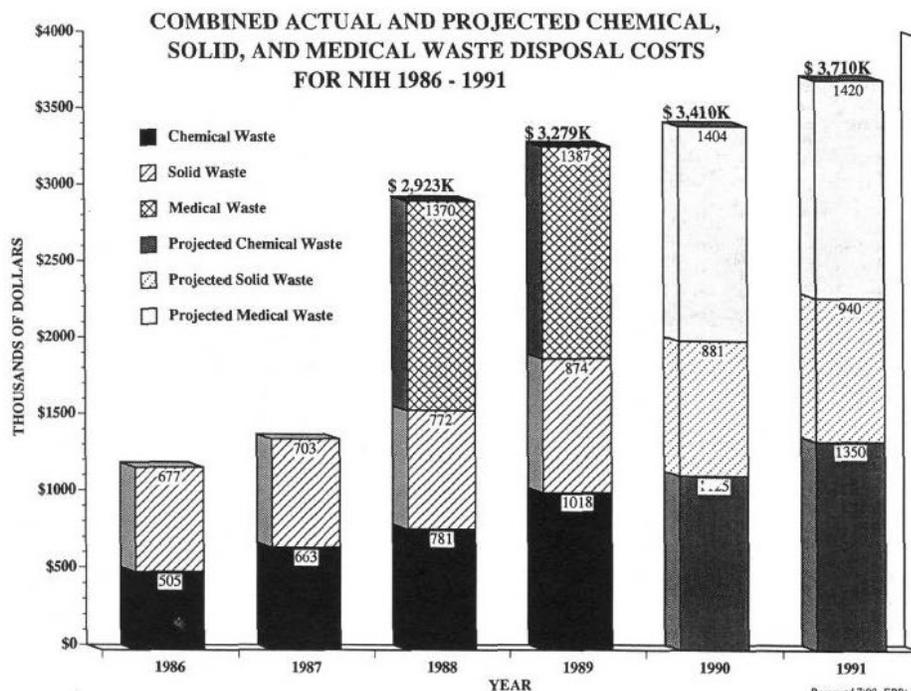
Frank Rose guides a burn box toward its destination in an incinerator in Bldg. 11. Some 800 boxes of medical pathological waste are burned daily at the facility.

icals are stored, with the cooperation of NIDDK, for reuse.

"We used to throw them away as hazardous waste," said Pfister. "Now we have a chemist evaluate the containers and we save chemicals with long shelf-lives." Researchers can call 496-7990 for free delivery of selected reagents.

"We once had an order for ultrapure phenol and were able to supply it from our ware-

**(Continued on Page 10)**





A masked worker in Bldg. 21 prepares a "lab pack" for disposal. The drum he is filling contains bottles and small containers of chemicals surrounded by packing material. The exhaust hose at left draws dust and fumes away. The drum will either be burned or treated off-campus.

Photos: Judi Bolander

*(Continued from Page 9)*

house," said Pfister. "But we need to further automate our system so that scientists can query our 9,000-container inventory through Wylbur. I think this program has a real potential to grow."

While recovering unopened containers of chemicals is a service DS can provide, Rau says it would be better if researchers avoided over-ordering. "The cost of disposal can be several times the cost of the original procurement," he pointed out.

Rau also advised use of shorter-lived isotopes, fewer hazardous materials, and said scientists should plan smaller scale studies that take waste management into consideration. Researchers should also avoid mixing hazardous waste with nonhazardous: "We should never find a Coke can and lunch bag in a box for chemical waste."

Similarly, workers should never dispose of chemicals down drains, said Rau. "It goes to the municipal treatment plant and ends up in the Potomac River. There is no need to dispose of things improperly. We offer a very responsive and easy-to-use service. Within 2 days we will pick up the material.

"Consciousness needs to be raised here on waste issues," he continued. "NIH has a lot of personnel turnover and many foreign scientists. There is a continual need to remind workers about proper waste management and reduction."

To keep this issue in focus, Rau's branch has created a news flyer called *Wasteline* and is currently participating in a revision of the popular DS waste calendar. Designed by the Medical Arts and Photography Branch, the

new calendar will be distributed to all laboratories this month (see sidebar on Page 11).

Perhaps more graphic than the calendar is the residue workers must pry out of the incinerators on campus when glass, metal and plastic are inadvertently added to medical pathological waste—the so-called "burn boxes," or more formally called the biohazardous waste disposal boxes.

Three incinerators in Bldg. 11, fired to 1,800-2,200 degrees Fahrenheit, burn 5 days of the week at NIH.

"About 800 boxes are burned every day," said Pfister. "Every Monday morning, about 6



A collection of mixed waste, which is both radioactive and hazardous, occupies the floor of Bldg. 21's radioactive waste processing facility. Mixed waste is NIH's biggest waste management and disposal challenge.

inches of vitrified slag must be chipped out of the incinerators by hand."

The moral is that burn boxes should never contain glass or metal that doesn't strictly need that sort of disposal.

Atop the slag in the furnaces is ash, which is surveyed radiologically before it leaves NIH for the county landfill. "Hot" loads—those still showing traces of radioactivity—are held for decay before removal.

