

The NIH Record

20 Years of Success

NIGMS Minority Programs Celebrate Anniversary

By Janet Glover

In the 1960's, a survey conducted by the Ford Foundation indicated that fewer than 1 percent of doctorates earned in the United States were held by Black Americans, and that only a fraction of these were awarded in the sciences. The numbers for members of other underrepresented minority groups were even smaller.

In the years following this and other studies, the Minority Access to Research Careers (MARC) Program and the Minority Biomedical Research Support (MBRS) Program were established by NIH to help increase the number of minority biomedical scientists. Now in their 20th year, these programs have helped thousands of students to complete undergraduate and graduate degrees and have enhanced research and research training activities at institutions with substantial minority enrollments.

Promoting Research Training

The MARC program enables minority institutions to develop and strengthen their biomedical research training capabilities through improved undergraduate science curricula. (See **ANNIVERSARY, Page 12**)

Lance Liotta Named Deputy Director for Intramural Research

Dr. Lance A. Liotta has been named NIH deputy director for intramural research, one of the top five positions at the agency; his appointment was effective July 6.

He is joining the Office of the Director after serving simultaneously since 1982 in three positions at the National Cancer Institute: chief of the tumor invasion and metastases section in the Laboratory of Pathology, chief of the Laboratory of Pathology, and codirector of the Anatomic Pathology Residency Program in the Laboratory of Pathology.

Liotta has devoted his career to the study of cancer invasion and metastasis, the major cause of cancer treatment failure. He was one of the first scientists to investigate this process at a molecular level. In 1975 he proposed that tumor cell attachment and degradation of the basement membrane (a collagenous sheath that surrounds epithelial ducts, blood vessels and nerves, and separates tissue compartments) was crucial to invasion and metastasis. He found that disruption of the basement membrane is the general hallmark of the transition from *in situ* to invasive cancer for all human epithelial cancers. He discovered metalloproteinases produced by tumor cells that degrade the

Town Meeting III

Healy Emphasizes Need for Workplace Harmony

By Rich McManus

The popular song "We Are Family" might be an appropriate anthem for the living room, but it shouldn't characterize the workplace, suggested several speakers at NIH director Dr. Bernadine Healy's third "town meeting." Held June 29 on the topic "The NIH Workplace: Diversity in Harmony," it featured guest speakers Rep. Connie Morella and columnist Judith Martin, also known as "Miss Manners."

In her introduction, Healy emphasized that NIH, although a community, is not truly a family. "Familiarity and intimacy are appropriate in family life, but a certain formality and distance should be maintained at work," she said. She called for "an abiding respect for the individual . . . every life matters, every human being is important." It would be a tragedy, she concluded, to compromise the major premise of NIH—healthy human life—by undermining it with such vices as discrimination, verbal and physical assault, prejudice and harassment.

Martin, whose syndicated etiquette column appears in many newspapers, brought to NIH'ers "just what you always knew you needed—bioetiquette."

She defined etiquette as a set of rules, not laws, that restrict human urges in order to



NIH director Dr. Bernadine Healy (c) invited two guest speakers to her third town meeting. They are columnist Judith Martin (l) and Rep. Connie Morella, who represents Maryland's 8th district, which includes NIH.

make life more harmonious.

"You're probably wondering why etiquette has to mess with science, which was getting along so well without manners," she quipped. "Etiquette, being a nice, old-fashioned term, is obviously not a new restriction on your liberties, but a common language of behavior."

