

"Still
The Second
Best Thing
About Payday"

The NIH Record

Director Takes Formal Oath

Healy Makes History, Pledges Commitment at Swearing-In

By Carla Garnett

History was made June 24 as Dr. Bernadine Healy formally took the oath of office as NIH director. Greeted at her swearing-in ceremony by President Bush and DHHS secretary Dr. Louis Sullivan, NIH's first woman director had been unanimously confirmed for the position by the Senate Mar. 21 and officially took over the reins of NIH in April.

"Dr. Healy's appointment reinforces the commitment by the President and me to fully tap into the reservoir of women and minorities," said Sullivan, in opening remarks at the swearing-in ceremony. "This also signals our commitment to providing strong leadership in biomedical research."

Sullivan said NIH must have dynamic, visionary leadership at its helm. "We have found that person in Bernadine Healy," he said, adding that Bush made Healy the first person covered under the new pay reform legislation, which gave the NIH directorship an immediate pay raise.

"Dr. Healy, you bring the inspiration, soul and understanding necessary for building on NIH's already sterling legacy," said Bush, emphasizing the importance of individual

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Dr. Bernadine Healy takes the constitutional oath of office June 24 that formally recognizes her position as NIH director. DHHS secretary Dr. Louis Sullivan (l) administers the oath while Healy's husband Dr. Floyd Loop holds the Bible, and President Bush and Healy's daughters Bartlett (second from l) and Marie (c) look on.

PHS Holds Parley on Scientific Education, Literacy

If we are to continue to develop our knowledge in biomedical science, it is critical that we increase biomedical science literacy among the public," HHS secretary Dr. Louis W. Sullivan stated in a recent report.

"If we hope to conquer the diseases that still plague people, we need to nurture today's students into tomorrow's biomedical scientists. This means that we need to continue to emphasize the importance of science education in our schools and to increase our efforts in making biomedical research careers attractive and accessible to all members of society."

Sullivan expanded on this theme when he delivered the keynote address last month in Columbus, Ohio, at "Prologue to Action: Life Sciences Education and Science Literacy." This working conference drew 225 participants from throughout the American science education community to develop a comprehensive set of recommendations for the PHS.

By involving individuals from outside of PHS—educators, teachers, federal and state policymakers, and representatives from industry, the media, foundations and professional

NIH's Thompson Offers Help in Emergencies

By Anne Barber

Stopping to help after a recent car accident where two little boys were killed and their father seriously injured required no second thoughts on the part of Barrington Thompson—he does it automatically. He doesn't hesitate to get involved, use his expertise in CPR and assist whatever emergency team might arrive. Thompson is used to emergency situations; that is part of his job here at NIH.

Thompson is a respiratory therapy equipment specialist who works for Primedica, a private contractor, in the Clinical Center's department of respiratory care and physiologic monitoring. Chief Donald Flynn and the Montgomery County Fire and Rescue Squad, however, view Thompson differently. In fact, they presented him with an outstanding community service award at a recent banquet.

The accident for which Thompson was recognized occurred on May 8 around 7:35 a.m. as he was on his way to work on U.S. 29 in the Four Corners area of Silver Spring. He heard brakes screeching followed by a loud crash so he knew there had been a bad accident. He was in the opposite lane from the

crash, but he pulled out his NIH badge and signalled for cars to make way for him to cross over and allow him to park near the scene.

"I saw one child completely unconscious and the father who was semiconscious. He kept asking about his son. I tried to calm him while waiting for medical help to arrive. The fire rescue truck arrived first, then the paramedics." After helping get the child out of the car, Thompson started CPR and continued until an ambulance arrived. Once the child was on his way to the hospital, Thompson ran back to help extricate the father from the car. "It took about 25 to 30 minutes to get the father out," he said. "The father was then more conscious and started asking about his second son. That was when we realized there was another child."

After searching the car for the second child, they realized the back window was broken; the boy had been thrown clear of the accident. "We found him about 35-40 feet away, lying face down in a gully that was about 12 feet down," Thompson continued. "He was not dead at the scene. He had a faint pulse." A

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THOMPSON

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human chain formed to bring him up from the gully and CPR was performed until another ambulance arrived. Both children were taken to Holy Cross Hospital, and while travel time was only 7 minutes, one died enroute and the other 15 minutes after arrival. The father was flown by helicopter to Suburban Hospital with serious internal injuries.

When the police arrived and all pertinent information had been obtained, Thompson was preparing to drive away when a policeman told him that both boys had died. "I had been at the accident scene for approximately an hour and a half," he said, "but when the policeman told me that, it finally hit me."

"I am glad I was there to help. I gave them all the knowledge and experience I had to offer."

The mother of the accident victims found out from sources that Thompson had helped during the accident and one of her family members, who also works at NIH's Clinical Center, looked him up. "It turned out," he said, "that we had known each other for more than 2 years. He is an x-ray technician here at NIH."



Barrington Thompson

The mother has since called Thompson and expressed a desire to meet him. The father is now home from the hospital but still faces medical problems. As soon as it can be arranged, Thompson is willing to meet with the family and talk it out. "They have the greatest hardship to face," he says.

This was not the first time that Thompson had stopped to assist in an emergency. Back in 1989, again while enroute to work, he came across a man having a heart attack on the street. Thompson pulled over and began CPR. A nurse, Sharon Bray from CC's nursing department, also stopped and between the two of them they performed CPR until paramedics

arrived about 15 minutes later. The man survived. Thompson and Bray continue to stay in touch with each other. "I also heard from that man's family," he said.

"I always travel with an emergency kit in my car and I renew my CPR certification yearly," says Thompson. "I will continue to stop because you just can't drive by if someone needs help. Time is sometimes the most crucial element."

Thompson admits that the two experiences have sent his adrenaline flowing. One of the rewards he gets from his job is "the thrill of seeing a person walk away from an emergency situation where you have used your skills to help."

Originally from New York, Thompson came to this area 5 years ago to attend school and decided to stay. He has been at NIH more than 4 years, starting as a stay-in-school. He worked as a biological aide in Bldg. 36 during the day while attending classes in the evening. On weekends he worked part-time for the messenger/escort service in Bldg. 10. When Thompson heard about the job with Primedica, he considered it a good opportunity to receive on-the-job training and continue his education at night. He was hired in March 1988, received training for 6 months, and has been doing the job ever since.

Thompson received his degree in computer science programs in 1990 from the University of the District of Columbia. He accomplished this in 3½ years by taking summer courses.

Remembering his school days, Thompson said sometimes his beeper, which he wears constantly, would go off and he would have to stop somewhere and call in. "Once, I had to turn around and come back to work."

"Doing both, job and school, was a real challenge," he continued. "It took a little extra time on my part to coordinate the job so as to get to school on time."

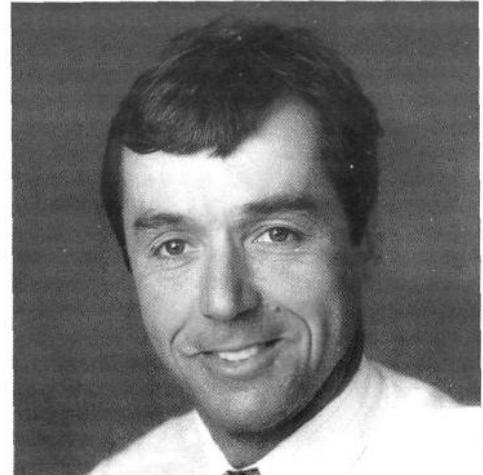
Upon getting his degree, Thompson took on a part-time job as an emergency medical technician at a private research clinic located on the Shady Grove medical campus.