Less obvious than ash, paper or animal bedding disposal are some of the ingenious ways DS has found to save reusable items. For instance, the liquid scintillation counters that are virtually ubiquitous on campus (they measure samples for radioactivity) are full of a flammable material that gets recycled into fuel. Precious metals such as gold and platinum are recovered from computer circuit boards. Osmium, a volatile, toxic chemical used as a staining agent in electron microscopy, is recycled, as are x-ray film (containing silver) and mercury (from thermometers, barometers and blood pressure gauges). Silver is also recovered by the Property Branch, Division of Logistics, from 44 known locations on campus where photographic processing occurs.

## Everyone at NIH Can Recycle

As soon as you finish with this issue of the *Record*, get a box (the kind copypaper comes in will do nicely) and toss in the newsletter. Then, anytime you have white paper to throw away, add it to the box as well. When you have a half dozen or so boxes full of paper, call the Transportation Branch, 496-4381. They will cart off the boxes—for a modest fee—and help you become a responsible recycler.

"You have to use a little care in loading the boxes," notes Ed Pfister, a member of the year-old NIH recycling task force. "Most office papers are quite acceptable."

A few rules for your box: staples are okay but paper clips are not; carbon paper is a no-no; no bound journals or glossy, magazine-type paper, including fax paper, can go; no colored paper allowed (however, white paper that has colored lettering on it is acceptable); no plastics; no envelopes, food wrappings or

paper towels; yellow "post-it" gummed note paper is also unacceptable—it reduces the paper quality from high to low grade.

High-grade paper sold for \$125 per ton last year but is now in the \$75-\$90 range. Medium grade paper brings only \$15-\$25/ton and low-grade paper such as newspapers brings almost nothing, Pfister said.

"We frequently get calls—mostly from Bldgs. 31 and 10—from workers interested in helping to recycle," he reported. "Westwood is doing an in-house project and the Children's Inn is very interested in setting up a model recycling program. Proceeds would go toward inn expenses. All the people in Bldg. 21 are collecting pop cans for the inn.

"We are encouraged by employees' enthusiasm about participating in recycling projects. We're confident that they will support a program," Pfister concluded.



A worker collects unopened but usable bottles of chemicals at a storage site in Bldg. 8, Rm. B1B-03A. Some 9,000 containers of chemicals that would otherwise have been discarded as hazardous waste fill the storage area, which is operated cooperatively by DS and NIDDK.

"The fixer/developer solutions they use contain silver," Rau explained. "We can electrolytically pull the silver out of solution into a cartridge."

Scrap metal is also recycled by the Property Branch through a GSA contract.

"That comes mostly from the shops," observed Rau, "and includes old cabinets and desks, plus metal from building renovations on campus." Another metal, lead from motor pool car batteries, is sent to a lead reclamation center.

Surplus property is also a form of recycling; the Property Branch's new warehouse in Greenbelt recently held an open house where reusable items were displayed.

Glass and plastic streams from laboratories are also monitored for potential recycling. While plastic tends to end up as regular solid or pathological waste, glass has a more varied

future owing to its composition.

"The glass used in laboratories is borosilicate glass, which has a high melting point," said Pfister. "None of the recycling outlets wants it, but there is a potential market for glassphalt—a substance used to pave roads."

Most of the laboratory glassware should be washed for reuse at the media and glassware section in Bldg. 10. Unfortunately, NIH can't give used, but sterile, glassware away to high school or college labs—the liability costs are too high. "We want to encourage recycling, but not in a way that will increase our liability," said Rau.

Flint glass—the green, brown and clear kind found in pop bottles, for instance—is, by contrast, recyclable and, for safety reasons, segregated out of laboratory trash.

Recycling is perhaps nowhere more prevalent than in Ed Rau's office, where his draft of the NIH chemical and surplus waste management contract is so carefully and comprehensively written that more than 20 federal agencies, among them FDA, Treasury, National Institute of Standards and Technology, Smithsonian, and National Oceanic and Atmospheric Administration, use it.

"They ride our contract because it covers all

**(Continued on Page 12)**



A dove and its young (center, top) occupy a nest in a metal box on a shelf at the Bldg. 26 solvent bulking area. Employee Stephen J. Washko took the picture, impressed by the ironic juxtaposition of nature and chemical waste.

## Return of the Waste Calendar

How does one dispose of needles and syringes, animal carcasses, flammable solvents, toxic chemicals, radioactive materials, used batteries, or multihazard combinations of these? Answers to such questions and more are once again as easy as looking for a date on a calendar—the NIH Waste Calendar that is.