She targeted four categories of offense—disrespect, nonresponsiveness, sexual harassment. (See **TOWN MEETING, Page 4**)

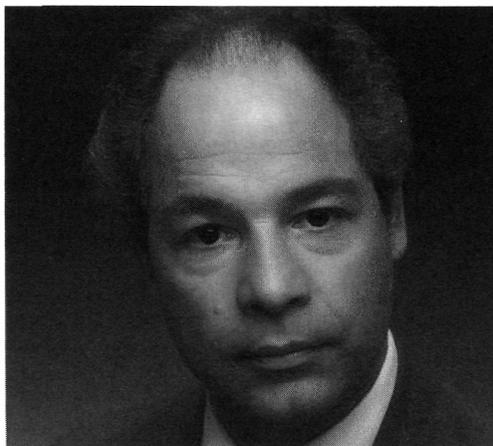
Hair Coloring Products Linked to Lymphoma Risk

By Kara Smigel

Women who use hair coloring products may have a slightly increased risk of non-Hodgkin's lymphoma (a type of immune system cancer), according to an NCI study. Women who used hair dyes had a 50 percent higher risk (relative risk of 1.5) of developing non-Hodgkin's lymphoma when compared to women who never dyed their hair. Use of hair dyes was much less common in men who participated in the study, and was not found to increase their risk of cancer.

The study results suggest an association between hair dye use and risk of lymphoma, but cannot definitively prove a cause-and-effect relationship. No recommendation to change patterns of hair dye use can be made at this time, based on these research results.

In the report, which appeared in the July 1 issue of the *American Journal of Public Health*, researchers compared the use of hair dyes by more than 275 women with non-Hodgkin's lymphoma, Hodgkin's disease, multiple myeloma, or chronic lymphocytic leukemia (cases) to more than 700 same-age women who



Dr. Lance Liotta

basement membrane collagen and facilitate invasion. He went on to develop and lead a metastasis research group at NCI. Scientists in Liotta's group have discovered a series of novel genes and proteins that regulate cancer invasion and metastasis, providing new strategies for cancer diagnosis and treatment. These include NM23 (Dr. Patricia Steeg), a functional suppressor gene for breast cancer

(See **LIOTTA, Page 2**)

(See **CANCER RISK, Page 6**)

LIOTTA

(Continued from Page 1)

metastasis; TIMP-2 (Dr. William Stetler-Stevenson), a new protein that inhibits invasion and angiogenesis; laminin-binding proteins (Dr. Mark Sobel) that mediate tumor cell attachment; and autotaxin (Dr. Mary Stracke), a protein that profoundly stimulates motility. Liotta's group also developed the first synthetic compound (CAI) (Dr. Elise Kohn) that blocks cancer metastasis growth by inhibiting selected signal transduction pathways. CAI has now entered clinical phase I trials under support from the Division of Cancer Treatment.

"We have searched inside and outside the NIH for an outstanding deputy director for intramural research to coordinate policy for all research conducted on our 300-acre campus. I believe that Dr. Liotta is the very best possible scientist for this extremely important position," said NIH director Dr. Bernadine Healy in announcing the appointment. "I am very pleased that he has accepted this post as one of my four principal deputies."

Liotta is an active member of six professional societies—International Metastasis Research Society, American Association for Cancer Research, American Association of Pathologists, American Society of Cell Biology, American Society for Clinical Investigation and the International Academy of Pathology.

He has been the recipient of numerous awards for cancer research, including three PHS Commissioned Corps Medals, the Arthur S. Flemming Award, the Warner Lambert/Parke Davis Award, the sixth annual Rhoads

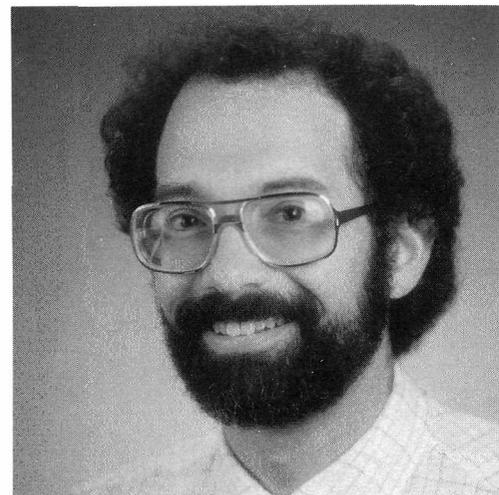
Memorial Award, the Milken Family Foundation award for basic research, the Josef Steiner Prize, the Simon Shubitz award for basic research, and the Lila Gruber Research Award. He holds more than 30 patents for his work.