Thompson's job at NIH is like his off hours—full of emergency situations and always on the run. His section, respiratory care, is part of a larger team that responds to code blue emergencies.

His department is in charge of maintaining all respiratory equipment for the hospital, monitoring the intensive care unit, hooking up EKGs and ventilators. "We try to schedule as much as we can," he said, "and respond to emergencies as called."

"I like working in the medical field because you get an adrenaline rush and you know you have the ability to do the job."

Although only 28 years old, Thompson sums up his life thus far: "I pack a lot into my days." □



Dr. Harry Mahar recently accepted an award on behalf of the Occupational Safety and Health Branch (OSHB), Division of Safety, from the Maryland governor's committee on employment of people with disabilities at its annual conference and awards luncheon. The award was presented to the branch for its outstanding role in encouraging the employment of people with disabilities. OSHB is an NIH participant in the Marriott Foundation for People with Disabilities, a program to provide employment internships to high school students with disabilities. All ICDs interested in hiring students from this internship program should call Joan Brogan, 496-2906.

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News From Florence

HHV-6 Induces HIV Infection of Normally Nonsusceptible Immune Cells

The human herpesvirus-6 (HHV-6) may act as a cofactor in the development of AIDS, targeting immune system cells for infection by HIV that are not normally susceptible to the virus, according to new findings reported by Dr. Paolo Lusso of NCI.

The study, presented at the 7th International Conference on AIDS, provides evidence that HHV-6 induces the expression of specific receptors ("docking ports") for HIV on the surface of certain T lymphocytes (white blood cells that regulate immune function) where they normally do not exist. HHV-6, which is found in more than half of the world's population and causes the childhood disease roseola infantum, does not by itself produce AIDS.

"Our findings suggest that HHV-6 may broaden the range of T lymphocytes that can be infected by HIV, favoring its spread in patients coinfecte with the two viruses," said Lusso.

T lymphocytes are identified by the kinds of antigens (proteins that provoke an immune response) present on their surface. One type, the CD4⁺ T cell (also known as a "helper T cell" for its ability to activate a number of immune responses), has CD4 protein as its distinguishing surface antigen. HIV exhibits a protein on its surface, gp120, that uses the CD4 protein as a receptor. After binding, the virus can enter the T cell and use its genetic replicating mechanism to make new HIV particles.

CD8⁺ T cells, divided into "killer T cells" (which attack infected or malignant body cells) and "suppressor T cells" (which suppress the action of immune system cells), have CD8 protein on their surface. In CD8⁺ T cells, the gene which produces the CD4 protein is highly repressed; thus, the cells lack CD4 receptors. Without these binding sites on its surface, the CD8⁺ T cell is resistant to HIV infection.

Research by Lusso and his colleagues determined that HHV-6 is capable of infecting both CD4⁺ and CD8⁺ T lymphocytes, rather than just CD4⁺ T cells as previously believed. The scientists also showed that HHV-6 infection could turn on production of CD4 protein in CD8⁺ T cells, creating CD4 surface receptors and making the cells susceptible to HIV.

First, cultures of the human cancer T cell line Jurkat, known for its low level of CD4 protein expression, were infected with HHV-6. The virus triggered a consistently higher-than-normal level of CD4 protein production. Infection of Jurkat cells by other herpesviruses showed no such increase, indicating that only HHV-6 produces this effect.

The scientists next wanted to see if normal CD8⁺ T lymphocytes could be infected with HHV-6, and if so, would the virus induce

CD4 protein synthesis similar to that seen in Jurkat cells. Results from the experiment showed for the first time that the CD8⁺ T cells were susceptible to HHV-6, and that under the virus' direction, would produce CD4 protein.

The level of this induction was measured by counting the number of T cells that had both CD4 and CD8 surface antigens. Counts of these CD4⁺CD8⁺ T cells correlated well with the number of cells expressing HHV-6 antigens, suggesting that conversion from CD4⁻ to CD4⁺ was linked to virus infection.

"The absence of CD4 protein in CD8⁺ T cells had always been considered an irreversible 'congenital' trait defined during the cell's maturation in the thymus gland," said Lusso. "That HHV-6, a naturally occurring and very common agent, can change this trait is a significant finding. It explains how HHV-6 could mark normally nonsusceptible T cells as

potential HIV targets."

To test this hypothesis, the scientists incubated HHV-6-infected CD8⁺ T cells with the AIDS virus. Within 2 hours after exposure to the virus, HIV DNA was seen in the herpesvirus-infected T cells but not in controls (cells not infected with HHV-6).

Antibodies against CD4 protein were introduced into an HHV-6 infected T cell culture before exposure to HIV. As expected, the CD4 receptors were blocked and prevented HIV infection of these cells. This shows that CD4 is the HIV binding site on CD8⁺ T cells.

The study was conducted by Lusso, a visiting associate from Italy, Drs. Franco Lori and Alfredo Garzino-Demo, visiting fellows from Italy, Drs. Suresh Arya and Robert C. Gallo of the Laboratory of Tumor Cell Biology, NCI; and Drs. Andrea De Maria and Mauro Malnati of NIAID. □

Test Shows Exposure to HIV Earlier than Infection-Based Assays

According to early study results, a new testing technique may show exposure to HIV up to a year earlier than current tests show infection with the virus. Although demonstrating exposure to HIV does not prove infection, the high-risk, initially uninfected person studied by NCI researchers showed HIV infection in several standard tests 14 months after detection of HIV exposure with the new test.

"A test that shows such early evidence of exposure to HIV would be useful for diagnosis, especially for people who are at high risk of infection," explained NCI researcher Mario Clerici in his presentation at the 7th International Conference on AIDS. "It might also provide a more sensitive way to screen blood and organ donors and potentially creates an opportunity for earlier treatment." Clerici cautioned, however, that more research on additional high-risk people is needed to confirm the usefulness of the test.

Current tests for HIV depend on infection and detect either the immune response to the virus (antibody), pieces of viral proteins (antigen), or genetic material from the virus. The test reported by the NCI researchers detects the chemical messengers that specific white blood cells (T helper cells) produce when they come in contact with HIV. These chemical messengers, known as lymphokines, can eventually stimulate other cells of the immune system to make antibodies or killer cells against the virus.

"The test shows that T helper cells have seen HIV and recognize it," explained NCI scientist Gene Shearer. By exposing T helper cells to pieces of HIV (antigen) in the laboratory, measurements of the lymphokines that

are produced can be made. More than 100 individuals considered not to be at risk for HIV infection have tested negative in a screening test for HIV exposure.

Over a 19-month period, researchers from NCI and the University of Maryland studied a high-risk homosexual man, taking blood and serum samples seven times to test for HIV infection and HIV exposure. Standard screening tests (HIV-1 antibody and p24 antigen assays), a standard laboratory test for genetic material from the virus (polymerase chain reaction or PCR test), and the new T helper cell immune function test were used.

The screening tests remained negative for more than 16 months, while the T helper cell test became positive by the fifth month, and remained positive for the rest of the study. "Although it might be expected that the T helper cell test would be positive before antibodies could be detected, it is surprising that the T cell exposure reaction would precede antibody production by more than 1 year," said Clerici.

The PCR test also remained negative for more than 16 months, which was unexpected. The researchers suggest that, in the early stages of HIV infection, the virus may be sequestered somewhere other than in circulating blood. It is also possible that the HIV infection is kept under control by the immune system for a period of time, allowing HIV exposure tests to be positive while standard infection-based tests are negative. Later, when the virus multiplies, genetic material from the virus can be found in the blood, and antibodies are produced by the immune system. □

LITERACY

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organizations—the conference complemented and built on existing education programs rather than merely duplicating them. In addition, each of the conference attendees was able to add a unique perspective to the PHS science education initiative. This should ensure a comprehensive and well-integrated plan that will meet the needs of many segments of the nation.

