

"Still
The Second
Best Thing
About Payday"

The NIH Record

Temperature Is Important

Cooked Meats May Pose Cancer Risk, Study Shows

By Kara Smigel

Researchers have shown that the cooking of meats can create chemicals not present naturally; a few of these newly formed chemicals may increase cancer risk. For example, polynuclear aromatic hydrocarbons (PAHs) are the carcinogenic chemicals formed by burning fat during open-flame cooking. The smoke resulting from the burnt fat contains PAHs that adhere to the surface of the meat.

More recent research conducted by NCI, as well as Japanese and European scientists, indicates that another class of chemicals, heterocyclic aromatic amines (HAAs), are created within muscle meats during most types of cooking and may pose a possible cancer risk to humans. If preliminary risk assessments (based on only one of the types of tumors found in animal studies) are correct, HAAs may increase the number of human cancers in the United States by about 2,000 cases a year.

Researchers have identified at least 17 different HAAs that result from the cooking of muscle meats such as beef, pork, fowl, and fish. HAAs form when amino acids (the build-

ing blocks of all proteins) and creatine (a chemical found in muscles) react at high temperatures (over 212 degrees Fahrenheit or 100 degrees Celsius). Meats cooked at lower temperatures form negligible amounts of the chemicals. About half of the 17 identified HAAs are present in foods Americans eat most often.

HAAs were tested in the early 1980's and found to be mutagens (chemicals that alter the structure of DNA). In subsequent studies, mice, rats, and monkeys fed HAAs in their diets had increased rates of certain cancers.

Americans are most often exposed to the HAAs known as IQ, MeIQ, 8-MeIQx, 4,8-DiMeIQx, TMIP, and PhIP. Four of these—IQ, MeIQ, 8-MeIQx, and PhIP—cause a variety of tumors in mice and rats. The most abundant HAA in cooked muscle meats, PhIP, causes lymphomas in mice as well as mammary and large intestine tumors in rats.

IQ, 8-MeIQx, and PhIP are being tested for carcinogenicity in nonhuman primates. NCI researchers have found that all three chemicals

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History of Directors

Directorship Shows Preference For Native New Yorkers

By Dr. Victoria A. Harden

Second of two articles

The last six directors of NIH, all of whom are still living, are largely responsible for ushering NIH into the modern era. They include two Virginians, two New Yorkers and two Midwesterners.

As NIH's 13th director, Dr. Bernadine P. Healy, a native of New York City, is the third New Yorker to hold the position. At age 46, she is exactly the average age of her 12 predecessors when they assumed their posts. Healy was sworn in as NIH director Apr. 9 in a private ceremony.

Dr. William H. Sebrell, Jr., 1950-1955

Last of the NIH directors to rise through traditional U.S. Public Health Service ranks, Dr. William H. Sebrell, Jr., guided the NIH through a period of rapid expansion in the early 1950's.

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Feet of the Pharmacy

CC's Moeller Indefatigable, Energetic at 80 Years

By Anne Barber

Having started her second career at a time when most people are halfway to retirement, Delphine Moeller of the Clinical Center's pharmacy department is still working after more than 35 years.

A smiling, energetic Moeller, whom you would never guess turned 80 last August, has spent her career in the CC. "I came to NIH in 1955, right after my husband died, and worked as a unit clerk for Allergy and Infectious Diseases. At that time, they still had the iron lung." In 1960, she became a secretary for the pharmacy, where she remains, indefatigably, today.

"I was often the only secretary in the department. I set up all the files from scratch. And there have been only two branch chiefs in the pharmacy department during the 30 years I've been here—Milton Skolaut, who retired and went to Duke (University), and Dr. Joseph Gallelli, who has been chief since 1970."

When Moeller first came to the CC, it was a place where everybody knew everyone else, she says. "You knew all the chiefs and many of the nursing and medical staff."

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Tours Remove Barriers Between Students, Science

By Marilyn Weeks

John Dietrich wanted to do more than just tell his students about his experiences working in biomedical research labs. He wanted to show them.

So, earlier this year, Dietrich, a teacher at Broad Run High School in Ashburn, Va., brought 100 members of his biology classes to meet the scientists and visit the NIH and

ADAMHA labs where he spent 6 weeks last summer.

"I brought them all—honors classes, general classes. You never know when something may spark an interest," said Dietrich. "We want to show every student the importance of science."

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Dr. Ivan Mefford (r) of NIMH's Laboratory of Experimental Therapeutics talks with students from Broad Run High School, Ashburn, Va. They are (front row, from l) Steve Bathiche, Nathan Magee; back row (from l) David La Frendiere, Daniel Conde, and Margaret Faszkeski.

MEATS

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are absorbed into the monkeys' bodies from food. The bulk of the compounds absorbed by the animals is activated into carcinogenic chemicals and only a small percentage is excreted unchanged. IQ and PhIP absorbed by monkeys have also been found to alter the structure of their DNA (form DNA adducts). Further, IQ causes liver cancers in the majority of the monkeys to which it is fed.

These research results raise concern that HAAs may be human carcinogens. A study where human volunteers ate 320 grams (about 10 ounces) of cooked ground meat patties showed metabolic results similar to animal studies. Only 2 to 5 percent of the MeIQx the human volunteers ate was excreted unchanged in their urine; the majority of the chemical was absorbed into the body.

Four factors influence HAA formation: the type of food, the cooking method, temperature, and time. HAAs are found in cooked muscle meats; other sources of protein (milk, eggs, tofu, and organ meats such as liver) have very little or no HAAs naturally or when cooked. The amount of fat in the food has no influence on the amount of HAAs that form.

Temperature is the most important factor in formation of HAAs. Frying, broiling, and bar-

becuing produce the largest amounts of HAAs because the meats are cooked at very high temperatures. Oven roasting and baking are done at lower temperatures, so lower levels of

If preliminary risk assessments are correct, HAAs may increase the number of human cancers in the United States by about 2,000 cases a year.

HAAs are likely to form. Microwaving, stewing, boiling, or poaching are done at or below 212 degrees F, which creates negligible amounts of the chemical.

Meats that are partially cooked in the microwave before cooking by other methods also have reduced levels of HAAs. The juice that forms during microwave cooking of meats contains the precursor chemicals that would form HAAs. If this liquid is poured off before further cooking, the final quantity of HAAs is reduced. Foods cooked a long time by any method ("well-done" instead of "medium") will also form slightly more of the chemicals.

There have been no studies of the amount of HAAs in the average American diet, and it is not yet known if HAAs alter the structure of DNA in humans. These two types of stud-

ies would help to clarify the role of HAAs as possible human carcinogens. At present, federal agencies do not monitor the HAA content of cooked meats, and there are no guidelines concerning consumption of foods with HAAs. Further research is needed before definitive recommendations can be made.

However, concerned individuals can reduce their exposure to HAAs by: varying methods of cooking meats; eating beef cooked "medium" instead of "well-done"; microwaving meats more often, especially before frying, broiling, or barbecuing; and refraining from making gravy from meat drippings. □

Singers Hold Concert

The NIH R&W Madrigal Singers will present a program of sacred and secular works on Monday, May 13 at 12 noon in Masur Auditorium, Bldg. 10. The featured work is "Out of the Depths" ("Aus Tiefer Not") by Felix Mendelssohn, a work heavily influenced by J.S. Bach, whose music was enjoying a revival in the early 1800's.