He earned his A.B. degree in general science and biology from Hiram College in Ohio, followed by his Ph.D. degree in biomedical engineering and biomathematics from Case Western Reserve University. The subject of his Ph.D. was cancer metastasis. Then in 1976, he earned his M.D. degree from Case Western Reserve University and joined NIH as a PHS resident physician in the Laboratory of Pathology.

Liotta is married to Linda Bradley Liotta, a local artist. They have two children, Tyson and Wendi. □

DCRT Offers Kaleidagraph Course

DCRT announces a course in Kaleidagraph, a powerful Macintosh program for two-dimensional charting, graphing, and other scientific data analysis. The course will take place on Tuesday, July 28, from 12:30 to 2 p.m. in Lipsett Amphitheater. Please note that the time and place are different from previous announcements. The presentation will move from a basic introduction to Kaleidagraph to a demonstration of its ability to do advanced curve fitting. The course will cover the exchange of data between Kaleidagraph and spreadsheets and other graphing programs; it will also show how to export graphs from Kaleidagraph to use with drawing programs. No reservation is required for the course. Call 496-2339 for more information. □



Dr. Jeffery A. Schloss has recently joined the National Center for Human Genome Research staff as a program administrator in the Research Centers Branch. The centers program administers and funds large-scale human genome research projects such as preparation of a complete physical map of a human chromosome, or development of new mapping technologies. Schloss comes from the University of Kentucky, where he served on the faculty of the School of Biological Sciences. From 1979 to 1984, he was a postdoctoral fellow and associate research biologist in the department of biology at Yale University. He has a Ph.D. in cell biology from Carnegie-Mellon University.

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Dr. Gerald M. Edelman (c), 1972 Nobel laureate in physiology or medicine and director and professor at the Neurosciences Institute, Rockefeller University, delivered the keynote address at the third Frontiers in Science Symposium on Cell and Tissue cosponsored and hosted by NIEHS recently in Research Triangle Park, N.C. With him are (from l) Dr. John A. McLachlan, NIEHS scientific director; Dr. Kenneth Olden, NIEHS director; Dr. Mina J. Bissell, Lawrence Berkeley Laboratory; and Dr. J. Carl Barrett, chief of the Laboratory of Molecular Carcinogenesis, NIEHS. Edelman's address was titled, "Cell Adhesion Molecules and Molecular Histology."

*More Than 100 Attend***First NIH AIDS Postdoctoral Meeting Draws Wide Response**

By James Hadley

"I can't think of a meeting from which I've ever gained so much. Please offer it again. I even identified potential collaborators for my research," says Dr. Nancy Wade of the Wadsworth Center for Laboratories and Research in Albany, N.Y. "I'm going home with so much information, new ideas and enthusiasm."

"I found the meeting to be interesting and helpful for my current research. The lecture on the biology and molecular control of the HIV virus was just fascinating," says Blanca I. Restrepo, a graduate student studying microbiology at the University of Texas Health Science Center in San Antonio. "A very important highlight of the program for me was meeting and talking with other fellows, NIH staff and scientists."

These comments express the consensus of more than 100 participants at the first NIH AIDS postdoctoral fellows meeting recently held in Keystone, Colo. NIAID's Division of AIDS (DAIDS) organized the meeting, which the NIH Office of AIDS Research and the Fogarty International Center cosponsored.

Postdoctoral fellows received support to attend the meeting from NIAID, FIC and other NIH components, the National Institute of Mental Health, Howard Hughes Medical Institute and the statewide AIDS research program of the University of California.