Two major objectives of the PHS science education initiative are to expand efforts to enhance teacher knowledge of the life sciences and to encourage partnerships between the scientific and educational communities to improve science education at preschool through undergraduate levels. This new emphasis for the PHS will have an impact on student knowledge, motivation, career interest, and health promotion.

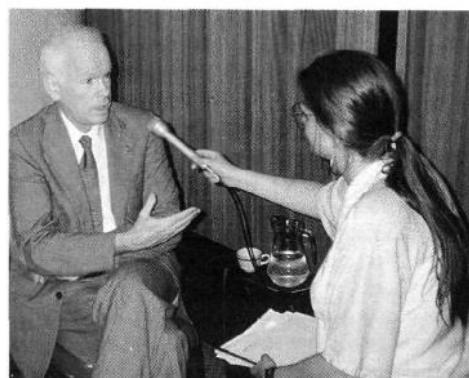
Through its own agencies, and through universities and other organizations, PHS expects to promote and support diverse activities. These include expanded opportunities for teachers such as summer training institutes; development of curriculum supplements, audiovisual materials, classroom activities, laboratory guides, and other educational materials; laboratory experiences for students and teachers; and provision of mentors. A major emphasis will continue to be on programs to improve science education for minorities and women.

In addition to Secretary Sullivan, other key speakers were Dr. James O. Mason, HHS assistant secretary for health; Dr. Bernadine Healy, NIH director; Dr. Frederick K. Goodwin, ADAMHA administrator; Dr. William F. Raub, NIH deputy director; Dr. E. Gordon Gee, Ohio State University (OSU) president; and Dr. J. Fredrick Cornhill, OSU biomedical engineering center director.

Planning for the PHS conference was coordinated by Dr. Jay Moskowitz, NIH associate director for science policy and legislation, and Bonnie Kalberer of that office.—Marc Stern



During the PHS life sciences education and science literacy conference in Columbus, Ohio, several news interviews took place. NIH director Dr. Bernadine Healy (above, l) discussed her initiatives as NIH director with reporter Laurie Losocco of the Columbus Dispatch. Also, ADAMHA administrator Dr. Frederick Goodwin (below) talked about increased minority participation in science careers with Karen Hopkin of radio station WOSU.



Members of NCI's EEO advisory group are (seated, from l) John Lindsay, Maxine I. Richardson, Kay Johnson, Dr. Samuel Broder, Linda Brown, Roger Aamodt, Betty Ann Sullivan. Standing are (from l) Herb Pierson, Donald Shoplard, Yvette Fryar, Marianne Wagner, O.H. Laster, Katie Finn, Wayne Jackson, Sandra Zink, Elena Murray, Janet Brow, Elise Yau, Yvonne Jones, Jane Daye, Jennifer Michael, Laura Lee, Carol Kelly and Don Christoferson. Not shown are Sudhir Srivastava, Nailab Agyeman, Rosemary Cuddy, Vaurice Stokes.

Committee To Define Needs For Online Access to ADB

The NIH information processing committee was recently formed as part of a plan to provide online access to administrative and financial data for users throughout NIH.

Although a wealth of information resides in the administrative database (ADB) and the central accounting system, NIH end users have often been frustrated by the lack of immediate access to this information. An NIH initiative has, therefore, been undertaken with the goal of providing online access to NIH data.

John D. Mahoney, NIH associate director for administration, has charged the information processing committee with the initial task of defining users' information requirements at all levels within the ICDs. Four subcommittees have been formed, each with its own focus, to facilitate gathering of this information—administrative/management, budget/financial, laboratory/branch, and procurement subcommittees. All ICDs have representation on one or more of these groups.

Once the administrative and financial data needs have been clearly identified, a technical subcommittee will work with DCRT to help define the way each ICD will provide access to its users.

The committee welcomes input from all levels within NIH. If you have not been asked by your ICD to contribute your specific information needs, please contact the chair of the subcommittee representing your area of interest.

Committee chair: Mark Kochevar, NCI, 496-6556. Subcommittee chairs: administrative/management—Hillel Soclof, NHLBI, 496-2157; budget/financial—Steven Berkowitz, NIAID, 496-4701; laboratory/branch—Dr. Steven Tronick, NCI, 496-8910; procurement—Byron Mason, NINDS, 496-5171; technical—Linda Alger, ORS, 496-1004. □

NCI Program Enriches Teachers

The NCI Equal Employment Opportunity advisory group (EEOAG) has started a teachers' enrichment program as an outgrowth of its adopt-a-school program at McKinley High School in Washington.

This summer, six students and three science teachers from McKinley will work at NCI to see first-hand how medical scientists use technology in the laboratory to answer experimental questions. The enrichment effort is designed to provide teachers with an up-to-date perspective on science so they can prepare their students for the seminars and lectures in the adopt-a-school program.

The EEOAG also looks at NCI hiring and promotion policies and currently is studying retention and promotion of nondoctoral employees at the GS-9 to 13 level.

NIDDK's Ernie Johnson Departs for Penn State

"I really, really enjoyed that year I spent helping younger scientists get started," says Ernie Johnson. "There's no graduate training that prepares a postdoc to deal with NIH or DRG," he adds, referring to the year when, as Diabetes Program director, he also oversaw manpower development. It was a "third hat," he says, but work that ranks among his fondest memories at NIDDK.

On July 1, when Dr. Ernest W. Johnson became director of grants and contracts at Penn State University College of Medicine in Hershey, he took up that work again. His departure ended 15 years of service to NIDDK, where he directed the Division of Diabetes, Endocrinology and Metabolism since 1984. "They're very fortunate to get him," says Dr. Lester Salans, who hired Johnson to head the Diabetes Program even before he finished his 1-year stint as a grants associate in 1977.

Two characteristics marked his federal service: a talent for astute and successful administration, and an ability to get others to work with and for him. During Johnson's tenure in the Diabetes, Endocrinology and Metabolic Diseases Division, all of the major recommendations of the congressionally mandated national commission on diabetes came about: the national diabetes data group, responsible for major epidemiological study, was established; so were the national diabetes advisory board and the diabetes research and training centers. The decade-long diabetes control and complications trial, due to conclude in 1993, was launched, and a group Johnson has fostered and chaired, the diabetes mellitus interagency coordinating committee, was formed.

Cystic fibrosis research, which languished during the mid-seventies, also flourished while Johnson directed the DEM division. The discovery of the CF gene in 1989 occurred after DEM staff facilitated cooperation between Drs. Lap-Chee Tsui and Jack Riordan of Toronto's Hospital for Sick Children and Dr. Francis Collins of the University of Michigan. Based on advances in molecular biology and genetics during the last decade, that major discovery continues to energize CF research for both treatment and cure. "Ernie Johnson has been an important part of the growth and success of the largest extramural division in NIDDK, and we are all very grateful to him," says Dr. Phillip Gorden, NIDDK director.

Johnson took over the Diabetes Program at the same time that major new funding, generated in response to the work of the national commission on diabetes, was fueling an unprecedented growth in diabetes research. "When I first came to NIH," Johnson remembers, "I thought the hardest problem for



Dr. Ernest W. Johnson

science administrators was channeling money toward the most promising diabetes research. It was easy to succeed in those days. You could make everybody happy."

