

Need More Time**Transplant Panel Gets
Third Chance to Meet**

The Human Fetal Tissue Transplantation Research Panel ended its second meeting at NIH asking for more time from DHHS to make its recommendations to the Advisory Committee to the Director, NIH; it will meet for a third time on Dec. 5 to discharge its difficult duties.

Charged originally with answering 10 questions posed by Assistant Secretary for Health Dr. Robert Windom touching on legal, ethical and scientific issues surrounding the use of human fetal tissue from elective abortions for transplantation research, the panel found itself revisiting the morality of abortion at its second session.

Nevertheless, it adopted provisional language concluding that use of human fetal tissue from induced abortion is acceptable public policy, provided that appropriate guidelines are followed.

The panel first met on Sept. 14-16 to hear the testimony of experts and interest groups from around the country. That meeting yielded—besides a glimpse of the promise that fetal tissue research holds and a glimmer of the passion with which people hold views on abortion—a cautious judgment that the issue of using tissues from induced abortions has moral relevance.

The second meeting on Oct. 20-21 was to have produced answers to the 10 queries so that firm recommendations could be made by Dec. 14-15 at the next meeting of the NIH Advisory Committee to the Director.

Federal funds for human fetal tissue transplantation research have been held up since Mar. 22, when a memorandum from Windom established a temporary moratorium on such work. Windom asked the panel to give its expert advice to the advisory committee which in turn advises NIH Director James Wyngaarden.

At its October meeting, the panel attempted to employ the 21 different points of view represented in its membership to craft careful answers to already knotty questions. A 36-page dissent statement was distributed by two of the panelists just minutes before the panel adjourned on Oct. 21.

Anticipating that their fellow panelists were likely to be persuaded that, since abortion is already legal, then research on fetuses is likely to gain approval also, Rev. James Burchell, a theology professor from Notre Dame, and James Bopp Jr., a prolific lawyer from Indiana, wrote a formal defense of their dissenting position.

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The NIH Record

Barriers to Employment**Access, Attitudes Hamper Disabled Workers**

Negative attitudes and a lack of opportunity—not missing limbs or absent senses—are two of the biggest hurdles faced by disabled Americans seeking work, said Lex Frieden, an advocate for the rights of disabled people who addressed the NIH Disability Employment Awareness Program on Oct. 20.

"Disabled people suffer more from the lack of job opportunities than they do from their impairments," he said. "And bad attitudes, including outright discrimination, are the biggest barriers that disabled people face."

Currently executive director of the Institute for Rehabilitation and Research Foundation in Houston, Frieden broke his neck in a car accident in 1967 and became a quadriplegic. A teenager at the time, he was preparing to study electrical engineering in college when the wreck occurred.

From misfortune, however, Frieden has been able to reap positive results; NIH was among the milemakers on his road to recovery.

"When I was first treated after the accident in Oklahoma City, the methods had origi-

nated at NIH," he recalled. At the Institute for Rehabilitation and Research in Texas, Frieden became a research subject in an NIH-sponsored study. Still later, as a graduate student in psychology, he received NIMH money as a research assistant.

"I am glad that I had the opportunity to contribute in some small way to treatment efforts," he said.

After acknowledging NIH's role in his recovery, he offered a "realistic glance at the state of disability in the United States today": about 36 million Americans are disabled, 12 million of whom are trained, working-age adults. Only a third of that number are employed (and many are underemployed) and only a third receive benefits.

"There are 4 million disabled people neither employed nor receiving benefits," he said. "These people are looking for work."

Frieden said that two-thirds of the nation's disabled people want to work and would prefer to work rather than receive any benefits,

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Just in time for the Halloween season, two Clinical Center patients, Merri Christie (l) of Port St. Joe, Fla., and Bonnie Doak (r) of Los Gatos, Calif., created this effigy using pajamas, rubber gloves and paint. In an effort to relieve stress and show affection to helpful hospital personnel, the patients fashioned the sculpture to resemble 11 East nurse Peggy Coleman (c). "She's been so good," remarked Christie, who has been an NIH patient for 5 years. "And we like her so much." Last year, the patients made an effigy of Dr. Tommy Waytes of NIAID.

PANEL

(Continued from Page 1)

Speaking at the end of the meeting, panel chairman Arlin M. Adams, a retired judge of the federal appeals court in Philadelphia, said, "This is a very difficult balancing decision. These are very anguishing questions. Our conclusions at this point are very tentative. Everything is contingent upon our draft report."

Adams obtained a 2-week extension on the panel's original report deadline of Dec. 1 and won approval for a third session to be held at NIH on Dec. 5. □

DISABLED

(Continued from Page 1)

even if the benefits would be worth more money than a salary.

"These people are really motivated to work," he said. "They are skilled people."

Conceding that most of the aggressive disabled people have managed to find jobs, Frieden said employers must now begin the "really hard work" of addressing the needs of those with multiple impairments.

"This means helping people dress, talk or communicate, decide, travel, and overcome disincentives."

The attitude that disabled people need someone to protect and take care of them is outworn, he argued.

"It used to be that disabled meant unable," he said. "Today, disabled people not only want to work and are willing to work, they also can work."

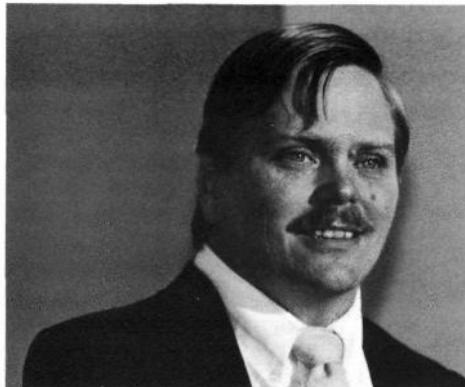
Discussing the independent living movement now afoot for disabled people, Frieden recounted his first experiences away from the protective atmosphere of home. He learned that independence for him was as simple, and as difficult, as being able to ask for the help that he needed. Until he went away to college, his family had seen to his every need.

"Accomplishments in any field must first be preceded by opportunity," he said. "Disabled people don't want others to make decisions for them. Expect us to make decisions. And expect us to take advantage of the opportunity to make decisions for ourselves."

Frieden said that disabled people have just as much to offer science as research has to offer them.

"It would be great if science could find a way to regenerate nerve cells," he said. "Call me when you find a way to do it. But I want to be productive now."

NIH currently employs some 634 disabled people, or 4.4 percent of its workforce, said Joan Brogan, handicap program manager in



Lex Frieden

the Division of Equal Opportunity. She confirmed an unemployment rate of 67 percent among disabled people.

Frieden said that NIH, like any employer in the U.S., should be attentive to the needs of disabled workers, accommodating them where necessary and giving them access to careers.

"The United States is a land of limitless opportunity," Frieden concluded. "Our goal is to have the same chance everybody else has."

Three members of the Handicapped Employees Committee were honored at the program: Susan Rae, chairperson, Lucretia Hosmer and Harry Canter. Also honored were NIH deputy director Dr. William Raub and *The NIH Record*.

Entertaining guests at the program in Wilson Hall was singer Agnieszka Gawin, a student at the Peabody Conservatory of Music who sang in several languages. The program ended with a reception. □

Building 1 Rooms Renumbered

Bldg. 1 rooms have been renumbered to help visitors and emergency personnel find their destinations more quickly and more efficiently.

According to a memorandum from Division of Space Management director James Hawkes, "An erroneous and illogical room numbering system has been utilized in Building 1 since the time the structure was built."