In celebration of the 500th anniversary of Columbus' first trip to America, the program will include six Italian madrigals from the 1500's. The program will finish with two American songs: "The Man that Got Away" by Harold Arlen and "In the Good Old Colony Days," a post-revolution song arranged by Robert deCormier. □



Dr. Judith Vaitukaitis (l), NCRR acting deputy director for extramural research resources, and Dr. Marjorie Tingle (r), director of the Biomedical Research Support (BRS) Program, NCRR, meet with high school student Nupur Ghoshal. Ghoshal, a participant in NCRR's Minority High School Student Research Apprentice (MHSSRA) Program, visited NIH recently as a finalist in the prestigious Science Talent Search, a national competition jointly sponsored by Westinghouse Electric Corp. and Science Service, a nonprofit science organization that administers the contest. The MHSSRA program, a component of the BRS program, awards grants to institutions to provide minority high school students with summer research experiences. Ghoshal's experience in the MHSSRA program at Iowa State University taught her some of the techniques she used to conduct her Westinghouse project, "Electrical Propagation of Proteinase Inhibitor II Presence in Poplar Hybrids." Ghoshal's project earned her a \$1,000 scholarship.

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NICHD Administrator Wins President's Committee Award



HHS secretary Dr. Louis Sullivan (l) presents an award from the president's committee on mental retardation to Dr. Felix F. de la Cruz, chief of NICHD's Mental Retardation and Developmental Disabilities Branch. Looking on is Dr. Albert Anderson, vice chairman of the president's committee.

The administrator of mental retardation research at the National Institute of Child Health and Human Development received an award from the president's committee on mental retardation (PCMR) for his outstanding contributions to the field of mental retardation research. Dr. Felix F. de la Cruz, chief of the Mental Retardation and Developmental Disabilities Branch, received the award from HHS secretary Dr. Louis W. Sullivan at the recent national summit sponsored by the PCMR in Washington, D.C.

The PCMR advises the president on programs and services for persons with mental retardation, tries to determine how government can best meet their needs, and promotes public awareness and action for combatting mental retardation. The summit focused on strategies for the states and territories to prevent mental retardation and related developmental disabilities.

De la Cruz was one of the first to realize the grave consequences of high levels of the amino acid phenylalanine in the blood of pregnant women. This problem emerged when women who had been treated for phenylketonuria (PKU) as children began having children of their own. PKU results from the body's failure to metabolize phenylalanine. Untreated, PKU causes severe mental retardation. A simple blood test, developed a generation ago, can detect the condition. Treatment consists of a diet low in phenylalanine, begun in infancy. The majority of individuals with PKU discontinue the diet when they reach adolescence, resulting in ele-

vated blood levels of phenylalanine.

When the first generation of women to benefit from the diet grew up and began starting families of their own, many did not know that their own elevated phenylalanine levels would endanger the unborn children they carried, even though the children did not have PKU themselves. Through de la Cruz's determined efforts, a national collaborative study was undertaken to try to prevent mental retardation in the children of women originally diagnosed with PKU in infancy.

Long committed to the prevention of mental retardation, de la Cruz has consulted with the PCMR for more than 20 years. He has published numerous important works in the field and is well-known in the scientific community for his contributions to the understanding of such chromosomal disorders as the fragile X syndrome and trisomy 21 (Down syndrome). Two of his books, *Trisomy 21*, published in 1981, and *Research Perspectives in Cytogenetics*, published in 1984, are among the most frequently cited works in the literature. His contributions have also appeared in such highly regarded scientific journals as the *New England Journal of Medicine* and *Lancet*.

His efforts have also led to a national collaborative study of chorionic villus sampling. This new diagnostic procedure allows physicians to identify chromosomal and biochemical disorders and DNA abnormalities earlier in pregnancy than do current diagnostic methods. An early—but optimistic—report of this study was recently published in the *New England Journal of Medicine*. □

NIGMS Augments Training Programs for Minorities

A new predoctoral fellowship program for minority students and an extended honors undergraduate research training program are new additions to the research training activities of the National Institute of General Medical Sciences. The new programs augment the institute's efforts to increase the number of scientists who are members of minority groups that are underrepresented in biomedical research.

The predoctoral program provides up to 5 years of support for research training leading to a Ph.D. or combined M.D.-Ph.D. degree in the biomedical sciences. It is available to highly qualified students who are members of such minority groups as African Americans, Hispanics, Native Americans, and Pacific Islanders. The award includes tuition, fees, \$2,000 to cover travel to scientific meetings and laboratory and other expenses, and a stipend of \$8,800 per year.

The honors undergraduate program, a component of the NIGMS Minority Access to Research Careers (MARC) Program, was established in 1977. It provides grants to educational institutions with substantial minority enrollments to permit them to provide science courses and biomedical research training to honors students who have an interest in biomedical research. The award provides tuition, fees, trainee-related expenses, and a stipend of \$4,800 per year for freshman and sophomore trainees and \$6,732 per year for junior and senior trainees.

In the past, the honors undergraduate program supported students in their third or fourth year of college. Now, the 59 institutions that have awards to support honors undergraduates have been given the opportunity to participate in a pilot project to extend these programs to highly promising students in their first 2 years of college. This project seeks to determine whether the expansion will encourage more students to major in science and maintain their interest in pursuing careers in biomedical research.

The new predoctoral fellowship complements an existing NIGMS program that provides predoctoral support only to outstanding graduates of the MARC honors undergraduate research training program. □

Hepatitis B Patients Sought

The NIDDK liver diseases section seeks patients with chronic hepatitis B and elevated liver enzymes for a long-term treatment study using an antiviral drug. Patients with extreme complications or who are HIV positive are ineligible. Physician referral is required. For more information, call 496-6110. □

MOELLER

(Continued from Page 1)

Today, she arrives at work by bus. She never drove until her husband died and left her a Packard. "So I learned to drive, but after it was wrecked—not by me—the insurance company would only give me such a small amount that I decided it wasn't worth buying another car. The bus only takes 15 minutes," she notes, "and when it snows, I often walk because the buses cannot come into my subdivision. We (CC employees) are considered essential so I always come to work." The 25 minutes it takes her to walk from home doesn't seem long to Moeller.

"Work is just like home," she says. "I think of them (the staff) as my children." Moeller considers herself to be the feet of the pharmacy. "I've always volunteered to run errands. I feel very lucky that I can do so."

With the help of her daughter, who visits her once a week, Moeller does her grocery shopping and that of some of her neighbors, who previously helped her when they were able to shop.

Moeller is very independent and loves to garden. "I don't have much grass, honey," she says. "Mostly flowers and shrubs." The word "honey" is a familiarity that Moeller lavishes on almost everyone she meets.

"My husband was a wonderful gardener and president of the garden club. One year," she remembers, "he won best-in-show for a rose and I won best-in-show for my iris. Now irises won't grow in my garden."

When asked the secret to her vigor, she answers, "Work. But I've also found time to needlepoint, knit afghans, and read." Moeller's grandmother, who was born in Czechoslovakia, taught her to knit and her neighbor taught her needlepoint.

A native of Detroit, Moeller worked for the Edison Company there, which only hired single women; upon wedding, women were given a marriage grant and dismissed.

It was at Edison that Moeller met her husband. It seems that the company had a tennis club, game rooms, boat club, a gym, badminton courts, handball courts, and a skating rink, which is where she met her husband. "He asked me to skate with him but he was into speed skating and I wasn't a very good skater. So I said no. But he kept after me and finally I gave in and that was it.

"Back then," Moeller said, "I made more money than my husband. I made \$45 a week working in the legal file section while my husband, with a master's degree in research engineering, only made \$43 a week. He had not been employed there as long as I."