Lester Salans' perspective was a little different. "Twenty or 30 million new dollars came to us all of a sudden," says Salans, now a vice-president of Sandoz Pharmaceutical. "It was a real challenge to the extramural program to make the best use of that new money." Recalling the thoughtfulness, sensitivity, and creativity that his new administrator brought to the job, Salans adds, "Ernie helped educate them to the possibilities."

"He's an extraordinarily creative guy," asserts Dr. Walter Stoltz, who, as a fellow NIDDK program director, worked hand in glove with Johnson in that period. "If there was anybody who could figure out how to get something done, Ernie could. The guy's mind is going all the time. He's a brilliant problem solver, in any domain." Salans, too, appreciated Johnson's unbureaucratic, fresh approaches to organizing and channeling the program's new resources.

Gaining acceptance for some of that new thinking was the biggest challenge they faced, according to Salans, and Johnson's ability to get people to work together was a decided advantage. Targeted disease research in diabetes, for instance, was a concept "relatively foreign to NIH at the time." Part of Johnson's task, says Salans, was "getting everybody to buy into" the idea of support for diabetes-related research, including immunology, endocrinology, biochemistry, or any other science that might push diabetes knowledge forward. Special requests for applications went out, with encouragement to the scientific community to contribute their best ideas to the new enterprise.

"It was a very exciting, very rewarding time when we all worked hard, in a very collegial way." It all paid off when "really first-rate

grants came in—more grant applications than we had money for," Salans remembers. "I counted on Ernie, and he didn't let me down. Everything going on in the field of diabetes research now was begun or nurtured by programs set up in those days," he adds.

"People don't really think about what it takes just to keep something like that going," says Jean Curran, a former NIDDK program director who worked for Johnson during that same time. "It takes a lot of energy and knowledge and being able to work with various personalities. You're putting out fires all the time."

In the midst of fighting fires, however, Johnson also worked at fostering his staff's effectiveness. "Ernie worked hard," Curran adds, "but he was also always available, and very good to his people." Johnson is known for recruiting excellent people and letting them exercise their capabilities. "He really is extraordinarily committed to the development and productivity of the people who work for him," says Stoltz, who describes the unique *esprit de corps* among the DEM staff as a "healthy tension, an excitement," that Johnson fostered as division director. Yet he manages to achieve consensus and cooperation. "People feel they're an important part of the decision-making process," explains Dr. Robert Silverman, chief of the Diabetes Branch, who himself came to NIH through Johnson's efforts.

Johnson concedes that it wasn't easy to leave NIH. "I have roots here, and many good friends, but I'm very excited about returning to the academic world." He will also be professor of cellular and molecular physiology in the college of medicine at Penn State. More than anything else, though, he looks forward to working with those young scientists who are seeking support for new research programs.—Jane DeMouy □

R&W Offers Cancun Trip

Escape to the beautiful beaches of Cancun, Mexico with R&W. We've got an all-inclusive 4-day/3-night package, Dec. 6-9, at a great price. Our package includes: round trip airfare from BWI Airport, with meals and complimentary cocktails served inflight; airport and hotel transfers; breakfast, lunch, dinner and all snacks daily, and unlimited drinks at the bars and disco in the Royal Solaris; hotel accommodations at the Royal Solaris; hotel tax and baggage handling; three swimming pools and two jacuzzis; water sports; live nightly entertainment, and more.

Package price is \$569 per person, double occupancy if you book before July 15—after that date, price is \$594. A \$100 per person deposit is required to hold your reservation. □



Dr. Bernadine Healy, who was formally sworn in as NIH director June 24, pledges to "hurry" NIH toward cures and treatments for "every man, woman and child who has ever been touched by the anguish of disease."

Photos: Bill Branson



Healy, who said being sworn in as NIH director was the proudest moment of her professional life, shares the special time with her daughters, 11-year-old Bartlett and 4-year-old Marie.

HEALY

(Continued from Page 1)

effort to the goal of making this country "not only the wealthiest, but the healthiest nation in the world."

"Lives of dedication are exemplified here at NIH in healthcare workers, animal caretakers, grants administrators and support staff," he continued. "There are buildings full of unsung heroes right here."

The ceremony, held before a capacity crowd in Masur Auditorium, in addition to President and Mrs. Bush, Sullivan, DHHS assistant secretary for health Dr. James Mason, and Undersecretary Constance Horner, was attended by Healy's husband, Dr. Floyd Loop, her daughters Bartlett and Marie, and her mother.

"This is the proudest moment of my professional life made all the more special by the presence of my husband and love of my life, my children and my mom," said Healy, who smiled and intermittently clasped her husband's hand during the ceremony. "I can think of no greater honor than to be named the first woman director of the National Institutes of Health."

Healy said that even as special as the moment was to her, she was not thinking only of herself and her own family during the swearing-in ceremony. She was remembering another woman, a 30-year-old mother of four who had been diagnosed with metastatic breast cancer.

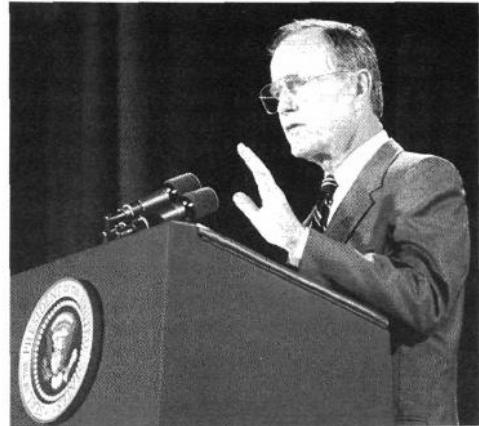
During a recent Capitol Hill visit, Healy had met the woman shortly before the woman was to undergo a last-ditch, difficult treatment to stop the spread of her disease. As Healy was leaving, the woman, who Healy described as displaying an inner beauty even in the face of the devastating effects of her cancer, took her arm and said, "Dr. Healy, hurry."

"Today, I take that young woman's farewell to me as a direct mandate from the American people," Healy declared. "NIH and the medical community must hurry. Human life is at stake, cures are desperately needed, and those cures are achievable—if we have resolve."

Bush, who praised all NIH'ers for their spirit of commitment, said Healy embodies what author Lewis Thomas meant when he spoke of "the capacity to do something unique, imaginative, useful and altogether right." The president also mentioned that he has asked Congress to increase NIH's 1992 budget to nearly \$9 billion.

"NIH-supported research has produced some of the most important medical advances in this century," he said. "In becoming director, Dr. Healy joins a long and noble tradition."

Bush also recalled his first introduction to Healy's work in 1984 when she worked for 2



President Bush, citing the major advances in science and medicine by NIH researchers that he said "not even Ripley would believe," praises Healy at her swearing-in ceremony for bringing inspiration and understanding to NIH's already sterling legacy.

years in the White House as deputy director of the Office of Science and Technology Policy. The office's director, Dr. Allan Bromley, Bush's chief science advisor, also attended the swearing-in.

Aside from being the first woman NIH director, Healy has made history in other ways:

As Sullivan mentioned, the NIH directorship was the first position the president suggested for the "critical position" category, a recently approved federal pay reform measure that authorizes 800 government positions to be paid at salary levels approaching the Cabinet secretary level—about \$138,000. Healy is the first to hold the position under this new pay agreement, on par with an executive level I.

In addition, the first Black director of an NIH institute—Dr. Kenneth Olden of NIEHS—was the first appointment of Healy's young tenure.

"Dr. Healy is already making an impact," said Sullivan. "I am confident NIH will flourish under her dynamic and conscientious leadership."



President Bush and Healy, who worked in the White House science policy office 1984-85 when Bush served as vice-president, share private words during her formal swearing-in ceremony June 24.