To rectify this deficiency, a standardized numbering system that eliminates duplication of room numbers and provides a more logical sequence of room numbering by floor has been implemented. The new system is already used in most buildings throughout the campus.

To assure prompt mail delivery to Bldg. 1, phone the receiving office ahead to get the new address. □

Overview of Extramural NIH

The Office of Health Scientist Administrator Development Programs will present a 2-day orientation session entitled "Fundamentals of NIH Extramural Activities" on Jan. 31-Feb. 1, 1989. It will be held in Bldg. 1, Wilson Hall, starting at 8:30 a.m., with registration at 8 a.m. each day. The course will provide an overview of extramural activities. Individual sessions will cover grants, contracts and cooperative agreements, the review processes and the scientific and fiscal management of awards.

Participants will be limited to approximately 50 people. Priority will be given to those who are new to the extramural side of NIH at all grade levels.

Those interested are to submit an HHS-350 form (Training, Nomination and Authorization) to the HSA Development Programs Office (Bldg. 31, Rm. 1B62). PHS commissioned officers are asked to use this form also.

To be considered, applications must be received no later than Dec. 13. Applicants are responsible for following up to see that the HHS-350 is received in the HSADP Office by that date.

For details regarding application procedures, contact A. Robert Polcari or Roberta Light, 496-1736, or Dr. Paul Velletri, 496-7707. □

The NIH Record

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Pertussis Toxin Genetically Inactivated, New Whooping Cough Vaccines Possible

By Laurie K. Doepele

Scientists have reported a major advance toward developing a safer pertussis, or whooping cough, vaccine. They have inactivated pertussis toxin, a pertussis bacterium product critical to the disease process, by modifying the toxin gene. This method of inactivating the toxin is virtually foolproof because the gene itself has been changed. While the mutant toxin is no longer harmful, it can still stimulate an immune response.

Used as the basis for a vaccine, this genetically modified toxin could potentially have fewer side effects than pertussis vaccines now licensed or in experimental use.

Whooping cough is a particularly severe disease in the first year of life. It begins like a cold with an attendant dry cough but gradually evolves into spasms of uncontrollable coughing. In a small number of untreated children, the coughing can be so severe that the individual cannot get enough oxygen and consequently can suffer brain damage or even die.

Before introduction of the current whooping cough vaccine in the mid-1940's, U.S. deaths from whooping cough averaged between 2 and 10,000 per year; in 1986, there were 6 reported deaths due to whooping cough.

During whooping cough, the major toxin produced by the disease-causing organism, *Bordetella pertussis*, acts like a Jekyll and Hyde. On the one hand, the toxin stimulates infection-fighting proteins called antibodies—an essential characteristic for an effective vaccine. But it also initiates a series of biochemical events that essentially paralyzes the immune system of the infected host, permitting bacteria to grow in the lungs and, as a result, cause disease.

In the present study, investigators succeeded in uncoupling these incompatible effects by genetically turning off only that part of the toxin gene responsible for the disease-causing effects.

The project began 2½ years ago after Dr. Jerry M. Keith's group at NIAID's Rocky Mountain Laboratories cloned the gene for the pertussis toxin and determined its genetic organization. They found that one part of the gene encodes for a single enzyme, dubbed S1, responsible for most if not all of the biological effects of the toxin.

These researchers, joined by collaborators in California and Japan, then focused their efforts on S1 after determining that by deleting a small part of the genetic region coding for S1 they could eliminate enzyme activity. Using the tools of genetic engineering, they made

precise mutations within this smaller genetic segment, thereby creating about 20 different mutant S1 molecules. Only one genetic mutation resulted in an S1 molecule that has virtually no enzymatic activity but that retains its ability to stimulate antibodies against pertussis. In this mutant S1, the genetic mutation caused only a single change in the building blocks, or amino acids, that make up the protein molecule.

Concern over the rare but serious side effects of the present whooping cough vaccine prompted the investigators to apply this novel approach toward vaccine development. The whooping cough vaccine now licensed in the U.S. is a whole-cell vaccine, so called because it contains the whole pertussis bacterium. The pertussis bacterium is grown and then killed, or inactivated, by heat treatment.

The whole-cell vaccine makes up part of the diphtheria-tetanus-pertussis (DTP) vaccine given in a series to very young children. The DTP vaccine has reduced the incidence of whooping cough in the U.S. from hundreds of thousands of cases per year to an average of 1,000 to 3,000 cases per year. But some children—the American Academy of Pediatrics estimates 70 out of 19 million immunized each year—have severe reactions to the vaccine; in extremely rare cases, it can cause brain damage and even death. Exactly why this happens, however, is unknown.

Because newer acellular pertussis vaccines now in experimental trials contain only part of the pertussis bacterium, they also contain fewer biologic contaminants than do whole-cell vaccines and therefore may be safer.

The acellular vaccines, however, are chemically inactivated. A chemically inactivated toxin may reactivate if it is not properly stored or mixed, and even after inactivation, tiny amounts of residual toxin activity can remain. Chemical inactivation is tricky: it depends on the chemical's ability to seek out and bind the toxin, and portions of the toxin molecule can infrequently be hidden and inaccessible.

In the current study the pertussis toxin was detoxified by changing its gene, and thus the inactive toxin cannot possibly regain its activity.

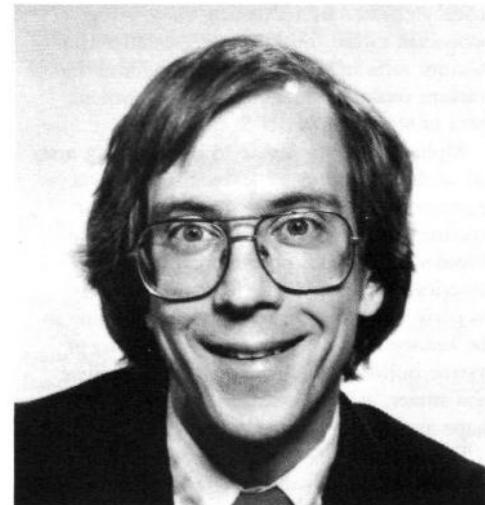
The challenge now is to recombine the mutant S1 molecule with the four other protein molecules that make up the toxin to determine whether this modified toxin, when incorporated into an acellular vaccine, provides protection against disease. □

Cech Gives NIH Lecture

The discovery that RNA can cut, splice and assemble itself without a protein enzyme overturned a basic scientific principle that informational molecules and functional molecules were always separate. The discovery that RNA can act as both suggested to Dr. Thomas R. Cech, who will lecture at NIH on Nov. 2, that the early evolution of life may have been different than previously imagined.

Cech will discuss his research on this topic at an NIH Lecture titled "RNA as an Enzyme" at 3 p.m. Wednesday, Nov. 2, in the Clinical Center's Masur Auditorium.

Cech is currently joint professor of chemistry and biochemistry, and molecular, cellular



Dr. Thomas Cech

and developmental biology at the University of Colorado. He is also an American Cancer Society research professor and an investigator at the Howard Hughes Medical Institute.

In 1988, he was awarded the Newcombe-Cleveland award from AAAS, the Heineken Prize from the Royal Netherlands Academy of Sciences, the Gairdner Foundation International Award, and the Louisa Gross Horwitz Prize.

Cech received his Ph.D. in chemistry at the University of California, Berkeley, in 1975 and was a postdoctoral fellow in the biology department of the Massachusetts Institute of Technology in Boston.