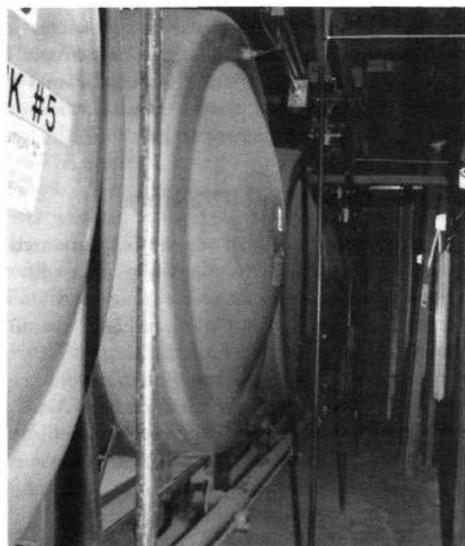
This week heralds the long-awaited return of the Division of Safety's publication entitled, "Waste Disposal at NIH." This third edition of the popular brochure, noted for its wall calendar format, will be delivered to laboratories, nursing stations and offices throughout the campus. Referred to as the Waste Calendar, the publication is divided into separate sections for each of the major waste streams generated at NIH. These waste streams are: general waste, medical pathological waste, chemical waste, radioactive waste and multihazard waste.

The calendar has two central purposes: first to serve as a reference on the proper techniques for segregating, labeling and packaging various types of waste for safe and environmentally sound disposal; and second to serve as a link between DS technical experts who can be called upon for advice on appropriate waste management procedures. Employees are encouraged to call DS for assistance in their efforts to dispose of waste properly.

A new section of the calendar is devoted exclusively to multihazard or "mixed" wastes.

By definition, multihazard waste is waste containing a combination of two or more types of hazardous constituents such as a radioactive waste contaminated with either an infectious agent or a hazardous chemical. An aqueous radioactive waste contaminated with organic solvents is a prime example of a multihazard waste. Generation of multihazard waste has been increasing in recent years; it is among the most expensive and difficult to dispose of. The Environmental Protection Branch (EPB) of DS encourages all investigators to involve EPB in planning experiments or activities that have the potential to generate multihazard waste.

Distribution of the calendar is due to begin this week and will continue through the end of the month. Requests have been sent to laboratory chiefs and nursing stations to provide DS with information concerning the number of units under their supervision that will need copies of the calendar. Any laboratory chief that has not received a letter requesting this information is encouraged to call 496-2801. Laboratories that have not returned their orders are encouraged to do so. Orders may be sent via fax to Ann Mahony, 402-0316. Other organizational components are also encouraged to call for additional copies if needed. The calendar is distributed to NIH components without charge.



Nine 2,250-gallon fiber glass tanks in the basement of Bldg. 21 are used to collect low-level radioactive liquids. Once the radioactivity decays, the waste can be released.

(Continued from Page 11)

the bases," said Rau, modestly. "It's sort of an innovative thing we've done here. We plan to expand it in the future."

Rau and colleagues are currently redrafting the document to reflect a widening regulatory landscape.

"Keeping up with hazardous waste regulations is almost a full-time job," observed Kenny Floyd.

All in DS agree that waste management in the nineties will only become more cumbersome and expensive.

"More labs and more buildings mean more waste," Rau said. "Technologies required to treat the waste are very expensive."

The branch is hoping that some regulatory help comes from Congress. Legislation allowing agencies to profit by the sale of recyclables would help. Meanwhile, everyone at NIH can do their part to waste less and recycle more. □



*Undergraduate students participating in the Minority Access to Research Careers (MARC) Program and the Minority Biomedical Research Support (MBRS) Program of the National Institute of General Medical Sciences gathered in the NIH Visitor Information Center earlier this summer. Each year, many MARC and MBRS students come to NIH intramural laboratories to do summer research. NIGMS sponsored a reception to enable the students to meet one another as well as NIGMS and NIH staff involved in minority biomedical research and training programs.*

## Autumn Classes Offer Personal Computing Training

This fall, the NIH Training Center in collaboration with the Personal Computing Branch, DCRT, will offer a wide range of new and redesigned personal computing courses to help employees utilize the latest enhancements in application software and networking arenas.

The new NIH Training Center Catalog and Calendar lists personal computing offerings for the entire year and is available in ICD personnel and administrative offices. The personal computing quarterly brochure (October through December 1990) is mailed desk-to-desk and contains specific course information and registration deadlines for more than 60 courses available this fall. Courses are presented both at Bldg. 31 in the User Resource Center and at the NIH Training Center's new location at Executive Plaza South (conveniently reached by shuttle bus service from Bldg. 31 throughout the day). New or restructured course offerings include:

*Introduction to Personal Computing for New Users*—a unique opportunity to learn about and compare the features of the IBM/compatible PC and the Apple Macintosh through seminar and hands-on experience;

*Introduction to DOS*—a streamlined, 1-day course designed to provide just enough DOS to enable students to use application software packages effectively;

*Introduction to DeltaGraph*—a 1-day course replacing CricketGraph, which provides skills in using this high-powered MAC graphing package;

*FoxBase on the Mac-Level 2*—an intermediate level course that teaches experienced users to customize the FoxBase + Program;

*3COM Network-Level 1*—offers a comprehensive background in 3 + Menus, 3 + Mail, and mail attachments;

*3COM Network-Level 2*—offers in-depth, hands-on experience in linking to printers and other resources and sharing files with others;

*3COM Network Management-Level 1*—for NIH staff who are or intend to be 3COM network managers or who will serve as backup to the network administrator;

*Introduction to dBASE III +*—a revised, 2-day course that provides working knowledge of database management capabilities including storing, organizing, sorting and retrieving information;

*Intermediate dBASE III +*—gives students additional database management tools including creating reports, customizing screens and indexing;

*WordPerfect 5.1*—four options are available: introduction (2 days), advanced topics (2 days), transition from 5.0 to 5.1 (1 day) and transition from 4.2 to 5.1 (1 1/2 days). See catalog and quarterly brochure for details.