President Bush (r) leads Dr. Bernadine Healy and DHHS secretary Dr. Louis Sullivan toward Maser Auditorium shortly before Healy would be formally sworn in as NIH's first woman director June 24.

A cardiologist by training, she has also introduced a historic new 10-year, \$500 million women's health initiative, the most definitive study of its kind ever undertaken in the United States. The three-pronged, comprehensive initiative will include a large prospective surveillance program, a nationally based community prevention and intervention study and randomized clinical trials investigating cancer, cardiovascular disease and osteoporosis.

"NIH is a national treasure," said Healy. Referring to the constitutional oath administered to her, Healy compared the 13

institutes to the 13 original states that signed the U.S. Constitution. "But we can, we must, continue to be better," she said. "For us there are many wars yet to be won, and each day is our own Operation Bethesda Storm."

"We can only be a strong nation if we are a healthy nation," she said, concluding her address. "To this end we solemnly pledge to improve the health of this nation through science and discovery. And to that young mother and her family, and to every man, woman and child who has ever been touched by the anguish of disease—we fervently pledge to each of you—We will hurry." □



Four-year-old Marie Loop, Healy's youngest daughter, gets her mom's assistance signing the guest book.



At a Stone House reception following the swearing-in ceremony, NIH director Dr. Bernadine Healy accepts congratulations from Dr. Leamon Lee, director of NIH's Division of Financial Management.

IHS Honors Three NIH'ers

The Indian Health Service, a sister agency to NIH within DHHS, recently honored three NIH employees who lent some of their time and expertise to IHS. All three received the Director's Special Award for Excellence.

Karen O'Steen, director of NIH's Executive Secretariat, participated in the IHS agency-wide quality management initiative, which involved two trips to Arizona and one to Portland, Ore. She was honored "for expert advice and counsel to the IHS as it reviewed the Executive Secretariat to improve the agency's responsiveness to external authorities."

Dr. Claudia Baquet, associate director of NCI's Cancer Control Science Program, was cited "for outstanding efforts in cancer prevention activities for American Indian and Alaska Natives."

Dr. Peter Bennett, chief of NIDDK's Phoenix Epidemiology and Clinical Research Branch, was lauded "for outstanding efforts in the understanding and treatment of diabetes in American Indian and Alaska Natives." □

Three Join NEI Council

Three new members have been named to the National Advisory Eye Council, the principal advisory body to the National Eye Institute. They are Drs. Argye Hillis, Joseph Horwitz and Paul L. Kaufman.

Hillis, a recognized leader in the design and management of large-scale clinical research projects, has long been associated with NEI-supported clinical trials. She was a study manager and statistician for the first clinical trial funded by NEI, the Diabetic Retinopathy Study. She is currently chief biostatistician at the Institute for Health Care Evaluation, Texas A&M University, and director of biostatistics at Scott and White Hospital/Foundation in Temple, Tex.

Horwitz, an expert in lens protein research, has contributed significantly to the understanding of changes in membrane and crystallin proteins during cataract formation. For more than a decade, he has been active in a variety of NEI advisory groups.

Since 1980, he has been associate director of the Jules Stein Eye Institute and professor of ophthalmology/biophysics at the School of Medicine, University of California, Los Angeles, and an affiliate member of the Molecular Biology Institute at UCLA.

An ocular physiologist and pharmacologist, Kaufman has contributed to current understanding of how glaucoma drugs affect ocular fluid inflow and outflow. He was a member of the glaucoma panel for the second NEI 5-year plan and is currently on the data and safety monitoring committee for the NEI-supported Glaucoma Laser Trial. He is professor of ophthalmology and director of the glaucoma service at the University of Wisconsin-Madison. □

NIEHS' William Johnston Earns Doctorate After Hours

By Thomas R. Hawkins

If they held a bachelor's degree in science from Central Michigan University, a master's in public management from Wayne State University, and a certificate of graduate specialization in health care administration from the University of Southern California's Washington, D.C., extension campus, most federal employees might think that their education was complete. But 5 years ago, with 22 years of federal service behind him, William Johnston in the Contracts Procurement Management Branch, NIEHS, had the desire to pursue study toward a doctorate.

"I talked with several graduate school deans in the area to see what programs were offered," Johnston explains, "and several of them recommended Campbell University's program in educational administration, with an optional area in business administration, with some statistics. It helped, too, that Campbell offers course work in the evenings and summers that fit in with my work schedule." He started in the fall of 1986 and graduated in December 1990.

Campbell University is a small, private university in Buies Creek, N.C., that offers graduate work in law, education, and pharmacy.

"I thought statistics would be the difficult part of the educational administration curriculum, but it turned out to be the course work that interested me most," Johnston explained. Indeed, he ultimately wrote his dissertation on statistics—using linear and multiple regression analysis—and taught a few classes in statistics at the university before he graduated.

Johnston carried as many as 18 credit hours in 1 year, and 9 hours in one semester once, and graduated with a 3.95 average on a 4.0 scale.

"The energy required to keep at it was the hard part," he recalls. "You can't slack off; it's 100 percent or nothing."

Completing the degree gave Johnston a great sense of satisfaction. He is especially gratified by the support given by many of his colleagues at NIEHS. He names about a dozen people who offered advice, letters of reference, computer or statistical expertise, or other forms of assistance or moral support. "Before you get done, you realize that this is a road you don't travel alone. There are many fine people who support and encourage you along the way," he said.

One of his friends, Dr. Bernard A. Schwetz, chief of the Systemic Toxicology Branch at NIEHS, noted: "It's great to see someone who went out and did this on their own time, one semester at a time. I think it is a real accomplishment."

Johnston finished his course work in July 1990, took his written comprehensives in Sep-



Dr. William Johnston

tember, took his orals in October, and turned in his dissertation in November. He made the final defense of his dissertation in December. "When I had completed my defense," he recalls, "I left the room. When the committee called me back in and said, 'Congratulations, Doctor,' it was so surprising that I was kind of numb afterwards."

A number of NIEHS friends who had followed his progress were quick to call with their congratulations. "It was touching to me that there were so many nice people supporting me," Johnston said. "Plus my wife Eileen put up with me through all this. In addition to getting the degree, this realization has been very special."

Certainly the degree is a worthy objective in itself, and will enhance Johnston's performance at NIEHS. He also has ideas about how the degree will apply to future plans.

"When I leave the federal government, I would like to look into working as a contracts officer or administrator at an academic institution. I would also be interested in eventually starting my own business, teaching various aspects of contracts administration."

In the meantime, he may teach on a part-time basis since he enjoyed teaching at Campbell so much. "I would spend 12 or 15 hours preparing for a class, and after teaching I would stand up there and field questions from all over the room," Johnston said. "Afterwards you realize—my gosh, I really know this stuff. I can understand why people enjoy teaching."

He also realized how important statistics are in scientific work at NIEHS. "I realized the scientists here rely on statistics in designing studies and analyzing their data. My degree work gave me a new appreciation of what

researchers do."

He laughs a bit when he remembers all he went through holding down a full-time job and completing a doctoral program at the same time. "I'm not sure I would have the energy to do it all again," he said. □

NCRR Honors Brunzell

Dr. John D. Brunzell, professor of medicine at the University of Washington, Seattle, received the third annual Award for Excellence in Clinical Research for his studies of lipoprotein metabolism from the General Clinical Research Centers (GCRC) Program, NCRR.

Brunzell is an authority on disorders of lipoprotein metabolism, which is the process by which fats, cholesterol and triglycerides are transported and used throughout the body. His work has contributed fundamentally to the understanding of the role of triglycerides in heart disease, obesity and diabetes.