"As the AIDS pandemic continues into the next century, NIAID recognizes the need to broaden its efforts to pique the interest of and train future researchers to better understand and combat this devastating disease," says Dr. Anthony S. Fauci, NIAID director. "We must make every effort to ensure an adequate pool of trained scientists and clinical investigators to confront the research challenges of AIDS. We must maintain a cadre of trained investigators across AIDS-relevant scientific disciplines."

Because the meeting overlapped with two major conferences on AIDS—"The Prevention and Treatment of AIDS" and "Critical Research Directions in Pediatric HIV Infection"—fellows had the opportunity to network with prominent AIDS researchers.

At the fellows meeting, young investigators heard first-hand about scientific advances in AIDS research from leading researchers. They interacted informally with other fellows, scientific leaders and NIH staff at plenary lectures, poster sessions and tutorials that included topics such as new strategies for AIDS treatment and vaccines, regulation of HIV and virus-host cell interactions.

The meeting also offered minority scientists an opportunity to consider careers in AIDS



More than 100 participants of the first NIH AIDS postdoctoral fellows meeting take a break in Keystone, Colo. They include fellows, speakers, faculty, NIH staff and program directors of NIH institutional training grants who attended the meeting recently.

research. Funds from the NIH Office of AIDS Research made it possible for the minority graduate students, postdoctoral fellows and junior faculty to attend.

"The Division of AIDS is proactive in its efforts to attract minority individuals into AIDS research," says Dr. Opendra K. Sharma, health scientist administrator in DAIDS' Pathogenesis Branch and organizer of the meeting. "The AIDS postdoctoral fellowship program supports 14 institutional training grants, funding approximately 60 postdoctoral fellows in AIDS research. Each institution is required to attract minority scientists into its training program. However, only one African American is currently being trained under this program. Directors of the institutional training programs indicate that there is an acute shortage of minority candidates."

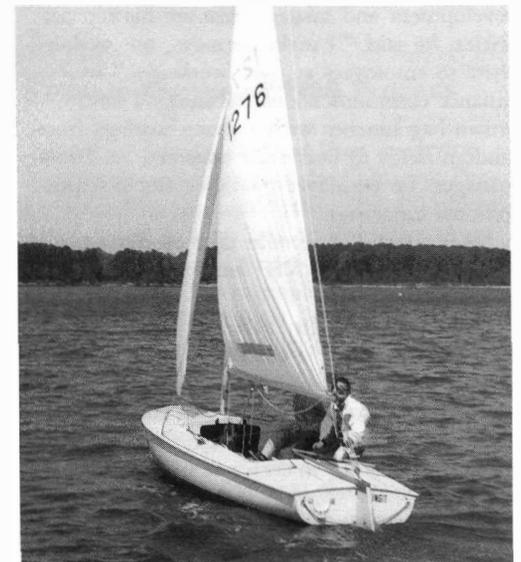
To increase African American participation, adds Sharma, "We undertook a major effort to identify 20 minority participants through extensive networking with the institutes at NIH, academic institutions and professional societies." These organizations included the Society for the Advancement of Chicanos and Native Americans in Science, the Association of Minority Health Professional Schools, the American Society of Microbiology, and the Federation of American Societies for Experimental Biology.

A centralized data base with information on minority undergraduates, graduate students, postdoctoral fellows and faculty would be a valuable resource for recruitment of candidates for research training, faculty appointments and NIH consultants.

A session on training opportunities, with a focus on minorities in AIDS research, included discussions by Dr. Fred Jones, vice president for academic affairs at Meharry Medical College; Dr. Gail H. Cassell, president-elect of the American Society of Microbiology; Dr. Jorge Argon, postdoctoral fellow at Harvard

Medical School; Dr. Susan Zolla-Pazner of New York University Medical Center; and Dr. Hortencia M. Hornbeak, chief of the Scientific Review Branch, NIAID Division of Extramural Activities, and Sharma. NIH staff discussed research training and various NIH initiatives for minorities.