The NIH Lectures were established in 1953 to recognize outstanding scientific accomplishment and to contribute to the exchange of information. The lectureships are awarded by the NIH director on the advice of the scientific directors. □

NIDDK Grantee Sets FDA Drug Development Record

With the recent federal approval of the drug alpha-MPG, NIDDK grantee Dr. Charles Y.C. Pak has set a record for the number of orphan drugs approved from a single investigator.

Alpha-MPG (Thiola) is the latest in a series of drugs that Pak and his colleagues at the University of Texas Southwestern Medical Center at Dallas have developed to prevent the formation of kidney stones.

In 1983 the Food and Drug Administration approved sodium cellulose phosphate, which is successful in treating patients who form stones as a result of increased absorption of calcium from food. Potassium citrate was approved by the FDA in 1984 for people with low levels of urinary citrate. By increasing these levels, potassium citrate inhibits the crystallization of calcium salts in the urine and the formation of calcium oxalate stones, the most common form of stones in the U.S.

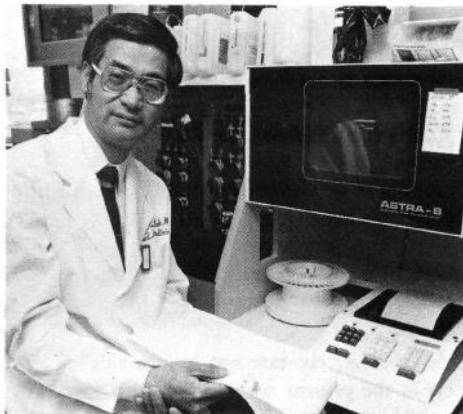
Alpha-MPG, the latest in the growing arsenal of drugs to prevent kidney stones, was approved in August 1988 by the FDA for treating patients with cystinuria, a genetic disorder that affects approximately 10,000 Americans. Patients with cystinuria cannot properly metabolize the amino acid cystine in the kidneys. As a result, excessive levels of cystine build up in the urine and crystallize into stones, which are often "staghorn" in shape and can cause severe pain.

The usual preventive treatment for cystine stones is D-penicillamine, which sometimes even dissolves them. However, up to 50 percent of patients stop taking the drug because of severe side effects, such as rash, fever, joint pain, and liver and kidney dysfunction.

A multicenter research team led by Pak found that serious side effects were significantly less common in patients treated with alpha-MPG. Of 49 cystinuria patients who first took D-penicillamine and later received alpha-MPG, 67 percent had to stop taking D-penicillamine due to side effects, while only 30 percent were forced to cease alpha-MPG therapy. An additional 17 patients who had never taken D-penicillamine were offered alpha-MPG for the first time. Eleven of these patients experienced minor side effects, and only one was forced to discontinue treatment.

Besides having fewer side effects, alpha-MPG is equal to or better than D-penicillamine in reducing urinary cystine.

Pak began his research on kidney stones in 1968 at NIH. In 1972 he moved to the University of Texas where he continued his work with support from NIDDK. Rather than treating all kidney stones with a "shotgun" approach, Pak has identified 16 separate stone-forming disorders and has developed selective



Dr. Charles Pak

treatments for each. His drug development studies are unique because in most cases, his group conceived the ideas, found how the drugs work and tested them for safety and effectiveness—projects usually undertaken by large pharmaceutical companies.

Pak recently received the U.S. Public Health Service Award for exceptional achievement in orphan products development for "aiding significantly in the development of orphan products for rare diseases or conditions." —Bill Hall □

Workshop on Animal Care

The Office for Protection from Research Risks will cosponsor a workshop with Johns Hopkins on the "PHS Policy on Humane Care and Use of Laboratory Animals" on Dec. 1 (12 noon-5 p.m.) and Dec. 2 (8 a.m.-5 p.m.) at the Stouffer Harborplace Hotel in Baltimore.

The program has been designed for institutional administrators, animal care committee members, laboratory animal veterinarians, investigators and their staffs, as well as any person sharing responsibility for humane animal research. It will focus on the respective roles and responsibilities of those involved, and will promote the sound implementation of PHS policy and the Animal Welfare Act through high quality management to ensure humane care and use of laboratory animals.

There will be no registration fee for NIH employees, but there will be a fee of \$15 for those who plan to attend the luncheon on Dec. 2.

Space is limited and registration is required. Contact Johns Hopkins University, (301) 955-2959, for further information. □

Bishop To Give Falk Lecture

Perhaps the most exciting and promising area in cancer research today is the rapidly progressing understanding of the central role of genetics in the process of cancer causation. Twenty years ago, the late Dr. Hans L. Falk, formerly of NIEHS, was among those hypothesizing the existence of oncogenes, genes that go awry and trigger the development of cancer.

One of the most accomplished scientists studying the dynamics of genetic mechanisms in cancer today is Dr. J. Michael Bishop, professor of microbiology, immunology, biochemistry and biophysics at the University of California at San Francisco. He will present the fourth Hans L. Falk Memorial Lecture, "The Molecular Genetics of Cancer," Nov. 3, at 4 p.m. in the NIEHS Bldg. 101 conference center, 111 T.W. Alexander Dr., in Research Triangle Park, N.C. The scientific presentation is open to the professional community and the media.

Bishop has published more than 200 scientific articles in his areas of research interest which include RNA tumor viruses, the genome structure, viral replication, cellular transformation and RNA-directed DNA synthesis. He is a fellow of the American Association for the Advancement of Science and director of the George F. Hooper Research Foundation and the program in biological sciences at UC-San Francisco. □

Toastmasters Honor Feldman

The officers and members of the NIH R&W Toastmasters Club will present the 1988 Communication Achievement Award to Janice M. Feldman, associate director for nursing, Clinical Center.

The ceremony will be held on Friday, Nov. 4, noon to 1 p.m., in Wilson Hall, Bldg. 1.

This annual award is presented to a member of the NIH community who has demonstrated outstanding skills in public speaking and leadership. Past awardees include Dr. William Raub, NIH deputy director, Dr. DeWitt Stetten Jr., NIH senior scientific advisor emeritus, and Storm Whaley, NIH associate director for communications.

For further information, call L. F. Jakubczak, Bldg. 31, Rm. 5C35, 496-9350. □

Lecture on Cocaine and PCP

The NIH Employee Counseling Services will present a lecture on "Cocaine and PCP: Separating Facts from Fiction," on Wednesday, Nov. 9, in Wilson Hall, Bldg. 1, from noon to 1 p.m.

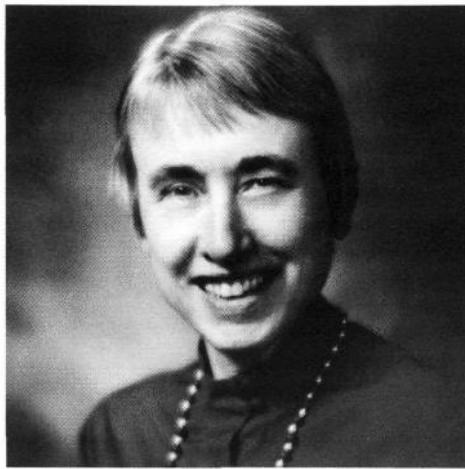
This is part of the Guest Lecture/Film Series presented by ECS. □

Jordan Named New NIH Genome Research Director

Dr. Elke Jordan, NIGMS associate director for program activities since 1982, has been named director of the newly created Office of Human Genome Research.