*Lotus 1-2-3*—introductory and advanced topics courses are now taught in Release 2.2.

For additional information, call the NIH Training Center, 496-6211. Employees can also build personal computing skills in the User Resource Center's learning laboratory and information center located in Bldg. 31, Rm. B2B47. Seven personal computer work stations, numerous peripherals, an extensive software library, and many disk-based and videotaped self-study courses offer many opportunities for self-paced training and education. Call the center, 496-5025. □

## Training Survey for Extramural Staff

A survey of NIH extramural staff will begin in late September to assess barriers to and perceptions of training for extramural staff. The survey, commissioned by the Staff Training for Extramural Program (STEP) committee in conjunction with the NIH Training Center, is expected to be completed in October.

A sample of NIH extramural staff of all grade levels will be selected randomly for either a mail questionnaire or a phone interview. Since this is a scientifically chosen sample, it is very important that everyone who is contacted participate in the survey; each person will, in essence, represent several others in the extramural community. Responses will remain confidential.

The STEP committee sincerely appreciates employees' willingness to assist in this effort to improve training for the extramural community. For questions phone Arlene Bowles, 496-1493, or James Scheirer, 496-7363. □

## Getting by with a Little Help

Support groups, which are self-help oriented group meetings where people with similar life concerns can go for emotional support and empowerment, proliferated in the eighties and continue to grow in the nineties. A great many support groups are structured around the 12-step recovery approach central to Alcoholics Anonymous. The Employee Counseling Service at NIH is offering a video presentation on the 12-step philosophy and a discussion of the self-help movement. It will be held on Thursday, Sept. 27 in Conf. Rm. 7, 6th floor, C wing, Bldg. 31 from noon to 1 p.m. Resource material on self-help groups will be available at the meeting. For additional information call 496-3164. □

## NCCR Program Inspires Local Minority Students to Science Careers

Twenty-four minority high school students participating this summer in the Minority High School Student Research Apprentice Program (MHSSRAP) at four local institutions have a better understanding of NIH and the process of biomedical research thanks to a special 1-day program held recently on the campus. MHSSRAP is one of three components of the Biomedical Research Support Program at the National Center for Research Resources.

Highlights of the day's morning session included tours of the National Library of Medicine and a hands-on demonstration of "Grateful Med," an NLM software program that provides access to bibliographic data bases, and NCCR's germ free NIH Animal Genetic Resource, a collection of more than 300 varieties of genetically defined rodents and rabbits used by intramural researchers because of their unique genetic traits. The students also visited the In Vivo NMR Research Center in Bldg. 10 where many were introduced to nuclear magnetic resonance and its importance as a noninvasive diagnostic tool.

After a box lunch in the Visitor Information Center, the afternoon's activities included meeting Drs. Michele Evans and Ricardo Parker, two NCI scientists who talked about their research and experiences at NIH. In describing how they came to be scientists, Evans and Parker also counseled the students about some of the difficulties and questions they are likely to face as minorities pursuing science careers.

According to Dr. Marjorie Tingle, director of the Biomedical Research Support Program, the goal of MHSSRAP is to cultivate students' interest in science so that they will pursue careers in research or the health professions. The students, who are recruited and selected at the local level, help scientists conduct research, collect and analyze data, write papers and make presentations at research seminars.

"The selected students are fortunate," says Tingle, "because they get to work with scientists who are committed to broadening their (the students') scientific understanding and to teaching them important technical skills." Tingle adds that MHSSRAP, which this year funded 2,152 apprentices for 8 weeks at more than 300 institutions, is the only NIH program for high school students.

For Vathana Vedamuthus, a 1990 graduate of High Point High School in Beltsville, Md., the program has helped her discover how interesting research can be.

"I always wanted to be a doctor," she said. "I didn't like research that much. But now I want to be a researcher and a pediatrician."

For an institution to be eligible for MHSSRAP it must have an NCCR Biomedical Research Support Grant or participate in



Dr. Nathan Jackson (r), acting chief of the small animal section at NCCR's Veterinary Resources Program, explains the importance of animal models to MHSSRAP students and their mentors prior to their tour of the NIH Animal Genetic Resource.

NIGMS' Minority Biomedical Research Support Program. Funding for the program in fiscal year 1990 was more than \$3.2 million, of which \$1.1 million was cofunded by ADA-MHA and 15 other ICDs.