Dr. Gregory Milman, chief of the NIAID Pathogenesis Branch, says, "In addition to participating in a world-renowned meeting on AIDS research, conferees made invaluable contacts with the program directors of the institutional training grants program and the leaders of minority institutions and private organizations dedicated to encouraging minorities in science." □



Join the fun with the NIH Sailing Association. Basic training classes start Wednesday evening, Aug. 26. Cost is \$95 plus \$35 club membership dues. Application forms and further information will be available Aug. 1 at the R&W Activities Desk in Bldg. 31.

TOWN MEETING

(Continued from Page 1)

ment, and discrimination—then asked why, if we all agree these are loathesome, do they still exist in the workplace?

Underlying her solutions to these ills is a comprehension of the differences between social and professional relations. The artificial distance created by good manners is no more phony than the illusion that all coworkers are automatically great friends, she argued. Using the image of a doctor's physical exam as a metaphor for addressing differences in professional status, she said, "If one of you is naked and the other one is clothed, then it is assumed that the relationship is professional. If both of you are naked, it is likely that the relationship is social." Martin concluded that proper workplace manners are epitomized by coworkers who are conducting a discreet affair—their workplace conduct is always irreproachable.

In addition to Healy and the guest speakers, eight panelists representing different races and genders at NIH offered their views on the meeting topic.

The responsibility for ensuring a proper workplace environment belongs to all of us, but especially to managers, said John Mahoney, NIH associate director for administration. "Seek first to understand, then to be understood," should become the supervisor's maxim, he said.

Dr. Kenneth Olden, NIEHS director, agreed that the leader in any organization sets the tone of the workplace. Human resource development and management are his top priorities, he said. "I make periodic, unscheduled visits to employees at their worksites," to enhance communications, he said. "I hold brown bag lunches with a dozen workers from random fields to hear their concerns . . . I rate managers on employee relations, not just professional capacities."

Joked Healy, "It would take me the next 30 years to meet all NIH employees in groups of 12."

NCNR director Dr. Ada Sue Hinshaw said professional respect is the cornerstone of any organization's function. "Listen to one another, both to the content and the feeling," she urged. "Constructive relationships take effort, but it is up to each one of us to maintain them."

Division of Engineering Services Director Jorge Urrutia, the first Hispanic worker to attain the Senior Executive Service rank at NIH, said workers should seek solutions to their problems within the system, not fight against it. Recalling his struggle for success, having landed in this country at age 18 with a few hundred dollars in his pocket, he said, "I had an idea of what I wanted to do, and I



Sandy Chamblee, senior policy advisor to the NIH director and a former litigator, organized the third town meeting at NIH.

remained focused. I feel very lucky to be where I am."

Morella spoke next, having arrived a bit late due to a press conference downtown. After Healy informed the audience that Morella had recently been voted, in a magazine survey, "one of the most polite people in Congress," Morella turned to Martin and pleaded, "Miss Manners, I'm sorry I was late."

Morella painted a statistical picture with which many NIH workers are quite familiar—not only is there no such thing as a "typical family" anymore, but parents, whether single or together, are spending more time at work than at home.

"Working parents spend an average of only 17 hours a week with their kids, which is a 40 percent drop since 1965," she reported. "Another survey shows that one in four adults is responsible for (the care of) an older relative. Government needs to provide more family-friendly policies such as flextime, shared jobs, family and medical leave, and day care. These initiatives will make our federal community more tightly knit."



Dr. Kenneth Olden, NIEHS director, stressed the importance of communication to the maintenance of a harmonious workplace.

Morella said she is meeting with the Office of Personnel Management and the General Services Administration to implement these policies. She said she will use her membership on the National Council on the Public Service to advocate for federal workers against such policies as a ban on honoraria; she also supports bills taking equal employment opportunity suits out of the agencies and into the Equal Employment Opportunity Commission, and lifting the "glass ceiling" from women in science and engineering careers. Increased productivity in the workforce will be the result of these initiatives, she said, concluding, "We want a workforce with no harassment in it."