Jordan, along with Dr. James Watson, who recently joined NIH as associate director for human genome research, will coordinate NIH's human genome project with other federal and nonfederal agencies, with industry, and with various national and international scientific organizations.

The genome project, which may take as long as 15 years to complete and could cost an estimated \$200 million per year, involves the mapping and sequencing of all the genes in the human body. The complicated task involves tens of thousands of genes and is expected to have a profound impact on the prevention and treatment of the more than 3,500 human diseases of known genetic origin.



Dr. Elke Jordan

As director of the OHGR, Jordan will be responsible for the day-to-day operation of the project office.

"Dr. Jordan brings to this new position a special combination of administrative expertise and extensive scientific knowledge in this exciting and challenging field of study," said Dr. James Wyngaarden, NIH director, who announced the appointment.

Jordan earned her Ph.D. degree in biology (biochemistry) in 1962 at the Johns Hopkins University. She is an active member of the Genetics Society of America, the American Association for the Advancement of Science and the American Society for Microbiology.

In May 1988 she received the PHS Superior Service Award. Her other honors include the NIH Director's Award and a Helen Hay Whitney Foundation Fellowship. □

Newburgh Appointed to Institutional Liaison Office

The recent appointment of Dr. Mary Janet Newburgh, incoming director of the Institutional Liaison Office in the Office of Extramural Research, has become the latest in a series of NIH actions designed to address and minimize scientific misconduct.

An 8-year NIH veteran, Newburgh, having previously held an NIH research grant and worked in the appeals office here, brings to this position a wealth of experience from both sides of the extramural negotiations table.

"I see this as a very important role," says Newburgh. "The credibility of science is really what's at risk."

Acknowledging the widely publicized and fairly sensitive issue scientific misconduct has become, Newburgh first plans extensive research into possible problem areas.

"It's going to be a really big challenge," she says, "and probably some changes will be made. There has to be a consciousness raising. There are cases that have to be brought to resolution."

As the main line of communication with the institutes' extramural scientists, the Liaison Office also is responsible for compiling, organizing and publishing the *Guide to Grants and Contracts*, a detailed listing of NIH research interests worldwide that is being made available online.

"This job will involve a great deal of interaction within our institutes, with Congress and various committees and with such organizations as the American Association for the Advancement of Science," says Newburgh.

Although monitoring NIH research efforts in the scientific community and overseeing the production of the *Guide* are large responsibilities of the new ILO director, discovering and reducing incidents of misconduct is clearly the main object of her appointment.

According to Newburgh, breakdowns in communication may explain some of the problem.

"I'm sure most of the cases are largely misunderstandings," she says. "Some might be



Dr. Mary Janet Newburgh

the result of sloppy science. Our office is here to see that there are fair and timely investigations and to assure that NIH funds are handled properly. Prevention will be our number one priority."

Newburgh is former deputy director of the Pharmacological Sciences Program Branch at NIGMS. Mary Miers, former director of the ILO, recently joined the Office of Program Planning and Evaluation at NINCDS.

—Carla Garnett □

PC Fair Scheduled

The User Resource Center will sponsor a personal computer fair featuring the industry's latest technology on Nov. 7 and 8 in Bldg. 31, Rm. B2B47. Scheduled presentations include software programs for desktop publishing, database, computer graphics, statistical applications and word processing.

For more information, contact Judy Crowell, NIH Training Center, 496-2146. □

Nursing Grand Rounds

The 3 West nursing staff in the Clinical Center will present a grand rounds lecture, "Termination: The Nurse-Patient Relationship" on Nov. 2 from 2:30 to 4 p.m. in the Little Theater, Bldg. 10. For more information call 496-4528. □

Hawkes, Space Management Chief, Retires After 38-Year Federal Career

By Anne Barber

His job title sounds as if he should be in charge of NASA or play a role in *Star Trek*.

"Neither," says James G. Hawkes, director, Division of Space Management, "but this job is just as critical. In order to get things done, you must have money, people and space. You can't accomplish anything without all three."

Space management at NIH originally began in the basement of Bldg. 1, where everything about office and laboratory space was recorded manually by name, room number, equipment, etc. Just one part-time person did all the work. It later grew into a full-time job.

When Hawkes first joined it, space management was using the old IBM computer keypunch card system. "Now," he says, "we have a much more sophisticated computer system, WYLBUR, with DCRT handling the input. And recently, we acquired a CAD (computer-assisted design) system which we hope eventually to be able to operate independently of DCRT."

At the time Hawkes took over space management 22 years ago, he had 5 people working for him; now there are 20.

"Since my arrival, staff has increased four-fold and space has grown 100-fold.

"Our job is to attend to the space needs of the programs and people," he explained. "It is a very difficult job. Some days you make one person happy and 16 others unhappy."

Hawkes and his team are responsible for 10 million square feet of office space in more than 175 buildings (leased and owned) and serve approximately 18,000 people located as far away as Guam, where NINCDS has a program.

According to Hawkes, most NIH'ers are not aware that his office also functions administratively on behalf of the NIH director. It attends to the daily needs of the cafeterias, blind stands, credit union, bank, day care centers, R&W, FAES, Post Office facilities, beauty and barber shops.

"We also are responsible for real property, easements and right-of-ways, quarters and rents both off and on campus," he states.

Hawkes did not always work in space management at NIH. He joined the government in 1950, taking a job with the Federal Security Agency in Bldg. T6 on campus. Twenty-four hours after arrival he was on his way to Los Angeles where he began working for the Tuberculosis and Sugar Diabetes Field Survey Program as a medical x-ray technician. Three years later, that program was abolished and put under the auspices of what was then HEW. So back to NIH he came to work in



James G. Hawkes

the supply program located in the sub-basement of Bldg. 1.

Supply later moved to larger quarters in Bldg. 13, just in time to acquire materials needed for the opening of the Clinical Center.

"We bought everything by the trainload," Hawkes remembers. "We filled Buildings 12 and 13, rented a warehouse, and filled the tunnel between Buildings 10 and 14. It took millions and millions of dollars worth of equipment to get the CC ready for occupancy." While still working in supply, Hawkes initiated a pilot program for the revolving fund, fee-for-service, that NIH still uses.

Buildings were not the only new things being initiated at NIH at that time. Hawkes was selected as the first management intern for NIH in 1955-56. Only one intern was selected for the pilot program from a pool of 67 applicants. "I was a guinea pig for the program," he said. "It was certainly a good opportunity for me and benefited my career."

One of his assignments during the internship was with the Office of Telecommunications, which he joined after his year as an intern was up. According to Hawkes, at that time NIH had only one switchboard, phone calls were operator assisted, and each office had only one phone. After staying with telecommunications for 10 years, he saw it grow from 700 phone lines to more than 6,000.

Also during his tenure at NIH, Hawkes saw Top Cottage (a small residence formerly owned by the original donor of the NIH property, Mr. and Mrs. Luke Wilson) moved at a cost of \$35,000 and then later demolished when Bldg. 31 was built. He was also involved in the acquisition of the Sisters of the Visitation Convent and negotiated its purchase. Other major accomplishments include

the round robin renovations taking place in Bldgs. 2, 3, 4, 5, 7, 8, 9, and the Consolidated Office Building to be built in the future (and that has recently been renamed the Biomedical Research Facility.)

When Hawkes retires on Nov. 1, he still will be involved in construction; he and his wife are building a log cabin north of Frederick. "We both are from Maine and were raised in a woods environment, so this will be great for us," he said.

"I had never heard of NIH when I was first offered a job here," Hawkes recalls. "Now I feel that NIH makes life better not only for the American people but also for people throughout the world."