The 24 students, who were accompanied by

their mentors, participate in MHSSRAP at George Washington University, Georgetown University School of Medicine, University of the District of Columbia, and Children's Hospital.—Michael Fluharty □

## Coffer To Head NIH Federal Women's Program

Lucretia "Chris" Coffer has joined the Division of Equal Opportunity staff and will serve as the Federal Women's Program manager. Her chief responsibilities will be directing, developing, and evaluating NIH's Federal Women's Program (FWP). She will focus on matters pertaining to the employment stance of more than 6,000 women at NIH by developing policies and reviewing current practices affecting the employment of women.

Coffer has had progressively responsible assignments that make her an EEO expert. She has served as an EEO counselor, EEO investigator, EEO specialist and EEO manager. Her sensitivity and concern for issues affecting women have caused her to head various committees and lead task forces thereby increasing her knowledge in this specialized field of EEO. Coffer's 26-year career in federal service has included personnel matters, adjudicating discrimination complaints, developing affirmative employment plans, and federal recruitment activities.

She is committed to excellence in advancing the stance of women in federal employment. She believes women should be elevated to the prominence they deserve commensurate with their skills and abilities. One of her goals as Federal Women's Program manager is to enhance the FWP at NIH. She welcomes the support and cooperation of all employees.

Coffer's credentials include a myriad of continuing professional development courses as



Lucretia Coffer

well as personal achievements including suggestion awards; outstanding performance awards; a special act award; and numerous letters of commendation from federal agencies recognizing her contributions in the EEO field. Most noteworthy are her achievements in the community that resulted in her receiving a commendation from the White House for the Operation Care and Share Program; the D.C. Public School System, for the Partners-in-Education Program; the Girl Scouts of America, for volunteer services and leadership; and the Pilgrim AME Church, for outstanding Christian service.

She is currently a member of FEW, NAACP and the International Training in Communications organization. □

## Martha Pine Named NIGMS Executive Officer

In its 28-year history, NIGMS has had only two executive officers. The third, appointed last month, is Martha Pine.

Pine has been the NIGMS deputy executive officer since 1981. During that time, she has been involved in analyzing, providing advice on, and helping to effect a number of major initiatives. These have included the transfer of the Minority Biomedical Research Support Program to NIGMS; the transition of the human genome initiative from an NIGMS-administered project to an independent NIH center; and the development of grant portfolios in areas of emerging scientific opportunity such as structural biology and biotechnology. Pine has also worked closely with the project officers of the institute's two multimillion-dollar research and development contracts to handle contract recompetitions and administrative and funding issues.

NIGMS director Dr. Ruth Kirschstein notes that "on a daily basis over the past decade, Pine has served as a sounding board for me and my senior staff for ideas we are exploring that might bear on the structure, functions, staffing, funding, or morale of the institute or its components. Time after time, her solid judgment and good advice have proven most valuable. I look forward to working with her in her new role."

Pine sees that role as varied and challenging. She identifies the institute's minority biomedical research and training programs as one of the areas she plans to emphasize over the next few years. "Given the demographic trends in this country, increasing the number of minority biomedical scientists will become even more important than it is today," she notes. "We must examine how current NIGMS programs meet this need and how they can best address this issue in the future."

Pine also wants "to continue to be a strong voice for the interests of the NIH extramural community," as well as "to make sure that NIGMS retains and builds upon what I feel is an extraordinarily collegial organizational environment."

"Part of what makes this job so much fun is that in working with Dr. Kirschstein, I will become involved in a number of activities ranging from biotechnology to women's health research, with importance across the ICDs, in the department, and throughout the federal government," she adds.

Prior to coming to NIGMS, Pine was a DHHS management intern. During that 3-year program, she held assignments in the areas of general administration, program analysis and budget. The general administration rotation was at NIGMS, where she continued for a "target" assignment followed by a permanent job as administrative officer, a position she held until 1988. She has been



Martha Pine

with the institute since 1978.

Pine has a B.A. from the University of Kansas and an M.A. in teaching from Washington University in St. Louis. After receiving her master's degree, she taught high school English for 5 years. Her honors include a National Merit Scholarship, election to Phi Beta Kappa, a National Defense Education Act fellowship, and, more recently, the NIH Merit Award in 1982 and the NIH Director's Award in 1988.—Ann Dieffenbach □

### 'Meet a VIP' Raffle

The Friends of the Clinical Center, Inc., will be raffling chances for you to meet a VIP at an event of their choosing (i.e. staff meeting, coffee, public function, rehearsal, photo opportunity). Participating VIPs include Susan King (channel 7), Mary McGrory (syndicated columnist of the *Post*), Sen. Paul Sarbanes of Maryland, and Juan Williams (*Post* reporter).

From Oct. 3 to 24, raffle tickets will be sold for \$1 each in all the R&W gift shops (Bldgs. 10, 31, 38 and Westwood) and the cafeterias. The drawing will be held Oct. 26. Winners will meet with their VIP during November.