Moeller was considered quite an athlete. While attending Detroit's St. Ambrose High School, she played basketball. In 1928, her



Delphine Moeller

team won the state championship. She also played tennis, badminton, and swam. While at Edison, she won club championships in tennis and badminton and held both singles and doubles titles when she left the company. "My mother made my tennis outfits for me," she remembers.

Moeller and her husband moved in 1941 to the Washington area, where she continued to play sports, especially badminton. She and her partner won the D.C. Recreation Department badminton tournament for community centers in 1946. "I lost in the finals of the singles," she says. "I finally gave up badminton when I turned 52."

Many members of her family still remain in Michigan. "My grandfather was a detective in Detroit. I guess it is in my blood too because Dr. Gallelli often asks me to locate someone or some place. My father was a baseball player. He went from sandlot to the big leagues and once played for the New York Giants."

Her father died in his thirties from a

stroke, and her husband at age 41 from a heart attack. "My mother was left a young widow, and my children were only 12, 10, and 7 when my husband died. I had to come back to work after 14 years of not working." She rented an old manual typewriter and took the government typing test in a quonset hut where Bldg. 31 now stands.

Where does Moeller get all this energy? "Honey," she says, "I almost never get tired. I often used to get up early and play tennis. I also love to dance. There was a ballroom in my neighborhood when I was a young girl and admission was 35 cents. Wonderful big bands played there and we never missed a dance."

Continuing to stay busy, Moeller, on a recent Sunday, spent 2½ hours cutting her shrubbery. "That's what gardeners do," she says. "It is therapeutic for me."

Even while on vacation, if she doesn't leave town, she comes to work. "I just come in and do the mail, get them set up for the day, and then go home," she says.

Moeller starts her day at 5 o'clock every morning and reports for duty at 7 a.m. after her bus commute.

Currently, she is trying to persuade authorities to erect a bus shelter at the Ride-On stop directly across from Bldg. 10, a project she has pursued for some time. While she has been able to obtain cement to stand on and a bench to sit on, she still has no cover from the weather. "But I haven't given up," she says, with a characteristic sparkle in her eyes.

Normal Volunteers Needed

The clinical neuropsychology section of NINDS is looking for normal volunteers to participate in a study of perception. Volunteers will be paid \$30. For more information call Michael, 402-1316. □



Helping Moeller celebrate her 80th birthday, members of CC's pharmacy department threw her a party. Moeller (front row, 2nd from left) with her boss, Dr. Joseph Gallelli (behind her on the left) received as a memento a gold charm necklace, which she is wearing around her neck.

Lane Appointed NIAID Clinical Director

Dr. H. Clifford Lane has been appointed clinical director of the National Institute of Allergy and Infectious Diseases. He will continue to serve as chief of the clinical and molecular retrovirology section of the Laboratory of Immunoregulation, NIAID.

His appointment was announced by Dr. John I. Gallin, director of NIAID's Division of Intramural Research, who says, "Dr. Lane brings fresh ideas, an impeccable clinical background and a keen appreciation of the requirements for outstanding clinical research."

Dr. Anthony S. Fauci, director of NIAID, adds, "Dr. Lane is a compassionate physician, first-rate scientist, and valued colleague. His appointment as director of NIAID's clinic means that patients will benefit from the talents of both a fine physician and researcher."

During his tenure as clinical director, Lane hopes to initiate several innovative plans to expand and ensure the highest possible quality for clinical activities at NIAID. He intends to promote the use of state-of-the-art information technology in getting medical findings in the hands of the institute's clinical investigators.

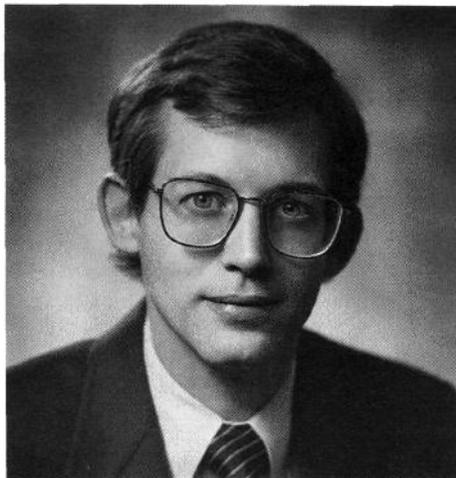
"We need to be sure that we have the latest information technology at the Clinical Center," said Lane, who also wants to incorporate ideas and expertise from nurses into the clinical research agenda. "I want to devise ways to make it easier for scientists to translate their research findings into clinical applications."

Lane has led an extraordinary career since coming to NIH and has made a number of outstanding contributions in the areas of basic and clinical immunology. He has successfully combined bench research with clinical applications that have resulted in immediate benefit to patients.

Lane currently directs a large segment of NIAID's research efforts against AIDS. He and his colleagues were among the first to recognize the severe abnormalities of B-cell function and immunoregulation in patients with AIDS. They further delineated the precise mechanisms responsible for the decreased T-cell responses seen in lymphocytes from HIV-infected persons and provided conclusive evidence that the critical immunologic defect in this syndrome is the inability of the helper/inducer T lymphocytes to recognize and respond to soluble antigen.

Lane has designed and carried out a number of strategies to treat the underlying immune defects in patients with AIDS. Perhaps one of the more important contributions of Lane and his colleagues in this area has been the clear demonstration of the antiretroviral effects of interferon alpha in a subset of patients with HIV infection.

In addition, Lane has designed and carried



Dr. H. Clifford Lane

out the first studies to evaluate the potential benefit of bone-marrow transplantation from a healthy identical twin to his HIV-infected brother. He and his colleagues have extended these studies to other sets of twins using bone-marrow transplantation combined with anti-retroviral therapy and adoptive immunotherapy. He also directed the first United States trial of a vaccine to prevent infection with HIV. The gp 160 vaccine used in these studies has shown significant promise of inducing protective immunity against the AIDS virus.

Lane was born in Detroit and earned his B.S. and M.D. degrees from the University of Michigan. Following his residency and internship in internal medicine at University Hospital in Ann Arbor, Lane joined NIAID as a clinical associate in 1979. □

Institute Relay Set, May 15

The 14th running of the NIH Institute Relay, one of the traditional rites of spring at NIH, sponsored by the NIH Health's Angels Running Club, is scheduled for Wednesday, May 15. This year's event will include team competition in five divisions: *open* (runners 39 years old and under), *master* (runners over 40 years old), *all male, all female*, and *mixed* (teams with at least two female members).

The Allen Lewis NIH Memorial Trophy will be inscribed with the names of the winning teams in each division. Additionally, all runners participating in the relay will receive festive ribbons. All runners, volunteers and their friends and relatives are invited to attend a post-race party at the FAES House located on Old Georgetown Rd. The festivities will begin around 4:30 p.m.

The relay will be held at 12 noon in front of Bldg. 1. Each relay team is comprised of five runners, each of whom runs a half-mile loop around Bldg. 1. There is a \$5 team entry fee, which will be used to help defray the cost of the race. Entry forms and instructions will be available at the R&W Activities Desk located in Bldg. 31, Rm. B1W30 beginning on Monday, Apr. 15. Teams entering the relay must return their completed entry forms with the required entry fee to the R&W Activities Desk by 4 p.m., Friday, May 10.

Dr. Peter Pentchev, who is coordinating the event once again, reminds everyone that the relay is intended to promote friendly and constructive competition among members of the NIH community. Consequently, participants at all levels of ability are encouraged to share in the joy of this annual NIH event.