Hawkes received numerous awards during his tenure at NIH and among the most recent was the NIH Director's Award in 1976 and the Centennial Award in 1988; the Clinical Center Modernization Committee, of which he is a charter member, presented him with a plaque upon his departure. □

A Tribute to Counseling

I am currently working for the Division of Computer Research and Technology as an independent mail clerk. It is a very rare opportunity to be able to work for such a nice group of people. It also makes the working world a whole lot nicer and makes you want to do a better job.

In my last position, it was not so nice. I had been in a position for close to a year and I was having much difficulty because I could not perform certain duties. I was then referred to the NIH Employee Assistance Program. It was through a counselor who had experience in working with the disabled and mentally retarded that I learned that I had a "dual learning disability." It was not easy for me to accept and face the "facts." But if it had not been for the assistance and help that I received through a counselor at the Employee Assistance Program and her great knowledge in working with the disabled and mentally retarded, I would not have been able to work out a solution to my situation.

I am very thankful for all the help that I received from counseling and recommend it highly to anyone experiencing problems. People think that just because someone is different that they should respond differently toward them. From my own past experience that should not be the matter. I would like to expect from others that I be treated the same as anyone else.—Julie V. White □

Sensitive Assay for HIV Infection Developed

Scientists at NIAID have developed a system that allows accurate counting of extremely low levels of AIDS virus-producing cells. This assay, or detection system, is capable of finding one virus-producing infected cell out of 1 million uninfected cells and is effective for counting AIDS virus-producing cells immediately after their isolation from AIDS patients. The assay differs from others that require time-consuming adaptation of AIDS virus from patients to growth in laboratory cell lines before AIDS viral particles can be detected. The assay is expected to be valuable for AIDS vaccine and drug development research.

Dr. Bruce Chesebro, chief, and his colleague Kathy Wehrly, Laboratory of Persistent Viral Diseases, at NIAID's Rocky Mountain Laboratories in Hamilton, Mont., created their assay from a cell line (cells derived from a common ancestor cell) long used in medical research called HeLa cells. The researchers used HeLa cells that have been genetically engineered to contain CD4, the cell surface receptor by which the human immunodeficiency virus (HIV), the cause of AIDS, enters cells to infect them. Thus, the cells are infectible with HIV. The advantage of using HeLa cells for creation of the assay is that they will adhere to the plastic walls of culture dishes and grow in large quantities. Scientists can more easily and accurately count HIV-infected cells that are attached to a surface than cells

floating in a test tube. Other cells can be made to adhere to plastic, and are used in HIV-detecting assays, but using the processed cells is not as reliable as using HeLa cells.

As is the case with some other HIV assays, HIV-infected HeLa cells are detected by using HIV-specific antibodies (immune system-produced proteins) as tools linked to chemicals that change color, or become fluorescent when the antibody comes in contact with HIV. When researchers see fluorescence or a specific color change in the cell culture, they know that cells infected with and producing HIV are present and they can count the number of virus-producing cells.

This assay has allowed the researchers to determine that neutralizing antibodies produced in response to infection with HIV can prevent spread of HIV in cell cultures of susceptible immune system cells, even blocking viral spread that usually occurs during close cell to cell contact. These results suggest that certain antibodies present in HIV-infected people may play a role in limiting viral infection, though they cannot completely eradicate or cure infection. The ability to measure and evaluate the effect of antibody response is useful for researchers working to develop effective vaccines to prevent AIDS. Researchers working to develop drugs effective against HIV may be able to use the assay to determine whether certain drugs reduce the amount of HIV present in infected persons. □

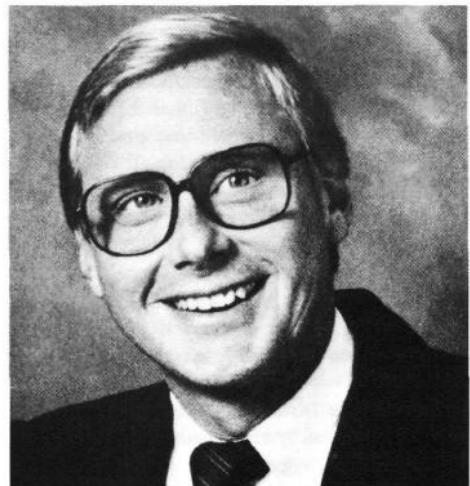


NIH deputy director Dr. William F. Raub recently cut the ribbon that officially opened the NIH Fitness Center located on the B4 level of Bldg. 31. Looking on are (from l): Dr. French Anderson, chief, Laboratory of Molecular Hematology, NHLBI; James Hawkes, director, Division of Space Management; Raub; Norman Mansfield, director, Office of Research Services; Dr. Thomas E. Malone, former NIH deputy director; and Tom Flavin, NIH special projects officer. The fitness center, complete with weight room and shower facilities, also boasts a specially floored judo and taekwondo center named for Malone, who teaches classes in the martial arts there.

Disc Jockey Opens 50's Show

Chris Core, one of Washington's comic disc jockeys, will appear onstage to open "The Forgotten Fifties—A Musical Revue" presented by the NIH R&W Theatre Group on Friday, Nov. 4 in Masur Auditorium, Bldg. 10.

Core will talk about his WMAL radio show "Trumbull and Core," which has received



WMAL radio disc jockey Chris Core will open the NIH R&W Theatre Group's musical revue, "The Forgotten Fifties."

high ratings since it started as "Two for the Road" in 1976. He will set the stage for the audience by telling anecdotes and relating "boring facts" about music of the 1950's.

Core is the fourth Washington personality to introduce an NIH musical revue. Eddie Gallaher of WWDC radio began the tradition in 1986, and WMAL radio's Harden and Weaver did the honors last year. The 1987 show broke all previous attendance records, raising \$3,000 for the NIH Patient Emergency Fund.

"The Forgotten Fifties" will run at 8 p.m., Nov. 4, 5, 11, 12, 18 and 19 with matinees at 3 p.m. on Nov. 6 and 13. For information call 686-9591. □

Retirement Planning

The Recruitment and Employee Benefits Branch, DPM, is offering another retirement planning program for NIH employees on Nov. 7 and 8.

A personnel bulletin will be distributed desk-to-desk giving more detailed information. □

The OMS: An Employee's Defense Against the Slings and Arrows of Outrageous Fortune

By Ellyn J. Pollack

Veterinary staff alerted OMS of the potential risk to animal handlers because of suspected measles in some NIH monkeys.

An NIH office employee's complaints of difficulty breathing, burning eyes and headache led this person to visit OMS.

These are just two examples of when the Occupational Medical Service (OMS), together with another branch of the Division of Safety (in these cases the Occupational Safety and Health Branch), intervened and prevented more employees from becoming ill.

The primary interest of OMS is to promote the health of employees at the work site. In the first case, OMS worked with NIH veterinary and safety staff, as well as local and state health departments, on a screening and vaccination program for workers to prevent spread of infection to susceptible employees and monkeys.

In the other instance, OMS notified the Occupational Safety and Health Branch (OSHB) to investigate the employee's work site. It was discovered that a volatile vapor was released in the air causing the employee's breathing problems. Environmental safety, engineering and custodial services were instrumental in cleaning up the office space and preventing other employees from being affected.

Last year OMS staff handled 31,600 visits, of which 58 percent were work-related, 29 percent involved health promotion and 13 percent were acute nonwork-related medical visits.