This is a great chance to meet someone who makes the news. Or the winning ticket could be an exciting gift for someone special. The raffle will aid the Friends of the Clinical Center in its continuing efforts to provide emergency financial assistance to NIH patients and their families. For more information, contact Linda E. Nee, 496-3559, fax 402-0494. □

### Volunteers Needed for Study

The Laboratory of Neurosciences, NIA, is conducting a study of depression in adults age 45 and older. The study does not involve drug treatment. For further information contact 496-4754, Mon-Fri., 9 a.m.-5 p.m. □

## TRAINING TIPS

The NIH Training Center of the Division of Personnel Management offers the following:

Courses and Programs	Starting Dates
<i>Management and Supervisory 496-6371</i>	
Hands-On Animal Techniques	9/20
Workshop: Rodent Techniques	9/26
Managing Stress, Maximizing Effectiveness	11/2
Voice for Success	10/29
Creative Basics for Changing Workplaces	10/29
Working With Personnel Differences	11/6
<i>Personnel Management Training and Special Courses 496-6211</i>	
Qualification Analysis	10/10
Break the Smoking Habit	10/12
Career Assessment and Life Planning Strategies	10/22
Basic Employee Relations	10/24

### Office Operations Training 496-6211

<i>Personal Computer Training 496-6211</i>	
3 Com PC Network Level 1	10/12
Introduction to Lotus 1-2-3 Release 2.2	10/15
Introduction to Microsoft Word (MAC)	10/15
Introduction to WordPerfect 5.1	10/16
Welcome to Macintosh	10/16
Introduction to DeltaGraph (MAC)	10/19
Introduction to dBASE III Plus	10/22
Welcome to Macintosh	10/22
3 Com PC Network Level 1	10/23
WordPerfect 5.1-Advanced Topics	10/23
Introduction to DOS	10/26
Introduction to WordPerfect 5.1	10/29
3Com PC Network Level 2	10/29
Lotus 1-2-3 Release 2.2 Advanced Topics	10/30
Introduction to Personal Computing for New Users	10/31

Personal Computer training is available through User Resources Center (URC) self study courses. There is no cost to NIH employees for these hands-on sessions. The URC hours are:

Mon.-Thurs.	8:30 a.m. — 7 p.m.
Friday	8:30 a.m. — 4:30 p.m.
Saturday	9 a.m. — 1 p.m.

Training Center, DCRT, and other training information is available on WYLBUR. Logon to WYLBUR and type ENTER TRAINING

### Infant Care Available at NIH

Full-time child care for ages 2 months to 3 years is available at ChildKind at NIH in Bldg. T-46. Openings are now available for ages 18 months and older. ChildKind is open to children regardless of race, religion or national origin. Hours are 7:30 a.m. to 6 p.m. For more information call 496-8357. □

### Dry Mouth Study

NIDR seeks patients over age 18 with dry mouth caused by radiation therapy in the head/neck region for a drug study. Volunteers must not have cardiovascular, respiratory, hepatic or digestive problems. Call 496-4371 or 496-2069. □

## Creutzfeldt-Jakob Gene Mutation Found

Scientists at the National Institute of Neurological Disorders and Stroke have linked three outbreaks of Creutzfeldt-Jakob disease (CJD) in Europe and Israel to a genetic mutation found in the outbreaks' victims.

CJD is a rare, rapidly progressive dementia with a worldwide yearly incidence of one per million. The disease afflicts about 300 Americans annually, and kills within 1 year after symptoms of mental deterioration and involuntary movements appear.

"This is the first significant mutation to be described in CJD," said Dr. Paul Brown, one of the scientists who contributed to the discovery. The work was conducted by investigators at the NINDS Laboratory of Central Nervous System Studies in conjunction with colleagues in Czechoslovakia and Israel. The findings appear in the July 21, Aug. 25, and Sept. 8 editions of the British journal *Lancet*.

Since 1975, CJD has affected 22 people in Orava, a rural region in Czechoslovakia with only 15,000 residents. This incidence of CJD is hundreds of times higher than the normal rate. Furthermore, the outbreak is continuing, according to Dr. D. Carleton Gajdusek, a Nobel Prize winner and chief of the NINDS laboratory.

"This problem has all the indications of escalating into a major international scientific concern," said Gajdusek. Part of this scientific interest focuses on the similarities between CJD and another, better-known dementia—Alzheimer's disease.

CJD has long interested scientists studying Alzheimer's disease. In addition to sharing basic symptoms, both Alzheimer's disease and CJD are amyloidoses—diseases in which the brain develops plaques of an abnormal protein called amyloid. While different proteins create the amyloid found in the two diseases, Brown said, "The same basic mechanism may be going on in the brain in Alzheimer's disease and CJD."

The mutation detected by Gajdusek and his colleagues was found on a gene that has been linked to amyloid plaques. The gene is located on chromosome 20 and is called the scrapie amyloid precursor gene. Thus far, the mutation in this gene has been found in all 18 CJD patients tested from disease clusters in both Czechoslovakia and Israel. In addition, Gajdusek and his colleagues have found the defect in people of Slovak and Sephardic Jewish origin who live in countries outside Czechoslovakia and Israel. "We've got the same mutation in CJD patients from Poland, East Germany, and Tunisia, and in some patients from Greece," Brown said.