Persons interested in finding out more about the relay and/or in volunteering their help should call either Pentchev, 496-3285 or Jerry Moore, 496-4606. □



The expert panel of the National Institute on Aging's Alzheimer's Disease Education and Referral Center held its first meeting recently. The panel advises the NIA director on the new center's policies and procedures for disseminating information on Alzheimer's disease. Panel members who attended the meeting included (seated, from l) Dr. Joseph M. Foley, chairman, Dr. Eric Pfeiffer, Thomas M. Ennis, and Karl C. Johnson. Standing are (from l) Dr. Creighton Phelps, Jane Blaustein, Steven Feldman, Vicki Freimuth, Susan Quinn, Lisa Gwyther, Mal Schechter, and Diana Mason. Not pictured are Dr. Robert N. Butler, Dr. Paul McHugh, Edward F. Trusckee, and Stephen McConnell.

DIRECTORS

(Continued from Page 1)

Sebrell was also the first NIH director born in the 20th century—in 1901 in Virginia. He received his M.D. degree from the University of Virginia and joined the Service in 1926. As an assistant to Dr. Joseph



Dr. William H. Sebrell Jr.

Goldberger, Sebrell was inspired to continue research on nutritional diseases. He was the first to recognize and describe the dietary deficiency disease ariboflavinosis, and he contributed important studies on the role of diet in other diseases.

During World War II, Sebrell served as codirector of the National Nutrition Program. When the war ended, he studied the nutritional status of civilians in occupied Germany. He was involved in formulating standards of nutrition for international agencies and played a key role in gaining acceptance for scientific nutrition as a function of U.S. state and local health departments.

As Sebrell's directorship began in 1950, two new institutes had joined NIH under the Omnibus Medical Research Act: the National Institute of Arthritis and Metabolic Diseases and the National Institute of Neurological Diseases and Blindness. In 1953, NIH became a part of the newly created U.S. Department of Health, Education, and Welfare. Perhaps the most significant event of that year, however, was the opening of the NIH Clinical Center. The advent of clinical research at NIH significantly changed the dynamics of the NIH intramural program.

Sebrell resigned as director in 1955, accepting a post as professor of public health nutrition at Columbia University. He continued at Columbia until his retirement in 1970. He now serves as a medical advisor on nutrition to Weight Watchers International.

Dr. James A. Shannon, 1955-1968

Under its eighth director, Dr. James A. Shannon, the NIH reached maturity, becoming widely recognized as the leading biomedical research institution in the world. Shannon's key contribution to the modern NIH was recognized in 1983, when Bldg. 1 was renamed in his honor.

A New York native, Shannon was born in 1904. He received his M.D. in 1929 and a Ph.D. in physiology in 1935, both from New York University. During World War II, he directed research on antimalarial compounds at Goldwater Memorial Hospital in New York

City—a key project for the war effort after the Japanese cut off the supply of quinine, the natural product used to combat malaria. In recognition of his service during the war, he was awarded the Presidential Medal of Merit. From 1946 to 1949, he served as the director of the Squibb Institute for Medical Research.



Dr. James A. Shannon

In 1949 Shannon accepted an offer to become director of intramural research at the newly created National Heart Institute. He recruited a cadre of creative scientists to staff the program, including the future Nobel Laureate Julius Axelrod. In 1952 he was named associate director of NIH, and in 1955 became director.

During the 13 years of Shannon's leadership, rapidly expanding federal support for research altered the character of many medical schools, disrupting operating budgets and generating fears of government control of science. Shannon allayed fears by insisting on intellectual freedom for the individual investigator, and he deftly guided the grants program through potential political pitfalls. Shannon's success stemmed from his "emphasis upon quality as the *sine qua non* of the NIH operation," said Dr. John F. Sherman, then associate director for extramural programs.

After leaving NIH, Shannon joined the National Academy of Sciences as special advisor to the president. In 1970 he became professor and special assistant to the president of Rockefeller University. He now lives in Lake Oswego, Ore.

Dr. Robert Q. Marston, 1968-1973

When he took office as NIH director in 1968, Dr. Robert Q. Marston faced the task of leading NIH through a time when biomedical research policy was becoming increasingly complex and controversial.

Another Virginia native, Marston was born in 1923 and took his M.D. from the Medical College of Virginia. He did post-graduate work as a Rhodes scholar at Oxford University, where he worked with Howard Florey, who had been instrumental in developing penicillin. Marston came to NIH in 1951 as a member of the Armed Forces Special Weapons



Dr. Robert Q. Marston

Project. He conducted research for 2 years on the role of infection after whole body radiation. He held posts at the Medical College of Virginia and the University of Minnesota and served as dean of the University of Mississippi medical school before returning to NIH in 1966 as an associate director and director of the newly created Division of Regional Medical Programs. In April 1968 he was named administrator of the Health Services and Mental Health Administration, a position he resigned 5 months later to accept the directorship of NIH.

As he took the helm, NIH's scope had been expanded to include health manpower training. The National Eye Institute, the National Institute of Environmental Health Sciences, and the Fogarty International Institute had also recently been established. Qualitative changes in the NIH program also were made during Marston's tenure. He strongly opposed an initiative to move NCI out of NIH, and, although he won, the political battle may ultimately have cost him his directorship. The National Cancer Act of 1971 increased NCI funds and responsibilities, and also made the NIH and NCI directors political appointees. Creation of programs on hypertension and sickle cell anemia in the National Heart and Lung Institute reflected Congress's increasing concern with so-called targeted research programs.

When President Richard Nixon was re-elected in 1972, he decided to exercise the authority granted in the 1971 Cancer Act to appoint a new NIH director. Marston left NIH to become a scholar-in-residence at the University of Virginia and the first distinguished fellow of the Institute of Medicine, National Academy of Sciences. In 1974, Marston was named president of the University of Florida. He is now retired and lives in Gainesville, Fla.

Dr. Robert S. Stone, 1973-1975

Born in New York City in 1922, Dr. Robert S. Stone studied medicine at the State University of New York College of Medicine. He joined UCLA's department of pathology in 1952 and made numerous contributions to the field. He was one of the first researchers to suggest that radiation exposure increases the incidence of certain known diseases rather than creating new types. In 1963 he was named chairman of the department of pathology at the University of New Mexico School of



Dr. Robert S. Stone

Medicine, and in 1968 became dean of the school. During a 1972 sabbatical, he studied management at the Massachusetts Institute of Technology.

In May 1973, during a time of spiraling inflation, restricted budgets, and emphasis on efficiency in government, Stone was appointed director of NIH. His brief tenure was characterized by public debate about the value of basic versus targeted research and about how federally supported research should be managed. In January 1975, he submitted his resignation as NIH director and accepted a position as dean of the University of Oregon's school of medicine. In 1978 he was named dean of the medical school at Texas A&M University. He now serves as director of health systems and technology at Texas A&M.

Dr. Donald S. Fredrickson, 1975-1981

Arriving as director in 1975, Dr. Donald S. Fredrickson was called on to stabilize an agency buffeted by political and budgetary problems.

A longtime member of the NIH intramural program who told the press unabashedly that he "loved the place," Fredrickson was born in 1924 in Colorado. He took his M.D. at the University of Michigan and, after postgraduate work at Harvard University and in Boston, he arrived at the NIH in 1953 as a clinical associate in the National Heart Institute. His research focused on the structure of the plasma lipoproteins, their importance in the transport of fats, and the genetic factors regulating their metabolism and concentration in blood. He discovered two new diseases: Tangier disease, caused by the absence of high density lipoproteins, and cholesterol ester storage disease, also the result of a genetic disorder of fat metabolism.