NCRR director Dr. Robert A. Whitney Jr., presented the \$5,000 cash award to Brunzell at the Association of American Physicians, the American Society for Clinical Investigation and the American Federation for



Sen. Brock Adams (D-Wash.) congratulates Dr. John Brunzell (r), winner of NCRR's third annual Award for Excellence in Clinical Research, at the Association of American Physicians/American Society for Clinical Investigation/American Federation for Clinical Research annual meeting.

Clinical Research's joint annual meeting. The money for the award is made available to the GCRC program by an anonymous donor to reward outstanding clinical research at an NCRR-supported GCRC.

Whitney praised Brunzell, calling him, "the kind of investigator who is responsible for the success of NCRR's General Clinical Research Centers Program."

"Dr. Brunzell's work is an example of the interface of clinical research and basic science. He applies basic science to human health problems to define their causes at the cellular and molecular level and interfaces that with his initial clinical observations and subsequent therapeutic approaches to correct abnormalities of lipid metabolism," Whitney said. □

NIDDK Program Director Keynotes Leukodystrophy Conference

Dr. Robert Katz, director of NIDDK's Metabolic Diseases Research Program, will speak on "NIDDK and Its Support of Rare Diseases" at the 10th anniversary conference of the United Leukodystrophy Foundation (ULF) at Northern Illinois University in DeKalb, July 11-14. He will also chair a scientific roundtable discussion to explore the possibilities for NIH-sponsored immunology research in the leukodystrophies.

Leukodystrophies are inherited metabolic disorders in which the accumulation of toxic metabolites affects the function of cellular organelles such as peroxisomes. People born with one of these disorders may develop adrenal insufficiency or destruction of myelin, the complex of lipoprotein layers that covers nerve fibers and transmits nerve impulses, resulting in central or peripheral nervous system dysfunction.

The ULF anniversary conference takes place amid growing evidence that a combination of diet therapy and enzyme replacement through bone marrow transplant may arrest the nerve destruction caused in adrenoleukodystrophy (ALD), one of the more common forms of these orphan diseases.

"It is a promising time, and patients and researchers are optimistic about a number of developing therapies," explains Katz. Gene therapy is the ultimate goal, according to Paula and Ron Brazeal, who founded ULF after losing two sons to the disorder. The gene for monochromatic leukodystrophy (MLD) has already been identified, and researchers are attempting to isolate the gene for X-linked ALD at the tip of the long arm of the X chromosome.

But right now, the Brazeals are feeling optimistic about another treatment for ALD. In this form of leukodystrophy, very long-chain fatty acids are not metabolized. Accumulating to toxic levels in the blood, adrenal glands, and the nervous system, they destroy adrenal and nerve function in young boys. In about half of those with the genetic defect, mental deterioration progresses rapidly between ages 4 and 8, resulting in dementia and death in about 2 years. Now, explains Katz, patients can be placed on a restricted diet supplemented by "a mixture of glycerol trierucate (GTE) and glycerol trioleate (GTO or Lorenzo's oil), which lowers the level of toxic, very long-chain fatty acids." This helps prevent nerve fiber deterioration in some but not all patients, allowing time for a more permanent intervention.

The diet therapy, developed by Dr. Hugo Moser of the Kennedy Institute in Baltimore and Dr. William Rizzo of Virginia Commonwealth University in Richmond, reduces levels of these fatty acids in the blood within 4



Dr. Robert Katz

weeks and has improved peripheral nerve function in some adults with a milder form of ALD called adrenomyeloneuropathy. Although diet alone cannot stop the course of the disease, it provides a window of opportunity for therapies such as bone marrow transplant, a treatment that appears to arrest rapid mental deterioration.

Because ALD won't necessarily occur in every boy with the genetic defect, bone marrow transplants can't be attempted until a child is symptomatic. Once a patient begins rapid nervous system deterioration and a donor is found, it is possible to transplant bone marrow within the few months available before extensive damage takes place. With the transplant, host marrow is destroyed, followed by an intravenous transfusion of donor marrow, which permanently produces the enzyme missing in ALD patients. Dr. William Kravit of the University of Minnesota at Minneapolis has performed transplants on ALD patients, and believes it can also help juvenile and adult victims of metachromatic leukodystrophy, another form of the disorder.

Four patients in the United States have received bone marrow transplants in conjunction with dietary therapy since January. "It is possible that in patients with rapid central nervous system deterioration, the oil therapy in conjunction with bone marrow transplant could arrest deterioration. However, much more has to be learned before a definitive course of treatment can be recommended," Katz explains. Researchers hope that clinical trials will show that dietary therapy can also help prevent the onset of neurological symptoms in asymptomatic boys who have the biochemical defect.

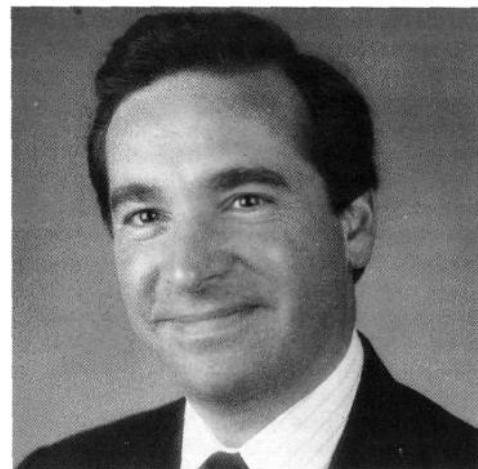
The United Leukodystrophy Foundation offers resources, referrals, information on clinical trials and genetic counseling to families, as well as funding and scientific support to researchers.—Jane DeMouy □

NIEHS Grants To Bolster Environmental Medicine

The NIEHS has awarded eight grants under its new Environmental/Occupational Academic Award Program to enable faculty at eight medical schools across the United States to expand training for medical students in environmental and occupational medicine. Grantees will establish new curricula, residencies and other innovative programs.

The grants, made possible by a \$500,000 allocation by Congress, were in response to two major studies, one from the American College of Physicians and the other from the National Academy of Sciences. The studies pointed out the need for broader awareness among primary care physicians of the diagnosis, care and prevention of occupational and environmental diseases.

The grants are for 5 years, subject to review, and provide funds for faculty salary, allowing recipients freedom from other academic duties in order to develop academic programs in environmental and occupational health training. □



Dr. Steven M. Schnittman has recently been named chief, Medical Branch, in the Treatment Research Program of NIAID's Division of Acquired Immunodeficiency Syndrome. He will provide leadership in planning the medical research agenda for AIDS clinical trials conducted by the NIAID-supported AIDS clinical trials group. This network of 47 medical centers throughout the United States evaluates promising therapies for use against the human immunodeficiency virus and the opportunistic infections and cancers that characterize AIDS. Schnittman received his medical degree from the New York University School of Medicine. After he completed his residency at New York Hospital-Cornell Medical Center in New York City in 1985, he came to NIAID as a staff fellow in the Laboratory of Immunoregulation. He has received several honors including the Young Investigator's Award from the American Society for Microbiology-Inter-science Conference on Antimicrobial Agents and Chemotherapy.

Lived 'Landscape Architect's Dream'

Grounds Chief Cook Retires After 31 Years

By Anne Barber

"NIH is a landscape architect's dream," says Thomas J. Cook, chief of the Grounds Maintenance and Landscaping Branch, DES. Having retired Apr. 3 after 31 years, he came to NIH for that reason. A landscape architect doing design and plantings before joining NIH in 1960, he was looking to gain experience in grounds maintenance. Ten years later, he became branch chief.