However, Brown says it is not known if the genetic defect actually causes the disease or if

another agent such as a virus or a second gene is required. "The reason that the gene appears necessary but not sufficient," Brown explained, "is that a few relatives of Czechoslovak CJD patients who have the mutation, but are presently healthy, are getting beyond the age of risk." CJD peaks at about age 60. According to Brown, further study of these clusters will focus on the possibility of a coexisting environmental factor.

To date, this mutation has not occurred in anyone other than those with CJD or directly related by blood to someone with the disease. "It's beginning to look like this mutation in these groups is a fair marker for the disease," said Brown. □

## Cars, Car Stereos Stolen at NIH

NIH's main campus has recently been hit by a string of thefts.

On 2 days in the past couple months—July 26 and Aug. 24—a car has been stolen from an NIH parking lot and a vehicle reported stolen from Washington, D.C., has been dropped off at NIH, according to NIH police chief Tom Brightwell.

Additionally on those days, radios—three on July 26 and two on Aug. 24—were stolen from vehicles parked at NIH, he said.

"Both stolen vehicles were Toyotas and all stolen radios were removed from Volkswagen Jettas or Golfs," said Brightwell. "Both recovered cars were also Toyotas."

One car was taken from lot 16F on Rockville Pk. between the Medical Center Metro station and the Library of Medicine; the other car was taken from lot 31F at Rockville Pk. and Cedar Ln.

"Toyotas are popular to steal because their ignition locks are easy to defeat," he continued. "The stolen radios were the kind that easily detach from the vehicle's dash."

To prevent further thefts, the NIH police have assigned extra officers to patrol parking lots, Brightwell said.

"We are also coordinating information with the Montgomery County Police," he said. "Thefts of radios and vehicles is not just occurring at NIH, but in all of Bethesda recently."

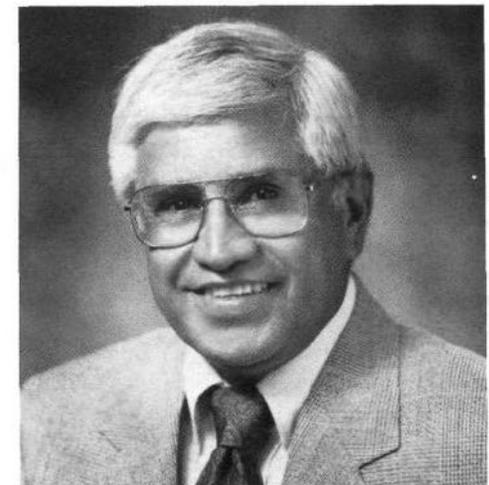
NIH'ers can take extra precautions by securing their vehicles and checking them periodically during the day.

"Don't leave cars unattended for days at a time," said Brightwell, explaining that one of the vehicles stolen from NIH had not been moved by its owner for several days.

"And if there is an incident," he said, "report it immediately. The sooner we have the information, the sooner we can investigate." □



*Dr. David Satcher (l), president of Meharry Medical College, and NLM director Dr. Donald A.B. Lindberg take questions from the audience at the recent EEO open meeting for NLM staff. Satcher addressed the topic, "Centers of Excellence in Minority Health Professions Education and Care." Both physicians emphasized the need to care for minority and underserved populations in the U.S.*



*Dr. Ernest Marquez has recently joined the NIGMS Office of Review Activities as an executive secretary of the Minority Biomedical Research Support review subcommittee. He comes to NIGMS from Cambridge BioScience Corp., where he directed microbiology product development. From 1973 to 1984, Marquez was a faculty member in the department of microbiology at Pennsylvania State University College of Medicine. He has a Ph.D. in microbiology from the University of Southern California School of Medicine.*

## Lecture on Computer Viruses

The Personal Computing Branch, DCRT, will be hosting an NIH PC User Topic Session entitled "Computer Viruses: Techno-terrorism in the Age of Information." It will be held on Tuesday, Sept. 25 from 9:30 to 11 a.m. in Lipsett Amphitheater, Bldg. 10. Viruses on both the IBM PC and Macintosh will be discussed, including what you can do to protect your computer. All NIH employees are welcome. □

## Animal Welfare Rules Republished; Comments Sought by Oct. 1

A final, 45-day public comment period is now open on the revised, controversial sections of part 3 of the USDA's proposed animal welfare regulations, which all NIH-supported researchers must follow. These regulations, affecting the use of dogs, cats, and nonhuman primates in research, have been changed since they were first proposed in March 1989. Now included are a number of revisions that had been sought by the research community.

Many groups that support the use of animals in research are urging their members and anyone else interested in the advancement of biomedical science to write the USDA in support of the new proposed regulations found in subparts A and D of part 3. The comment period ends Oct. 1.

During a previous comment period, the research community strongly opposed these proposed regulations as being overly detailed and specific in prescribing minimum standards for the handling, housing, care, treatment and transportation of dogs, cats, and nonhuman primates. Thousands of comments flooded the USDA from researchers and others who expressed concern about the restrictive nature of the proposed rule, while doubting it would actually improve the welfare of research animals.