Defining sexual harassment for the audience was Diane Armstrong, director of NIH's Office of Equal Opportunity. The increase in questions on such conduct fielded at OEO owe to both the Hill-Thomas controversy last spring and to "faith in the processing system," she said. Of 228 informal complaints lodged with OEO last year, only 7 raised issues concerning sexual harassment; no formal



Judith Martin, whose pen name is "Miss Manners," introduces "bioetiquette" to NIH.

complaints went forward. "Our record is excellent, compared with other federal agencies of similar size," Armstrong said. She cautioned that men, too, may have grounds for lodging complaints of sexual harassment, and urged all employees to "raise strong objections where you find offenses. Feel free to seek counsel from OEO. We can't resolve any problems if you don't bring them to our attention."

Attorney Sandy Chamblee, senior policy advisor to Healy and principal organizer of the town meeting, warned of the legal consequences of sexual harassment. "Sexual harassment can be very subjective; it has elements of nuance . . . workplace behavior that



Healy listens to a question from the audience during her third town meeting in Masur Auditorium.

violates the law is clearly a matter of degree and persistence." Any questionable conduct should be nipped in the bud, she said. "It's better to settle informally than to enter the junkyard dog realm of the courtroom."

Addressing the topic of diversity was Dr. Nancy Nossal, chief of the nucleic acid biochemistry section in NIDDK's Laboratory of Biochemical Pharmacology; she began her NIH career as a postdoc in 1964.

"Although my experience has been good, I know there are labs at NIH where women don't feel welcome," she said. A good lab, she explained, is one where the chief is committed to principles of openness and fairness, and where employees are tolerant and understanding. "Keep the workplace informal," she warned. "Don't become so afraid of offending that we destroy the camaraderie that makes science enjoyable and successful."

Echoing Nossal's call for mutual respect was Dr. Philip Pizzo, chief of NCI's Pediatric Branch, who said his colleagues all deal with the stress of working overtime in crowded conditions he labeled "the world of the submarine. We need to have creative flexibility with respect to the hours and the place of work—the priority should be that the work is done, not when or where. We also need an environment where the individual can be both part of a team and work on his or her own projects, because that's where professional respect originates."

Because the field of pediatrics lays at the intersection of family, gender, and age, Pizzo said pressure to innovate is strong, if not overwhelming, in his branch. He also appealed for wider opportunities for advancement at all levels of employment.

When the floor opened for comment, topics included: how to put teeth into sanctions against sexual harassers, how to employ more Hispanics in top NIH jobs, how to make jobs more flexible for families where both parents

work and need day care in the workplace, how the "oppression of white males" can be eradicated from the workforce.

Concluded Healy, "Anyone exhibiting intolerable behavior will have action taken against them . . . a better NIH is the responsibility of all 15,000 employees." Workers "had better have respect for enforceable laws," she said, "but also sign on to a sense of duty to the unenforceable. The turnout at this meeting suggests the NIH (community) takes this issue very, very seriously."

As in previous town meetings, the proceedings were beamed by closed-circuit television to a variety of NIH buildings both on and off



Rep. Connie Morella said federal personnel guidelines must become more "family-friendly" to keep pace with changes in society.

campus. A fourth town meeting, perhaps involving Secretary Sullivan, is currently being planned. □

Volunteers Needed at NHLBI

The Cardiology Branch, NHLBI, needs normal volunteers between ages 50 and 70 to participate in a study assessing the mechanisms of certain cardiovascular conditions. Volunteers must not be taking any medication. The study includes transesophageal echocardiography (a procedure similar to an endoscopy) and takes approximately 2 hours. Participants will be paid. For more information, call Joy Laurienzo, 496-3015. □

FIC Gains Program Officers

Three new program officers—Drs. Sherry Dupere, Claire Hubbard, and Mirilee Pearl—recently joined the staff of the Fogarty International Center.