From 1961 to 1966, Fredrickson served as clinical director of the Heart Institute. He was named institute director in 1966, serving until 1968, when he returned to research as chief of the Molecular Diseases Branch. In 1969 he was also named NHI's director of intramural research, a post he held until 1974, when he left NIH briefly to head the Institute of Medicine of the National Academy of Sciences before returning as NIH director.

During Fredrickson's tenure, public concern about the safety of recombinant DNA techniques also created pressure for federal regulation. In response, he established a

recombinant DNA advisory committee that subsequently issued safety guidelines. This action reassured the Congress and other legislative bodies about the safety of research with recombinant DNA, making it unnecessary to enact protective statutes that tend to be inflexible and could cripple research. Fredrickson's stature as a research scientist and his sensitivity to policy concerns did indeed stabilize NIH after the turbulent period of the 1970's.

When he retired in 1981, Fredrickson returned to the National Academy of Sciences as a visiting scholar. Subsequently, he headed the Howard Hughes Medical Research Institute and, at present, is conducting medical research in his former laboratory at NHLBI and historical research as a scholar at NLM. In addition, he consults with the European community and Africa in evaluating their research programs.

Dr. James B. Wyngaarden, 1982-1989

NIH's most recent past director, Dr. James B. Wyngaarden, led the agency through a period of expansion stimulated by new scientific discoveries and by the advent of AIDS.

Born in 1924, the Michigan native graduated first in his class from the University of Michigan Medical School. He trained in internal medicine at the Massachusetts General Hospital and did postdoctoral work at the Public Health Research Institute of the City of New York.

From 1953 to 1956 he was a research associate at the National Heart Institute and the National Institute of Arthritis and Metabolic Diseases. Wyngaarden then moved to Duke University School of Medicine, where he rose to professor of medicine and associate professor of biochemistry. In 1961 he left Duke for other positions, returning in 1967 as professor and chairman of the department of medicine. He was active on various NIH study groups and committees and served on advisory bodies for national biomedical concerns.

Wyngaarden's research interests focused on the interface between chemistry and medicine, especially on the problems of purine metabolism. He is the coauthor of the *Cecil Textbook of Medicine* and, with his predecessor Fredrickson and others, an editor of *The Metabolic Basis of Inherited Disease*.

During Wyngaarden's term as NIH director, the agency's budget doubled. The number

and duration of investigator-initiated grants increased, and he worked actively to educate universities and medical schools about NIH funding procedures. Scientific advancements made possible the launching of the human genome initiative. With the surprising advent of AIDS as an apparently new disease, the NIH mounted a concerted effort to identify its cause and develop diagnostic, preventive, and therapeutic measures.

When Wyngaarden resigned as NIH director in 1989, he became associate director for life sciences in the White House Office of Science and Technology Policy. He now serves as foreign secretary for the Institute of Medicine of the National Academy of Sciences. □

Harden is NIH historian and curator of the DeWitt Stetten Jr. Museum of Medical Research at NIH.

R&W Offers Horseback Rides

R&W and Marriott Ranches invite you to enjoy a day in the country on horseback Saturday, May 18. We'll hit the trails at 10 a.m. for a 3-hour ride, then top it off with a picnic lunch of burgers, salads, and more. Cost for the day is \$45. All levels, from beginner to expert, are welcome, although riders must be at least 10 years old. For more information, call the R&W Activities Desk, 496-4600. □

DCRT Launches Product Guide For Computer Shoppers

Selecting the personal computer system that's right for you can be a daunting task. There are a multitude of brands from which to choose—each, it seems, with a bewildering array of options. And once you have the hardware, you still need to decide what software to use.

DCRT's Personal Computing Branch (PCB) understands your predicament. To guide you through the thicket of confusing product information, the PCB has put together a document known as the PCB Product Information Guide (PIG). The guide comes in two parts, one for IBM PCs and compatibles, the other for Apple Macintosh computers. Both guides contain detailed descriptions of the hardware and software PCB supports, complete with part numbers, list prices, and recommended configurations.

You can pick up a printed copy of the guide in the NIH User Resource Center, Bldg. 31, Rm. B2B47, or call PCB's help desk, 496-2282, to request a copy through the mail. The guide is also available for downloading from PCB's electronic bulletin board system, PCBull (480-8400); you'll find it in the PIG download directory in a variety of file formats. □



Dr. Donald S. Fredrickson



Dr. James B. Wyngaarden

STUDENTS

(Continued from Page 1)

With nearly two dozen scientists as their guides, the students toured NIDDK, NIMH, and NIAAA laboratories for a first-hand look at biomedical research.

The visit in February was part of Dietrich's ongoing efforts to interest talented young people in joining a future generation of scientists.

"When I was a kid, I got turned on to science by a few very special people," said Dietrich, who worked for more than a decade in private and government research labs including the U.S. Navy before he turned to teaching.

"I wanted to give something back to science—to try to serve as an example to students and hopefully get some of them interested in science as a career," he said.

As with any research effort, it may be years before Dietrich can document his success, but

"The teachers I remember best as inspiring influences are those who offered something special, above and beyond the prescribed textbook fare."

—Dr. Margaret Hamilton

preliminary results indicate his first field trip to NIH was an important step for students and scientists alike.

"I didn't know what to expect. I didn't even know what the health institutes did," said Niki Hall, a 16-year-old sophomore. "I've always been interested in science and math, but this has sparked a real interest in the role of research."

Niki, whose early interest in science includes experiments in the backyard where she helped her older brother dissect frogs, said, "Kids should be learning more about science at an earlier age."

Classmate Lisa O'Donnell, 15, agrees, suggesting that, "Kids need something hands-on, not just listening to people talk about science."

"Most of the students appeared to be a little overwhelmed at first, but I was really impressed by some of their questions," said Dr. Margaret Hamilton, an NIMH neuropharmacologist currently studying in vivo activity of central dopamine systems.

"I fully support programs like this," said Hamilton, whose own "natural curiosity" has been satisfied by a career in science. "When I was in high school, we had no idea what options were really available to us in any area, including science.

"The teachers I remember best as inspiring influences are those who offered something special, above and beyond the prescribed textbook fare," she said.

The comments support the importance of student programs like this one in addressing

the growing concerns in the scientific community about youngsters' apparent lack of interest and skills in science.

Dr. Frederick K. Goodwin, ADAMHA administrator, has launched a number of programs designed to introduce youth to biomedical research and stimulate interest in science.

One such program enabled Dietrich to spend last summer working in biomedical research labs, an experience that fostered the idea of a field trip for his students. Dietrich, who spent 3 years in night school to earn his teaching credentials, was one of 17 junior and senior high school teachers selected to spend 6 weeks in ADAMHA labs as part of the fellowship program. Support from scientists involved in the summer program helped Dietrich extend his lab experiences to his students.

"The tour was the logical thing to do, especially with the emphasis on programs to interest students in science," said Dr. Richard Weber of NIDDK, who teamed with Dietrich to set up the field trip. "At least the kids get a quick look at a real image of what research is and its importance to public health."

Dietrich, whose summer lab assignments included working with Weber and Dr. Agu Pert of NIMH on a study to determine the effects of cocaine on the immune system, saw the field trip as another important step in removing the barriers between students and science.