"OMS plays a key role in not only dealing with the immediate problems of the individual, but in identifying and solving problems to prevent recurrence," says Dr. Robert McKinney, director of the Division of Safety.

A large part of what OMS does is preventive medicine, according to Dr. Barbara Wasserman, OMS medical director. "We have shifted from seeing a lot of personal problems to seeing more occupational problems. We encourage employees to take appropriate measures to minimize potential adverse effects related to hazards at the work site."

One approach OMS staff uses in promoting employee health is to set up medical surveillance programs and monitor specific categories of employees who may come in contact with hazards. These observations may lead OMS staff to immunize employees or to run certain laboratory tests to detect potential injuries to organ systems. When job site hazards contribute to a job-related illness or injury, OMS staff works closely with OSHB and safety officers to investigate and imple-

ment preventive measures.

Last fall, two lab workers outside of NIH sustained occupational infections by the HIV virus. Naturally this was a concern for lab and health care workers. OMS and the Division of Safety developed an occupational medical surveillance program that included all lab workers doing research with retroviruses, as well as health care workers who have exposure to blood and body fluids. This program, which provides voluntary periodic HIV antibody testing, was opened to research lab workers in March and is being expanded to include health care workers. Any employee who has sustained recognized exposure to human blood or body fluids, especially if they are infected with HIV, is encouraged to report the injury to OMS for more frequent monitoring.

"If an individual comes and reports an HIV exposure, we consult with half a dozen experts here at NIH to get a consensus opinion on the advisability of administering AZT on a short-term basis," says Dr. James Schmitt, OMS senior staff physician. "You cannot get that type of expert opinion anywhere else."

"For all the projects we work on, we try to utilize NIH experts to the greatest extent possible. Regarding hepatitis B, we worked with representatives from the CC blood bank, hospital epidemiology service, and NIAID. For the retrovirus exposure surveillance program, we consulted with experts in the CC, NCI, and NIAID.

"Many of the surveillance programs we develop are unique and state-of-the-art. These programs have been used as models by organizations all over the nation."

OMS also provides emergency medical services for both work-related and nonwork-related medical problems, Wasserman says. For example, if someone experiences chest pains, the OMS staff will do an emergency evaluation and stabilize the person. If the medical emergency is not work-related, OMS will send the person to an appropriate community medical resource. If it is work-related, care will be provided by OMS.

When an employee sustains an injury and is not able to do his or her normal duties, OMS often works with the supervisor to find some light work the employee may be able to do. This enables the employee to continue working, rather than using sick leave, and often contributes to a faster recovery, according to McKinney.

Education also plays a major role in promoting employee health. The OMS staff teaches employees safe work habits to mini-

mize risk of exposure to hazards, and urges employees to report promptly suspected illnesses or injuries related to the work site. Cardiopulmonary resuscitation (CPR) training is offered to nurses and physicians, and a Heart Savers class is provided for laypersons who would like to learn CPR.

Another form of preventive medicine includes pre-employment examinations. The OMS staff evaluates job candidates for any medical problem that may interfere with job responsibilities or provide risk to the individual or others. The staff updates appropriate immunizations and, when necessary, enrolls the candidate in a surveillance program.

"The pre-employment exams protect the individual," Wasserman explains, "and make sure there are no medical problems that will interfere with the person's safety when carrying out the job."

OMS also offers cholesterol screening through the R&W Association and immunizations for work-related foreign travel. Employees in need of counseling for a variety of problems, including stress in their personal or professional lives as well as drug and alcohol abuse, may contact the Employee Counseling Service in Bldg. 31, 496-3164.

Patients are seen by appointment Monday through Friday between 8 a.m. and 5 p.m. in the Clinical Center's 6th fl. clinic. To schedule an appointment, call OMS, 496-4411. Between 5 p.m. and 12:30 a.m. weekdays, people may be seen on a walk-in basis. Emergency cases are evaluated promptly during clinic hours. In case of an emergency after hours, call the NIH fire department for assistance and transportation to Suburban Hospital or Bethesda Naval Hospital.

"The primary emphasis of OMS is prevention," McKinney emphasizes. "While they are there to provide care, their real goal is not to have any patients." □

Discount Play Tickets

Discount tickets are available at R&W for *The Fenix Quartet*, a play written by Robert G. Martin and performed at the Sanctuary Theatre in Adams Morgan, Washington, D.C., through Nov. 20.

Performances will be held on Thursday and Friday, 8 p.m.; Sunday, 3:30 p.m. and 7 p.m. Cost is \$9 for Thursday and Sunday performances and \$11 for the Friday evening show.

To obtain tickets, contact R&W Activities Desk, Bldg. 31, Rm. B1W30, 496-4600. □

NIDR Executive Officer Named

Yvonne H. du Buy has been named executive officer of the National Institute of Dental Research. She served as budget officer for the National Institute of Allergy and Infectious Diseases prior to her arrival at NIDR.



Yvonne du Buy

"I respect the mission of the NIH and am fortunate to be able to continue to serve by supporting NIDR's intramural and extramural scientists in their research," she said.

Du Buy has been with NIH since the beginning of her career. She received a B.A. from the University of Maryland in 1971 and soon afterward joined NIH. In 1972 she became a management intern and has since held several administrative positions. She served as budget analyst and administrative officer at NICHD and budget analyst with the Division of Financial Management in the Office of the Director, NIH.

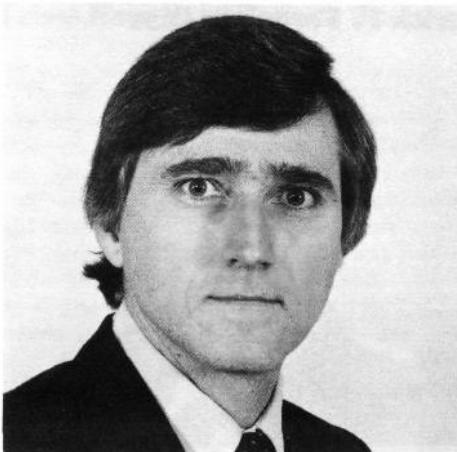
Prior to her career at NIH, du Buy became well acquainted with biomedicine through her father, Dr. Herman G. du Buy, a former researcher and scientist emeritus at NIAID.

She has received several awards including the NIH Director's Award, several NIH special achievement awards, and, most recently, the PHS Special Recognition Award in her prior position as budget officer for NIAID.

In her spare time du Buy favors skiing, tennis and scuba diving. She replaces John Patterson who retired earlier this year. □

Singers Take Note

The NIH Madrigal Singers, a continuously active chamber chorus since the late 1960's, has openings for sopranos and tenors. The repertoire is mainly from 16th century England and Italy with frequent excursions to elsewhere and elsewhere. Meetings are Sunday evenings from 7 to 9. Phone Richard Shrager, 496-1122. □



Dr. William Duncan has recently been named chief of NIAID's Genetics and Transplantation Biology Branch of the Immunology, Allergy & Transplantation Program; he joined the branch as program officer in 1987. He received his Ph.D. from the University of Texas Health Science Center in Dallas in 1976 and was a faculty member in the department of cell biology, University of Texas, Dallas, for 5 years before moving to Dalhousie University in Canada in 1983. There, he was associate professor in the department of surgery and director of the laboratory of transplantation biology. He replaces Dr. Jane Schultz, who will become director of research administration for the health sciences, University of Pittsburgh.

Mammography Beneficial For Women Over and Under Age 50

Screening with mammography plus a breast exam by a health professional significantly reduces breast cancer deaths for women both over and under age 50, a National Cancer Institute study shows.