The National Association for Biomedical Research (NABR) last year wrote the USDA, saying the original regulations were too specific in mandating, for example, precise methods and daily time requirements for exercise of dogs. But NABR told its members in its August newsletter that the revised version is an improvement, allowing each animal facility to develop its own procedures for exercising dogs and enriching the environment of nonhuman primates.

"In general, this proposal for dog, cat, and nonhuman primate standards is a vast improvement over that originally published in March 1989," NABR reported in its newsletter.

"These revised part 3 regulations are much more acceptable and reasonable from the standpoint of scientists using animals in research," said Dr. John Miller, a veterinarian and director of the Division of Animal Welfare in NIH's Office for Protection from Research Risks. Previously, the regulations called for "engineering" standards—such as specific exercise area dimensions and length of exercise periods for animals, he says. Now, notes Miller, the revised regulations use "performance" standards that allow laboratories more freedom in choosing among alternatives while still meeting the goal of ensuring animal welfare. In addition, there are now fewer record-keeping requirements in the regulations.

But groups that originally supported the more restrictive standards are likely to oppose strongly the revised part 3 regulations. That is why a number of professional associations, scientific societies and research industry groups are now encouraging their members to support the revised part 3 regulations in letters to USDA before Oct. 1.

In 1985, Congress amended the Animal Welfare Act and directed the USDA to strengthen its existing regulations for the humane care and use of research animals. Parts 1 and 2, dealing largely with administrative issues, were finalized in August 1989, while subparts B and C of part 3, which brought cage size specifications for rabbits, hamsters, and guinea pigs in line with the *NIH Guide for the Care and Use of Laboratory Animals*, became effective in August 1990. Under a court order agreement resulting from a suit filed by the Animal Legal Defense Fund, all final USDA animal welfare regulations are to be in place by February 1991.

Copies of the revised subparts A and D of part 3 can be obtained from each institute's veterinarian or animal care and use committee chairperson. For further information, contact the Office of Animal Care and Use, 496-5424.

Comments on the revised sections should be addressed to Chief, Regulatory Analysis and Development, PPD APHIS USDA, P. O. Box 1839, Hyattsville, MD 20788. The comment letter should state that it is in reference to Doc. No. 90-040. For review by USDA, an original and two copies must be received by Oct. 1. □

### Shipping Contract Extended

The General Services Administration (GSA) announced recently that the current mandatory GSA contract with Airborne Express for next day domestic delivery of shipments, weighing 50 pounds or less, has been extended indefinitely. Technically, the current contract with Airborne expires Sept. 30. However, Airborne has agreed to extend the same services and rates to government agencies until a new GSA contract is awarded.

To avoid service and payment delays, make sure that the appropriate common account number (CAN) is noted in the billing reference section of the Airborne waybill. For more information call the Shipping and Receiving Branch, 496-5921. □

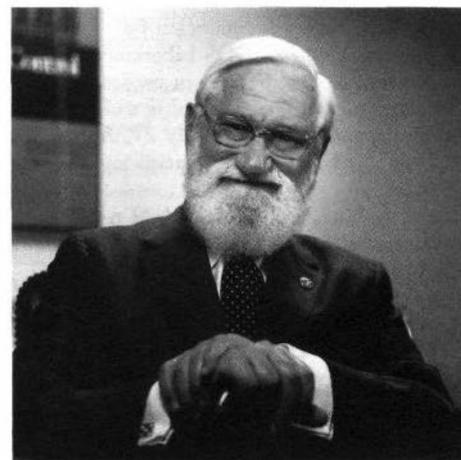
### Special Library Exhibit

The NIH Library, Bldg. 10, is sponsoring a special exhibit of books from its collection on management and leadership issues through Oct. 5 in the upper level reading room. For information call the reference section, 496-1156. □

## Sabin To Give Mahoney Aging Lecture, Oct. 3

The fourth annual Florence Mahoney Lecture on Aging sponsored by the National Institute on Aging will be held on Oct. 3, at 8 p.m. in the Lister Hill Center auditorium. This year's lecture will be presented by Dr. Albert B. Sabin and is titled "Aging of Individuals and of Society: Concepts, Challenges and Priorities."

Sabin, whose work has been devoted to acquiring new knowledge needed for the understanding and prevention of disease, will discuss his personal thoughts and priorities for



Dr. Albert Sabin

research and social action on aging. He has often stated that a "most important goal for biomedical and social research should be to make it possible for everyone to live a reasonable life span with mental and physical capacities reasonably unimpaired." Such a goal is the ultimate aim of research on aging.

Well-known as the developer of the oral polio vaccine, Sabin has had a distinguished career in pediatrics and biomedical research. He has held professorships at several prestigious medical institutions and served on numerous advisory committees on medical research. Retired since 1988, Sabin was most recently at the Fogarty International Center as senior medical advisor and lecturer. He is a member of the National Academy of Sciences, the Academy of Arts and Sciences, the Association of American Physicians, and numerous other organizations. □

### NIMH Seeks Volunteers

NIMH is seeking volunteers to participate in a study using an innovative treatment for depression. All services and medications are free. For more information call 496-6981 or 496-2141. □