"Many kids are afraid of science. I try to make it fun, keep them from getting bored," said Dietrich. His classroom is as lab-like as he can make it, he says, with a class menagerie that includes goldfish for respiratory experiments and rats for inbreeding experiments for a genetics demonstration. There also are snakes, turtles, a ferret, squid and octopus.

"The students see that animals can be used in science and can be treated well," said Dietrich. "And they get to see what happens instead of reading it in a book."

Some students agreed that seeing it is better.

"I thought it was neat being with all those scientists and being where medical research actually takes place," said Andrea Lotz, 16, a sophomore.

Jennifer Glass, 14, a freshman, said the time spent in the labs was "too short," but she said it was a great trip that has "made me think a lot more about a scientific profession." □

Atlantic City Trip, May 17

Travel by deluxe motorcoach to Trump's Taj Mahal Casino on Friday, May 17. Cost is \$25 per person and includes round trip transportation from NIH and a casino package of \$7.50 in coin and \$3 in food. For more information, call 496-4600. □

Clark Joins DRG as SRA

Dr. Anne P. Clark, a grants associate with NIH's Office of Extramural Programs since January 1990, has been appointed scientific review administrator of the lung biology and pathology review committee (LBPA) in the Referral and Review Branch of the Division of Research Grants.

The committee is being chartered as the LBPA study section and will be one of 82 chartered study sections in DRG. It consists of 14 members from the scientific community in the United States who conduct the initial scientific merit review of applications relating to research on lung function and mechanisms of lung disease.

Before coming to NIH, Clark was professor, department of biochemistry, University of Maine at Orono. She came to Orono in 1980 as assistant professor. During 1986-87, she took a 1-year sabbatical and came to NIH as a visiting scientist at the National Cancer Institute. In 1986, she was a distinguished Maine professor, and in 1988, served as an ad hoc reviewer for the pathobiochemistry study



Dr. Anne Clark

section in DRG. She has been principal investigator on research grants from the Maine Agricultural Experiment Station and from NCI.

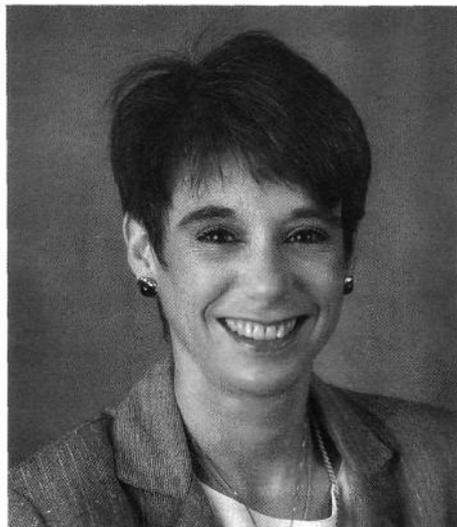
Clark received her B.S. in chemistry in 1971 from Bates College, and her Ph.D., also in chemistry, in 1975 from Dartmouth College.

She was a research associate in the biochemistry department, Oklahoma State University, from 1977 to 1980, and in the biology department at Bowdoin College from 1976 to 1977. While at Oklahoma State, she held an NIH postdoctoral fellowship for 3 years.

She has written more than 33 articles and given 26 presentations at professional meetings and seminars. She is a member of the American Chemical Society, the American Society for Biochemistry and Molecular Biology, and the Society for Complex Carbohydrates. □

Broido Joins NIGMS Program

Dr. Michelle Broido has been appointed a program administrator in the Biophysics and Physiological Sciences Program, NIGMS. She will be responsible for research and research training grants in the areas of structural biology, the structure and dynamics of proteins,



Dr. Michelle Broido

and nuclear magnetic resonance spectroscopy. Broido, a native Californian, earned her undergraduate and graduate degrees in chemistry at the University of California, San Diego. She then did research as an NIGMS postdoctoral fellow at the Weizmann Institute of Science in Rehovot, Israel. Before coming to NIH, Broido was an associate professor of chemistry at Hunter College of the City University of New York and the director of CUNY's nuclear magnetic resonance facility. □

File Management Software Available

Are your reprint files becoming unmanageable? Would you like to download citations from a Medline search and automatically reformat them for bibliographies in various styles?

Software packages are available to assist with these and other tasks. On Apr. 24, NIH Library staff will demonstrate the IBM versions of two very popular packages, Reference Manager and Pro-Cite (both available on Mac). Information will be provided on these and other packages recommended by NIH personnel and/or evaluated by NIH Library staff.

Demonstrations are in the NIH Library training room, Wednesday, Apr. 24. Reference Manager: 10-11 a.m. and noon-1 p.m. Pro-Cite: 11 a.m.-noon and 1-2 p.m.

For more information call Jenny Harriman, 496-1156. □

Physical Society Honors Fogarty Scholar Watt Webb

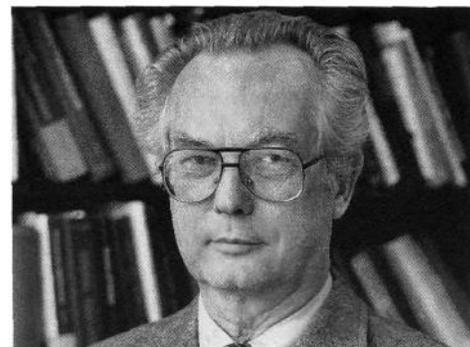
The American Physical Society awarded its 1991 Biological Physics Prize to Dr. Watt W. Webb, a Fogarty scholar-in-residence from Cornell University, at its recent annual meeting.

In awarding the prize, the society cited Webb "for his seminal work on the biophysics of cell membranes and cell motility, for his dedicated training of future generations of critical biophysicists, and for his longstanding contributions to the biophysics community."

Among Webb's many achievements are development of novel fluorescence techniques for measuring membrane protein and lipid diffusion on living cell surfaces, the application of sensitive imaging methods to observe the motion of individual receptor molecules on cells, classical studies of the molecular pumps that drive cytoplasmic streaming, explorations of the dynamics of reconstituted ion channels, and physical studies of membrane lipids through their liquid crystalline and fluctuation properties.

Webb is particularly proud of the award's acknowledgement of his "training of future generations." He says that there have been "few places in the country where physics graduate students can do Ph.D.-level research on biological problems while completing graduate education in physics or applied physics.

"Biological problems are so complex that they demand the best capability of physical science." He adds that "only recently has theoretical physics become powerful enough to approach the fundamental complexity of bio-



Dr. Watt Webb

logical systems."

In his lab, he notes, "students have lots of freedom and responsibility to find their own way, so many develop into excellent scientists."

A professor of applied physics at Cornell and former director of the university's School of Applied and Engineering Physics, Webb was nominated to be a scholar by Dr. Henry Metzger, scientific director of NIAMS.

While at NIH, he has been evaluating new physical optics instrumentation for use in biophysics research and studying cell surface receptor dynamics, including collaborative studies of the immunoglobulin-E receptor with Metzger.