This finding, from a new analysis of data from a clinical trial of the Health Insurance Plan of Greater New York, considerably strengthens the evidence that women ages 40 to 49 benefit from mammographic screening. Previous analyses of the HIP data found significant reductions in breast cancer mortality from mammography only for women 50 and over. The investigators attribute the new finding to longer followup and more efficient statistical methods.

The new study was published in the Sept. 21 issue of the *Journal of the National Cancer Institute*.

Major cancer organizations, including NCI, the American Cancer Society and the American College of Radiology now recommend that all women ages 40 to 49 have a mammogram every 1 to 2 years, and that upon reaching age 50 they have one annually.

"These recommendations are based on strong evidence that mammography has improved in detecting cancers in both older and younger women and that radiation has decreased to a point of negligible risk," said Dr. Charles Smart, head of NCI's Early Detection Branch and a coauthor of the study.

—Kate Rudden □



Seven library school graduates, including several practicing librarians, recently joined the staff of the National Library of Medicine as NLM associates. They have begun a 1-year postgraduate traineeship that orients them to the major programs and services of NLM and provides opportunities for independent projects based at the library. The new associates are (from l) Kimberly Parker, Elsa Lopez, Linda Hogan, Tanner Wray, Cynthia Harper, Joan Redmond Leonard and Catherine Soehner.

Former NIGMS Employee Dr. Frederick P. Ferguson Dies

Dr. Frederick P. Ferguson, former program coordinator of the Biophysics and Physiological Sciences Program of the National Institute of General Medical Sciences, died recently of a heart attack while traveling in Oregon. He was 72.

Ferguson, who retired in late 1987, had been with NIGMS and its predecessor, the Division of General Medical Sciences, for his entire 27-year government career. As chief of the NIGMS Research Fellowships Branch in the 1960's, he played a particularly important role in the development of the Fellowship and Research Career Development Awards programs. When the institute was reorganized in 1973, Ferguson became the deputy director of the Biomedical Engineering Program, and in 1976, he became program director.

When two programs were combined in 1978, Ferguson was named to the position he held at his retirement.

He received his B.A. and M.A. degrees from Wesleyan University and his Ph.D. from the University of Minnesota.

Before coming to NIH, Ferguson held several academic positions. From 1943 to 1945, he was an instructor in physiology at the Louisiana State University School of Medicine. He then moved to Rutgers, where he was made an assistant professor of physiology in 1946. Ferguson returned to Wesleyan University as an assistant professor of biology in 1947. Two years later, he went to the University of Maryland, where he was named a professor of physiology in 1955.

While at NIGMS, Ferguson received several awards, including the NIH Director's



Dr. Frederick Ferguson

Award. He was an active member of several professional societies, particularly the American Physiological Society and the Biomedical Engineering Society, on whose board of directors he served from 1980 to 1982. He was also a member of Phi Beta Kappa and Sigma Xi, and was a fellow of the New York Academy of Sciences and the American Association for the Advancement of Science. In addition, he had a long association with the Marine Biological Laboratory at Woods Hole, Mass., doing research there during his predoctoral years and becoming a member of the corporation in 1949.

He is survived by his wife, Dorothy, two sons, three daughters, and five grandchildren. The family has suggested that contributions in Ferguson's memory be sent to the NIH Patient Emergency Fund, Bldg. 10, Rm. 1C144.



Dr. William T. Watson

Ohio State University. His many awards include the Distinguished Alumni Award, Tuskegee Veterinary Medical Alumni Association. □

Current Issues in Research Funding

STEP Module 1, "Current Issues in Research Funding" (a module in four parts) will present an opportunity for extramural staff to become better informed about problems in research funding and to discuss timely issues.

The first session, "How Much Can One Investigator Do?" will be held on Nov. 16 at 1 p.m. in Bldg. 31, Conf. Rm. 10. Speakers will address the following: "The NIH 100% rule; what is it and how do we apply it?" (Geoffrey Grant, grants policy officer, OD); "Problems from the world of grants" (Walter Stoltz, director, Division of Extramural Activities, NIDDK); "Problems from the world of contracts" (Richard Powers, chief, Financial Advisory Services Branch, Division of Contracts and Grants, OD); and "A View from the outside" (Allen Heim, director, Sponsored Research and Programs, Vanderbilt School of Medicine).

Each session will consist of 1 hour during which the background of the issue is presented, followed by an open discussion of 1 to 2 hours.

This series is intended for NIH extramural staff interested in discussing various aspects of funding in the face of insufficient resources. Attendance is not required at all four parts of the module since the individual sessions are designed to be of different focus. No formal application is required for this module. Continuing education credit is not available. Attendance will be on a space available basis.

For additional information contact the STEP Program Office (496-1493). □



Dr. Robert E. Windom, DHHS assistant secretary for health, presents a Healthy Mothers, Healthy Babies Award to Sharon Bass (l) and Shirley Strembel of the Arizona Healthy Mothers, Healthy Babies Breastfeeding Task Force for their exemplary public information project. The award was presented as part of NICHD's Child Health Day 1988, which also included a symposium on child care.



TRAINING TIPS

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

Courses and Programs	Dates
Management and Supervisory 496-6371	
Effective Presentation Skills	11/28
Practical Approaches to Stress Management	12/02
Creative Basics for Changing Workplaces	12/01
Working With Personal Differences MBTI II	12/07
Interpersonal Relationships in the Work Environment	12/05
Positive Influence and Negotiation	01/25

Office Operations Training 496-6211

Adult Education 496-6211

Training and Development Services 496-6211

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

The URC hours are:

Monday-Thursday	8:30 a.m.—9:00 p.m.
Friday	8:30 a.m.—4:30 p.m.
Saturday	9:00 a.m.—3:00 p.m.

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NIH Fall Computer Expo

NIH's Fall Computer Expo will be held on Thursday, Nov. 10, at Wilson Hall, Bldg. 1. The 1-day showing of advanced office automation and graphics will begin at 9:30 a.m. and run until 2:30 p.m.

Vendors from all over the East Coast will be demonstrating the latest in desktop publishing, presentation/reporting graphics, printers, OCR scanning, software applications, networking and much more.

More than 20 vendors will be on hand including IBM, Falcon, Viteq, Data Translation, E.L. Horn & Assoc., Micrografx, GTSI, Zenith, etc.

All NIH personnel are invited to attend. There is no registration or cost and refreshments will be served. For more information contact Linda Alger, 496-1004. □

Nonsmokers Needed

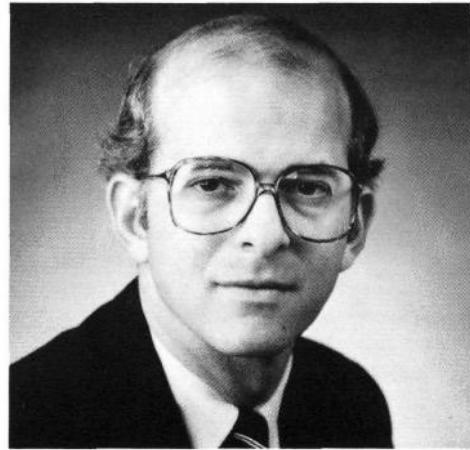
The Department of Medical Psychology at the Uniformed Services University of the Health Sciences is seeking healthy female nonsmokers, ages 18-45, for a study concerning the components of effective communication. If interested, please call 295-3263. Participants will be paid \$25 for their participation in this 1½-hour study. □

Tabor Named to Cancer Etiology Post

Dr. Edward Tabor was recently named associate director, Biological Carcinogenesis Program, in NCI's Division of Cancer Etiology. He will have responsibility for directing, supervising and coordinating DCE's intramural and extramural research programs in viral carcinogenesis and oncogenes, coordinating parts of the DCE AIDS vaccine research and development effort, and allocating resources necessary to the division's research program in biological carcinogenesis.