The dictionary defines a landscape architect as one whose profession is the arrangement of land for human use and enjoyment involving the placement of structures, vehicular and pedestrian ways, and plantings. "NIH," says Cook, "provides work in all these areas."

"Essentially, our job is to make the NIH facilities look good, and keep them looking good on the outside. NIH is dedicated to having a campus atmosphere and this has certainly made our job easier."

"Throughout the years," he continued, "there have always been construction surges. And when they level off, we get the campus fixed up and then the next surge begins. We strive and hope we've made a dent in keeping it looking nice."

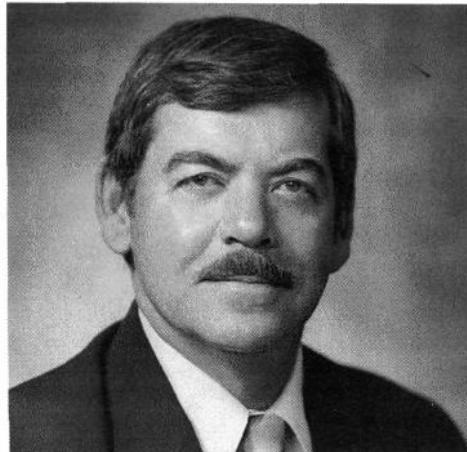
After Cook joined NIH, a master plan was created with the intention to provide buffer space between NIH and the surrounding neighborhoods. To accomplish this, he says, "We replace trees lost due to construction or age, plant shrubs and many flowers, especially bulbs that bloom early in the spring. Winter is somewhat depressing and the early spring flowers provide a welcome sight."

When Cook first came to NIH, Bldgs. 31A and 31B, along with the National Library of Medicine, were being constructed and Bldgs. 29 and 30 had just been completed. "That was my first project—Bldgs. 29 and 30. After that came Bldgs. 35, 36, and 37 where we did everything for that complex—design and landwork."

Many changes occurred during Cook's 31 years. One he particularly remembers—grass cutting. "In the beginning, we used three large tractor mowers along with smaller walk-behind mowers. Gradually we began using more smaller and fewer large mowers to accommodate the parking lot islands and the many small areas around buildings."

"Now," he says, "we contract out about 60 to 70 percent of the workload. When I first came here, staff numbered 55. Now we are down to less than half—23."

Cook says it was during the 1980's—with the imposed employee ceiling cuts—that NIH made the decision to hire researchers and not gardeners. "As a landscape architect, I didn't



Thomas Cook

understand that choice," he jokes. "But design, the more specialized maintenance work, and heavy equipment support are still being done by inhouse staff."

The branch also participated in the landscape design for the Children's Inn. "While we continue to provide maintenance to the inn," said Cook, "we get a lot of assistance, especially with plant materials, from supporters of the inn."

"I will certainly miss NIH," he says,—"the people, as well as the grounds that I have loved and worked with for the past 31 years. I will miss seeing trees and development areas taking shape. Many of those trees I located and had planted myself," he reminisces. "Now, some have 30-inch diameter trunks. I always miss those trees lost by construction because, working outside all the time, you think of this as your place. It is very rewarding."

A recipient of the NIH Director's Award in 1986, Cook is quick to credit his staff. "As any manager can tell you, the credit for the work has to go to all the people in the organization, the maintenance people who make these things happen. Without the gardeners, treeworkers, mechanics, equipment and tractor operators, things just would not happen."

While there have been no serious accidents while Cook was at NIH, he concedes that embarrassing moments did occur. "A tractor went through the window of the Credit Union in Bldg. 31 back in the late 1970's," he remembers. "No one was injured from grounds or the credit union. It happened around lunchtime at the first teller's booth. Luckily, she was out to lunch. The tractor just hung over into the window. We were very lucky."

For the past 6 or 7 years, flying model airplanes has become a hobby of Cook's. "I liked to do this as a teenager but got away from it for some time, but now I'm back into it and enjoying it all over again." The planes are radio-controlled and can be bought assembled or can be put together yourself. "I put mine together from sticks," he says proudly. "It takes longer, but it's more fun."

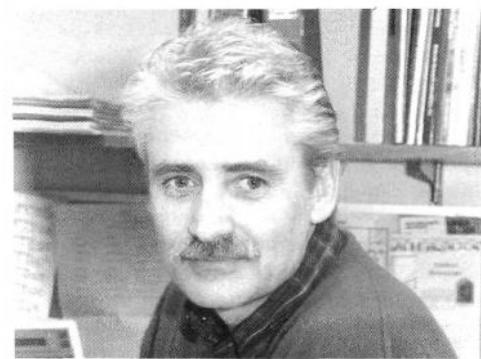
"I will continue to work in landscaping after my retirement," he says. "But it will be part-time, 3 days a week and mostly in maintenance programs and design. I will definitely be going back to the basics."

Upon retiring, he leaves words of wisdom: "You never call a shrub a bush. And never say 'dirt'—it is 'soil' to a landscape architect." Lynn Mueller, chief of planning, has been named acting chief of the branch following Cook's retirement. □

NIGMS Grantee Wins Roche Award

NIGMS grantee Dr. Leland Hartwell has received the 1991 V.D. Mattia Award from the Roche Institute of Molecular Biology for his contributions toward understanding the regulation of the eukaryotic cell cycle. The \$5,000 award was established in 1972 in memory of former Hoffmann-La Roche president and chief executive officer Dr. V.D. Mattia, and is given annually to a scientist "in recognition of outstanding contributions to the biomedical sciences."

Hartwell's research focuses on the genes involved in controlling the cell division cycle.



Dr. Leland Hartwell

In recent years, he has identified and studied genes whose role is to check that DNA damage has been repaired before allowing the cell cycle to continue.

Hartwell earned a Ph.D. in microbiology from MIT and is now a professor of genetics at the University of Washington. He is also current president of the Genetics Society of America. His other honors include election to the National Academy of Sciences in 1987 and the 1991 Alfred P. Sloan, Jr. Prize given by the General Motors Cancer Research Foundation. NIGMS has supported his research since 1969. □



TRAINING TIPS

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

Courses and Programs Starting Dates

Personal Computing Training 496-6211

Welcome to Macintosh	7/24, 8/5, 8/23
Intro to Word Perfect (Mac)	8/6
Advanced Word Perfect (Mac)	8/19
Intro to Microsoft Word (Mac)	8/12
Advanced Microsoft Word	8/28
Filemaker II	7/25
Excel Level 1	8/9
Excel Level 2	8/21
Excel Level 4	8/7
Intro to DeltaGraph	7/26
Intro to PowerPoint II	7/31
HyperCard Programming-Level 1	8/13
3Com PC Network-Level 1	8/1, 8/20
3Com PC Network-Level 2	7/22, 8/26
3Com PC Network Management-Level 1	7/29
Introduction to CRISP (a.m.)	8/13
Advanced CRISP (p.m.)	8/13
Introduction to Personal Computing for New Users	8/2
Improving PC Keyboarding Skills	8/1
Introduction to DOS	7/12, 7/26, 8/5
Introduction to WordPerfect 5.1	7/22, 8/7, 8/20
WordPerfect 5.1 - Advanced Topics	7/16, 8/26
Intro to Harvard Graphics, Rel. 2.3	9/5
Intermed. Harvard Graphics, Rel. 2.3	8/2
Introduction to dBASE III +	8/13
Intermediate dBASE III +	7/29, 9/10
dBASE III + - Advanced Topics	7/23
dBASE III + - Programming	8/19
Intro to Lotus 1-2-3, Rel. 2.2	8/12, 9/9
Lotus 1-2-3, Rel. 2.2 - Adv. Tops.	8/6

Cruise the Caribbean With R&W

R&W has booked a 7-night Southern Caribbean cruise aboard Royal Caribbean's newest ship, "Monarch of the Seas," sailing May 10, 1992. This luxurious ship boasts two dining rooms with a wide variety of international cuisines and superb service, bubbling jacuzzis, swimming pools, cafes, and a great itinerary. You'll visit the islands of St. Thomas, St. Maarten, Antigua, Martinique, and Barbados.