Webb will complete his second term as a scholar in May and return next year to resume his research on receptor dynamics and signal transduction mechanisms. □



Members of the Coalition of Patient Advocates for Skin Diseases Research met recently with Dr. Lawrence E. Shulman, NIAMS director. Afterwards, some members met with Dr. Peter Steinert, chief of the Laboratory of Skin Biology, NIAMS. Others went to NLM, where they learned about Grateful Med, the history of the library and had a tour of the facilities. Standing are (from l) Dr. Robert Braun, executive officer, NIAMS; Geraldine Pollen, special assistant to the director, NIAMS; Bob Rigney, American Academy of Dermatology; Dr. Steven Hausman, deputy director, NIAMS; Diane Williams, United Scleroderma Foundation; Frances McHugh, Foundation for Ichthyosis and Related Skin Types; Annette Scalone, United Scleroderma Foundation; LaDonna Williams, Eczema Association for Science and Education; Nancy Richwalsky, National Congenital Port Wine Stain Foundation; Miriam Feder, Dysmorphic Epidermolysis Bullosa Research Association of America; Vicki Kalabokes, National Alopecia Areata Foundation. Seated are (from l) Cathy Gidley, National Psoriasis Foundation; Barbara Butler, Lupus Foundation of America, National Psoriasis Foundation; Dr. Lawrence E. Shulman, director, NIAMS; Robin Monsky and Debbie DeCaro, Scleroderma Research Foundation.

DPM's Jim Pierce Retires After Science, Personnel Career

Dr. James E. (Jim) Pierce Jr., special assistant to the assistant director for operations, Division of Personnel Management, retired on Apr. 3, after 34 years of federal service. He served 3 years with the U.S. Navy during World War II.

He arrived at NIH on Apr. 3, 1961, after having served as a medical technologist at Mt. Sinai Hospital, Chicago; Kaiser Foundation Hospitals, Oakland; and 5 years at George Washington University. He joined Dr. Baruch S. Blumberg, chief, Geographic Medicine and Genetics Branch, NIAMD. He coauthored 10 scientific publications, four of them with Blumberg, who became a 1976 Nobel laureate. Pierce later transferred to the Program on Mental Retardation in the newly created NICHD, where he performed duties related to enzymatic and chromosomal mappings.

Pierce left the scientific field in 1966 to become an NIH management intern. He joined the Division of Personnel Management at the completion of his internship, where the 1 year that he planned to spend in personnel lengthened into 24 years. During this period, he served as employment relations specialist, personnel management specialist, personnel officer of the National Heart and Lung Institute, and for the past 17 years as a special assistant in the Office of the Director, Division of Personnel Management.

In addition to his exemplary service to NIH, Pierce has always found time for others. Included among his activities are work with the Boy Scouts of America, for which he received the distinguished Silver Beaver Award. He is past master of Pythagoras Lodge No. 74, Free and Accepted Masons; a member



James E. Pierce

of the Western Maryland Consistory No. 270 of the Scottish Rite Masonry; and he currently serves as district deputy grand master for District No. 2, Western Maryland.

Pierce plans to spend more time with his family, especially his wife, Dorothy, who retired from the D.C. school system as a teacher. He will continue to serve as a senior deacon of Peoples Congregational United Church of Christ, Washington, where he is also a member of the men's fellowship and vice president of the credit union. He is an active member of the Alpha Phi Alpha Fraternity, Inc., and holds membership in numerous alumni groups at Hampton University, North Carolina Central University and Century University, Los Angeles. □

NIDDK Summer Intern Honored

NIDDK summer intern Thomas Tu from the University of Virginia was named to *USA Today's* 1991 All-USA College Academic First Team. The 18-year-old biochemistry major, who is in his second year at the university but has earned enough credits to be a junior, has spent the last two summers in NIDDK's Molecular Pathophysiology Branch working with Dr. Eitan Friedman. Tu is a coauthor on two published research papers on parathyroid tumors, and on one submitted article about genetic abnormalities in myocardial tissue. He conducted experiments using polymerase chain reaction techniques.

Tu was one of 20 chosen from 854 nominated for the honor by professors, deans and college presidents or by students themselves. Those named to the first team received \$2,500 and were featured in the Feb. 22 issue of *USA Today*. The second and third teams comprised a total of 40 students, and 60 students earned honorable mentions. □

Unneeded Books Get 'Weeding'

In May, the NIH Library will begin a project to remove old, unused, and physically damaged books.

Books with heavy usage will be examined to determine whether multiple copies or newer editions should be obtained. In most cases older editions will be removed and only the latest retained. In some cases books with very low usage will also be removed.

All the books to be withdrawn will be shelved in a specially designated area of the library for 1 month. NIH personnel may review proposed withdrawals and make alternative recommendations.

The NIH Library welcomes comments from personnel on the weeding project and recommendations on current books to be added to the collection.

Although the NIH Library does not have space to collect books of general historical value, it does retain NIH annual reports, histories of NIH, and legislative histories of the institutes. □



Using the new Novak mail sorting conveyor system recently installed in Bldg. 31's mail services section are (front, from l) Marlene Tate, Roderick Brown and (back row) Claudine Smith. This new system doubles the normal mail sorting speed and is used primarily for incoming and interoffice mail. The machine can accommodate up to six persons feeding mail into 64 separate slots labeled by destination. The mail is then moved along by an individual conveyor belt that dumps it into the appropriate tote box. The machine can sort up to 1,000 pieces of mail per hour, per person at each of the six stations. Last year the mailroom sorted and delivered 21.6 million pieces of mail to approximately 900 mail stops.

NIGMS Retiree Mourned

Gloria Grauman, a grants technical assistant in the NIGMS Office of Program Activities who retired July 1989, died of cardiac arrest Feb. 16 in Wheaton. She spent 14 years with the federal government, the last 12 in NIGMS. During that time, Grauman received six awards and served on the NIGMS EEO advisory committee. Survivors include her husband, Robert; two sons and two daughters.



Training Tips

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

<i>Courses and Programs*</i>	<i>Starting Dates</i>
<i>Personal Computing Training 496-6211</i>	
Welcome to Macintosh	5/3, 5/22, 6/3
Intro to Word Perfect (Mac)	5/6, 6/10
Advanced Word Perfect (Mac)	5/23
Intro to Microsoft Word (Mac)	6/5
Filemaker II	5/17
Excel Level 1	5/9, 6/13
Excel Level 2	5/16
Excel Level 4	6/11
FoxBASE-Level 1 (Mac)	5/13
HyperCard Programming-Level 1	5/7
3Com PC Network-Level 1	5/2, 6/4, 6/17
3Com PC Network-Level 2	5/14, 6/18
3Com PC Network Management-Level 1	5/20
Intro to Personal Computing for New Users	5/1, 6/6
Intro to PC Keyboarding	5/3
Intro to DOS	5/6, 5/22
Intro to WordPerfect 5.1	5/7, 5/21
WordPerfect 5.1-Advanced Topics	5/1, 6/10
WordPerfect 5.0 to 5.1 Transition	5/20
Intro to Harvard Graphics, Rel. 2.3	5/1
Intermediate Harvard Graphics, Rel. 2.3	6/4
Intro to dBASE III+	5/8, 6/11
Intermediate dBASE III+	5/14
Intro to Lotus 1-2-3, Rel. 2.2	5/13, 6/17

*Note: Starting with this issue of the *Record*, Training Tips will alternate between Personal Computing courses and Management, Supervisory, Office Operations, and Administrative Courses.

DCRT's Visiting Scientist Havlin Speaks on Disordered Systems

Dr. Shlomo Havlin, a visiting scientist in DCRT's Physical Science Laboratory, makes sense of chaos. He has designed a theoretical model to explain several disordered systems in nature, and for that accomplishment has been honored as a featured speaker at the American Chemical Society's annual meeting. He will also speak to the NIH community on this topic in May.

Examples of disordered systems in the biological realm include neurons, lipids, and the blood vessels of the eye, all of which have structures that lack rigid order in similar ways.