Tabor has conducted extensive research with hepatitis B and non-A and non-B hepatitis, for which he received the Public Health Service commendation in 1979. He has seven U.S. patents and 140 publications resulting from his work, including a major book, *Infectious Complications of Blood Transfusions*. He earned his B.A. degree from Harvard University in 1969, and his M.D. degree from Columbia University in 1973.

Since 1983, he served as director of the Division of Anti-Infective Drug Products, Center for Drugs and Biologics, FDA, where



Dr. Edward Tabor

his work on improving the efficiency of new drug review made him the recipient of the Public Health Service Outstanding Service Medal in 1986 and the commissioner's special citation in 1988. □

Dickson, 29-Year NIH Veteran, Retires from NIGMS

Vivian F. Dickson has retired after 29 years at NIH, the last 20 of which she spent with NIGMS. At the time of her retirement she was a special assistant to the NIGMS director, deputy director, and the director of the cellular and molecular basis of disease program. She also served as a program analyst in the NIGMS Office of Program Analysis.

From 1975 to 1976, Dickson was detailed to the Office of the Assistant Secretary for Health, PHS, where she was a special assistant for health legislation.

Earlier in her career at NIGMS, Dickson was a program specialist, first in the clinical sciences section of the NIGMS Research Grants Branch and later in the automated clinical laboratory section of the institute's biomedical engineering program.

A certified medical technologist, she came to the NIH Clinical Center as a staff member in the clinical hematology laboratory and was chief of the morphology section when she left



Vivian Dickson

to join NIGMS. Among Dickson's honors are an NIH award of merit and six sustained high quality work performance awards. □

Early Infant Development

The National Institute of Child Health and Human Development seeks mothers, 30 years of age or younger, and their first-born infants, no older than 5½ months, to participate in a study of the ecology of infancy. Participation involves one visit to mother and baby in the home. For more information, call Ann Fox, 496-6832. □

Normal Volunteers Needed

NIMH seeks healthy male and female volunteers (ages 18-65), who are in good general health and not taking any medications, to participate in blood sampling studies determining hormonal variations. Volunteers will be paid for their participation. For more information, call Dr. Mark Demitrack, 496-1891. □

NIH Collaborators Win R&D Award from Magazine

By Anne Barber

Developing new instruments and finding solutions for scientists' needs for research equipment is the role of the Biomedical Engineering and Instrumentation Branch (BEIB), DRS. Dr. Stephen B. Leighton, a senior engineer in the mechanical engineering section of BEIB, and Dr. Alan Kuzirian, formerly of NINCDS, recently received an "R&D 100 Award" from *Research and Development Magazine*, acknowledging the significance of one such instrumentation project.

The magazine recognizes the 100 new products, processes, computer programs, or materials from around the world that it feels constitute the most significant technical advances of the past year.

Leighton and Kuzirian, a neuroanatomist now working at the Marine Biological Laboratory in Woods Hole, Mass., developed a miniature microtome (an instrument for cutting thin slices of tissue) that fits within a scanning electron microscope (SEM). It will be used for neuroanatomical studies of snails and other organisms.

Says Leighton, "Projects in BEIB often begin with a problem that is brought to our attention by scientists in other parts of NIH. In this case, I went looking for a lab that was studying the types of problems for which this instrument was suited."

Leighton found a supportive sponsor when he contacted Dr. Daniel Alkon, then head of the neural systems section in NINCDS' Laboratory of Biophysics (formerly located at Woods Hole but now at NIH). Alkon is studying mechanisms of learning using the marine snail *Hermissenda* as a model. He was intrigued by the possibility of obtaining better information about the structure of the animal's tiny brain, and introduced Leighton and Kuzirian, thus beginning their collaboration.

The microtome provides a new method for obtaining serial images of epoxy-embedded tissue. It also avoids much of the tedium, distortion and possible loss of sections associated with traditional sectioning.

"Other researchers have shown interest in the technique," says Leighton, "and we are currently looking for a small company that might be interested in making it available commercially. In fact, we exhibited at the NIH/ADAMHA Industry Collaboration Forum on Oct. 25 as part of that effort. We anticipate that this technique may significantly aid three-dimensional reconstructions of a broad range of biological tissues including neural networks and embryos for ontogenetic studies."



Dr. Steven B. Leighton (l) and Dr. Alan M. Kuzirian with the miniature microtome in the background mounted on a microscope frame. Their invention won them an R&D 100 Award.

"The technique that we developed is quite different from the traditional one. When I first started this project, I had to learn about both microtomy and SEMs. The group at the Marine Biological Laboratory was extremely helpful in this regard, with scientists such as Dr. Alan Hodge and Dr. Mort Maser providing a great deal of good advice."

Leighton is also working on a device for cell biology and a prosthetic urethral valve for persons suffering from incontinence. "The urethral valve will take considerable time to develop, but we hope it can be used on an outpatient basis without the surgery required by the present devices."

A graduate of the Massachusetts Institute of Technology, Leighton has worked in BEIB for 12 years.

Though Leighton's invention has garnered him his first R&D 100 Award, it isn't his branch's first. According to Dr. Henry S. Eden, deputy chief, BEIB, "It will be the fourth R&D 100 Award that NIH has received based on instruments developed within BEIB." □

New Hours for Photo Collection

The History of Medicine Division's prints and photographs collection will be open from 8:30 a.m. to 12:30 p.m. Monday through Friday. The collection will close during afternoon hours to facilitate a special project to produce a videodisc of the pictures in the collection. The project will take approximately 1 year to complete.

Patrons should also note that during the course of this project, portions of the collection will be closed or otherwise restricted for several weeks at a time. There may also be delays in the processing of photo orders. For further information, call 496-5961. □

NIH Artists Wanted

NIH will host its annual juried art show at the Clinical Center Galleries Dec. 6 through Jan. 17, 1989. Employees and their relatives may submit up to three of their own original artworks, excluding photography, to be juried for sale by watercolorist Ray Ewing (outstanding Maryland art instructor—1983), whose work is now showing in the main CC gallery through Dec. 6.

All work must be matted and framed appropriately for use with security locks and should not exceed 32" by 40" in size. Submissions must be received labeled with artist's name, NIH address and telephone number, title of work, medium, and dimensions at the CC Red Cross desk on Dec. 2 between 9 a.m. and 3 p.m. There is no entry fee.

The Galleries are a nonprofit operation that donates 20 percent of the sale of artwork to the Patient Emergency Fund. Artists will receive the remaining 80 percent of the sale. For more details, please call Helen Orem or Ann Ellis, 496-8113. □

Normal Volunteers Needed

The National Institute of Mental Health is recruiting 10 healthy participants (5 males and 5 females, ages 20-55) for research studies examining the effects of change in diet on behavior, memory and mood. Candidates must be free of serious medical illnesses, have no personal or family history of psychiatric disorders, and have had a stable weight in the last 3 months. Interested persons should not have been taking medications for at least 3 weeks prior to the study. Compensation (up to \$500) is available. For further information, call Dr. Benkelfat, 496-3421. □