Because we have reserved a group of rooms, we're able to offer our members special savings. Inside cabins are \$1,436 per person (based on double occupancy), and outside cabins are \$1,538 per person—that's a savings of \$300 per person off the regular cruise rates. Price includes round trip air transportation and all meals.

For more information or to sign up, contact the R&W, 496-4600. A deposit of \$25 per person is required to reserve your cabin. An additional payment of \$175 will be due Dec. 10, and final payment plus port charges of \$50 will be due on Mar. 15, 1992. Sign up now for this wonderful vacation. □

Chemistry Prize Awarded to Dr. Earl Stadtman of NHLBI

Dr. Earl Reece Stadtman, chief of NHLBI's Laboratory of Biochemistry, has been named one of two winners of the 1991 Welch Foundation Award in Chemistry. He will share the \$250,000 prize with Dr. Edwin G. Krebs of the University of Washington at Seattle.

The Welch Foundation cited Stadtman and Krebs for outstanding contributions to the field of enzyme chemistry. "The discoveries and work of these two chemists have strongly influenced not only their own field of biochemistry, but molecular biology, medicine, and pharmacology as well," said the foundation's president.

Stadtman is known for his work on cyclic cascade systems, which are widely used in living organisms to regulate key metabolic pathways. These systems control the activities of enzymes that catalyze the metabolism of essential substances such as nitrogen and carbohydrates. Stadtman and his colleagues discovered and explicated the glutamine syn-

thetase cascade, an enzyme reaction that regulates synthesis of several different proteins, and detailed how it works. Such enzyme cascades provide cells with a finely tuned regulatory system that can integrate a vast amount of metabolic information and amplify metabolic signals and rates.

His current work focuses on how oxidation of proteins is involved in several phenomena that include aging, activation of neutrophils (blood cells that destroy bacteria), and a number of different diseases. Accumulation of oxidized proteins in cells may be an early sign of tissue damage by oxygen free radicals, according to this research.

Born in Carrizozo, N.M., Stadtman received his Ph.D. in biochemistry from the University of California at Berkeley and has been with NHLBI since 1950, becoming chief of his laboratory in 1962. He is a member of the National Academy of Sciences and the New York Academy of Sciences.



Dr. Earl Stadtman receives applause upon being announced the corecipient of the 1991 Welch Award in Chemistry. He and his wife, Dr. Thressa Stadtman (l), are members of the National Academy of Sciences.

NICHD Advisory Council Gains Four New Members

The National Institute of Child Health and Human Development has named four new members to its Advisory Council. They are Dr. Josefina J. Card, president and principal research scientist of the Sociometrics Corporation, Los Altos, Calif.; Dr. Richard M. Narkewicz, attending pediatrician at the Medical Center Hospital of Vermont, Burlington, since 1966, and highly respected, well-known advocate of children's needs, who has appeared before the Senate appropriations committee,

House subcommittee on commerce, and on national television (*Good Morning America*) on behalf of children; Dr. Michael A. Simmons, chairman of pediatrics at the University of Utah School of Medicine and well-published author in the field of pediatric research; and Dr. Henry W. Foster Jr., professor and chair, department of obstetrics and gynecology, Meharry Medical College, Nashville, and March of Dimes Man of the Year, Music City Chapter. □

Bond Campaign Sees Increase

As the 1991 U.S. Savings Bonds campaign draws to a close, it's clear that NIH'ers are more willing than ever to look out for their financial futures.

This season bond buyers have purchased more than in previous years, resulting in a participation rate of 28.4 percent, with more savings bonds applications expected during mid-July, the official close of the campaign.

"FIC was pleased to lead the savings bonds campaign this year," said William Doak, FIC executive officer and this year's bond coordinator. "The spirit and enthusiasm demonstrated by the ICD deputy coordinators and canvassers was outstanding, and any success was largely due to their efforts. We are also indebted to Jack Patterson who worked diligently to train and assist the staff involved in the campaign."

It is expected that more than 1,000 applications for new bond allotments will be processed along with increased allotments for existing bond buyers.

Several ICDs—NCNR, NIA, NCHGR, and NIEHS—met or exceeded the 40 percent participation rate goal.

Over half of the ICDs met or exceeded the goal to increase current allotments. Four ICDs—NCHGR, NCNR, NIGMS, and FIC—demonstrated a double-digit improvement in their participation rate over the course of the campaign.

Special thanks went to all those responsible for making this season's campaign a success, especially the following donors: NIH Federal Credit Union (\$100 U.S. Savings Bond), R&W (raffle prizes), Crestar Bank (\$50 U.S. Savings Bond), GEICO (cordless telephone) and the Capital Centre (Bullets tickets) for their generous donations to the bond drive.

Raffle winners were: William H. Hill, DRG (cordless phone); Barbara Wassell, DRG (\$50 bond); Vernon Steele, NCI (Bullets tickets); and Ann Bodmer, NCI (\$100 bond).—Carol Cronin □

NICHD Needs Volunteers

NICHD seeks healthy volunteers ages 18-45 to participate in evaluation of a new vaccine against *Staphylococcus aureus* infections. Volunteers will be tested for HIV, hepatitis, and abnormal liver functions. Females will also be tested for pregnancy. Positive test for any of the above will exclude participation. For information call Dottie Allor, 301-496-1185. □

Infant Care Available

The NIH Infant/Toddler Center run by ChildKind, Inc., in Bldg. T-46 has spaces available for children 18 months to 2 years of age. Subsidy information is available on request. Call Lee Eltman, 496-8357. □



Bldg. 49 dwarfs NIDR's Bldg. 30 (r) and only appears, from this perspective, to be larger than the CC (l). Construction will be complete in fall 1992, according to project officer Steve Hagan of ORS. The south side of the building, shown above, will be the entrance to the facility housing researchers from seven institutes, primarily NICHD.

Learn To Sail

The NIH Sailing Association invites would-be sailors to come on board and to register for basic training on the club-owned Flying Scots. Training will be held for 6 weeks in August and September. It includes on-the-water work near Annapolis and classroom instruction. Successful completion of the course enables members to use the boats.

Applications for club membership and class are available at the R&W Activities Desk, Bldg. 31, Rm. B1W30. Registration will be by mail beginning July 15 and must be received by Aug. 5. □

Orioles Bullpen Barbecue Benefits Camp Fantastic

R&W has planned a special evening on July 19 starting at 5:30 p.m. in the Orioles bullpen and finishing with a game between the O's and Seattle at 7:30 p.m. Ticket includes a barbecue dinner, unlimited drinks and a game ticket. The whole package costs \$15 per person; a portion benefits Camp Fantastic, the summer camp for children with cancer. For more information, drop by the Bldg. 31 Activities Desk or call 496-4600. □



Dr. Victor Fung (r), chairman of the NIH Asian Pacific Islander American advisory committee, hands over a donation of \$500 to Randy Schools and Martha Giovannelli, representing the Children's Inn at NIH. The donation, made possible by contributions from Asian food vendors at the recent NIH Asian Heritage luncheon, will help purchase books, tapes and accessories for the inn.