Havlin's model, developed together with DCRT's Drs. George Weiss and H. Eugene Stanley of Boston University, reflects the most accepted understanding of the physical and chemical processes of a disordered system to date. By explaining the mechanisms generating this type of disorder, Havlin's work can benefit scientific research across NIH. "This model applies to many biological systems, which are the main issues at NIH," Havlin said.

The ACS speech, to be given Apr. 17 in Atlanta, is called "Transport in Trapping in Fractals" and will focus on the chemical processes in disordered systems. Havlin's 1-hour NIH presentation will be held May 12 at 1:30 p.m. in Bldg. 12A, Rm. B51. □



A check for \$750, representing proceeds from sales of the most recent volume of the NIH R&W Cookbook, was recently donated to the Children's Inn at NIH. On hand for the gift presentation were (from l) Agnes Richardson and Marge Casey, both of the cookbook committee, R&W president Dr. Helen Gift, daytime inn Manager Margo Bradford, and Kathy Carter, who chaired the cookbook committee.

Go Fly a Kite, Apr. 20

Kites will fill the skies over NIH on Saturday, Apr. 20 as R&W and the Bethesda Urban District cosponsor the second annual Spring Kite Fling.

Everyone is invited to fly their own kites from 1 to 3 p.m. on the rolling grounds of NIH behind the National Library of Medicine, where the first 50 children will receive a free prize. At 2 p.m., "Ben Franklin" will tell stories about how he discovered electricity. Refreshments will be available. The rain date is Sunday, Apr. 21.

To attend, park in lot 41B and look for the high-flying kites overhead. □

Readers Needed for Blind

Volunteers with a technical, academic or professional background are urgently needed by Recording for the Blind to record educational books on tape for thousands of students who can't read because of visual, physical or perceptual handicaps. Fields include astronomy, biology, chemistry, computer programming, medicine, physics and statistics.

Volunteers spend 2 hours a week at sessions held during the day, at night and on Saturday morning. Location is near the Tenleytown Metro station on the Red Line. For more information call (202) 244-8990. □



Eight NIDDK employees recently received the NIH Merit Award from the institute's director, Dr. Phillip Gordon (seated, c). The recipients are (seated, from l) Mariena V. Mattson and Joan H. Chamberlain. Standing are (from l) Charles J. Woodard, Margaret E. Hawker, Jacqueline E. Makle, and William L. Padgett. Not pictured are Dorothy C. Benton and Bess C. Gary.

NIH Hosts International Workshop on Biodiversity

A 2-day international workshop on biological diversity, drug development and the sustainable use of natural resources—believed to be the first of its kind—was held at NIH Mar. 13-14.

The workshop, "Drug Development, Biological Diversity, and Economic Growth," was sponsored by NCI, the Fogarty International Center, the U.S. Agency for International Development, and the National Science Foundation. It helped clarify the needs of developing countries and their scientific priorities so United States agencies can strengthen and coordinate their programs to support biological diversity and drug development.

The participants, representing seven countries, private industry, and environmental activist groups, focused on how to facilitate the development of pharmaceuticals derived from bioactive natural products while protecting the interests of the developing countries.

The ultimate goal of such activities is to promote economic growth in developing countries, while also conserving the biological resources from which pharmaceuticals and other useful products are derived.

"Biological diversity is a vanishing natural resource," FIC director Dr. Philip E. Schambra told the group in an opening statement. "It is estimated that between 5 and 80 million species of organisms exist today, of which one-quarter to one-half are threatened." He said most endangered species live in tropical areas, and that many countries with tropical climates have economies that are still developing.

"There is great pressure within these countries to exploit their available natural resources. The challenge for all of us," he said, "is to encourage sustainable economic development and the preservation of fragile natural resources including the unique product of eons of evolution, the Earth's biological diversity."

Chairing the conference was Dr. Jeffrey A. McNeely, chief conservation officer of the International Union for the Conservation of Nature and Natural Resources, based in Switzerland. McNeely is a world-renowned expert in conserving biological diversity.

Also participating in the workshop, Rep. John E. Porter (R-IL) expressed personal and congressional interest in the issues of preserving biological diversity and protecting human health, in addition to promoting economic growth.

The views of the National Cancer Institute were presented by Dr. Saul A. Schepartz, cancer expert within the Division of Cancer Treatment. The NCI has the only program within NIH devoted to the discovery and



Among the participants at NIH's conference on biodiversity were (from l) Dr. W. Franklin Harris, National Science Foundation; Dr. George Albers-Schonberg, Merck, Sharp & Dohme; and Dr. H. Haryanto Dhanurirto, of Indonesia's Agency for the Assessment and Application of Technology.

development of therapeutic agents from natural products, testing large numbers of materials to develop drugs for clinical trials in both cancer and AIDS.

Other speakers at the workshop provided the perspectives of the sponsoring agencies, pharmaceutical companies, and the governments of Ecuador, Madagascar, Indonesia, and Thailand. Also, speakers from Costa Rica, Brazil, and the U.S. presented technical and legal aspects of the cataloguing and surveying of pharmaceutically active plants and organisms. They also provided an overview of the current state of knowledge in the scientific community.

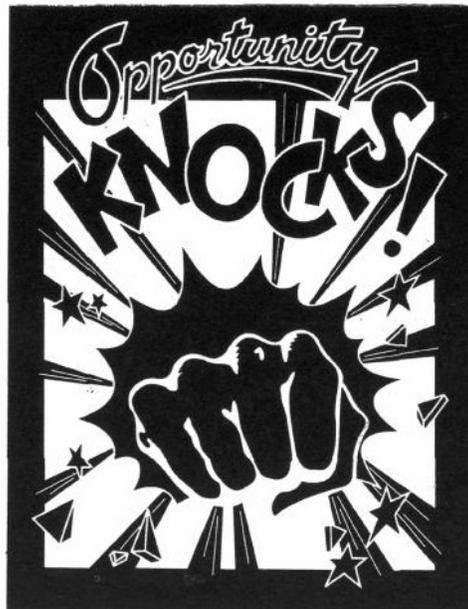
At the end of the workshop, the participants drafted a summary of issues brought up by the various speakers. Key conclusions recognized the importance of collecting traditional knowledge about bioactive species and the need to develop methods of compensation for those who possess traditional knowledge and for countries who have and maintain biologically diverse ecosystems. The workshop recognized the need for additional training and enhanced infrastructure support, especially to inventory species and traditional knowledge, and the provision of storage facilities, laboratories, and herbariums. The participants also agreed on the importance of developing new therapeutic agents and vaccines applicable to diseases in countries where bioactive species are collected.

The sponsoring agencies agreed to continue to work together to develop joint programs to address needs and concerns identified during the workshop.

Interested NIH staff are invited to contact F. Gray Handley, chief, International Coordination and Liaison Branch, Fogarty International Center, for additional information. □

Social Security Cards Available

A representative from the Social Security Administration will visit NIH on Thursday, May 2, to register minor children for Social Security numbers. The agent will be outside the Bldg. 31 cafeteria door from 9:30 a.m. to 12:30 p.m., with forms for SSN registration. The visit is sponsored by the Fogarty Center; for more information call 496-4625. □



NIH and ADAMHA are jointly sponsoring a Job Fair on Saturday, Apr. 27 from 10 a.m. until 3 p.m. in a tent near the Medical Center Metro station. Nursing, scientific, computer, administrative, clerical, library, professional and trade positions will be available. Applicants should bring resumes or SF-171s. For information call NIH, 496-0471, or ADAMHA, 443-9071.