Dupere joined the International Studies Branch as a scientific review administrator. This branch has assumed responsibility for the management of FIC's study section, which conducts the initial scientific review of Fogarty International Research Collaboration awards. She came to FIC from the Scientific Review Branch of the Division of Extramural Activities, NIAID, where she was in charge of the clinical applications, prevention, and treatment subcommittee of the AIDS research review committee.

Hubbard is now with the International Coordination and Liaison Branch, where she is program officer for Africa and the Middle East. She formerly was with the U.S. Department of State, Bureau of Oceans and International Environmental and Scientific Affairs, Office of Cooperative Science and Technology Programs, where she was foreign affairs officer for bilateral science and technology programs with China, Mongolia, Australia, New Zealand, Israel and Turkey.

Pearl has become program officer for FIC's International Research and Awards Branch, where she is responsible for the program of international fellowships and grants in the biomedical and behavioral sciences. She was formerly a health scientist administrator in the Cardiac Diseases Branch in the Division of Heart and Vascular Diseases, NHLBI. Prior to coming to NIH, she spent several years at Oxford University in England. □

Seminar Explains EPMS Process

Back by popular demand is an in-service seminar on understanding the Employee Performance Management System (EPMS) process. The seminar will be held on Thursday, Aug. 6, from 11:30 a.m. to 1 p.m. in Bldg. 31, Conf. Rm. 10. Many employees were turned away on June 16 because the meeting room was filled to capacity. The seminar, sponsored by the NIH advisory committee for women and the Office of Equal Opportunity, is open to all employees. A 30-minute overview of the system provided by Mimi Blitz, personnel staffing specialist, Division of Personnel Management, will be followed by a question and answer period. If you have questions as an employee or supervisor then plan to attend. No registration is necessary and sign language interpretation will be provided. □

CANCER RISK FOUND IN HAIR DYE STUDIES

(Continued from Page 1)

did not develop these diseases (controls).

In the study, the small number of women with Hodgkin's disease, multiple myeloma or chronic lymphocytic leukemia precluded a strong statistical result, but a slightly increased risk for two of these cancers—Hodgkin's disease and multiple myeloma—seemed to be associated with use of hair coloring products. Risk for chronic lymphocytic leukemia was not shown to be connected to use of any hair dyes.

The participants in the study were asked about their use of permanent hair coloring products (dyes that last until the hair grows out), semipermanent or nonpermanent hair coloring products (dyes that rinse out after several shampoos), and products that gradually change hair color as part of a questionnaire covering a wide range of topics.

For the women, the risks associated with permanent hair coloring products were higher than those for semipermanent or nonpermanent products. For non-Hodgkin's lymphoma, risk was increased 70 percent (relative risk 1.7) in women who used permanent hair dyes and 40 percent (relative risk 1.4) in women who used semipermanent or nonpermanent hair dyes.

Dr. Shelia H. Zahm, an epidemiologist in NCI's occupational studies section and lead investigator of the new study, said that "if the results represent a cause-and-effect association, the use of hair coloring products would account for 20 percent of the cases of non-Hodgkin's lymphoma in women."

Because only seven women used products that gradually changed their hair color, no reliable risk estimate was possible from this group. Among the men in this study, 56 used these types of hair coloring products. There was no increased risk of lymphoma found in these men.

For the women, risk of lymphoma did not increase with frequency of hair dye use, although risk increased with the number of years of use. Women who used black, brown/brunette, and red hair coloring products had slightly higher risks than women who dyed their hair with lighter colors. No information was available on women who lightened or highlighted their hair.

The researchers made adjustments for potential factors that increase cancer risk: family histories of cancer, cigarette smoking, and herbicide or insecticide use. None of these factors changed the risks calculated for hair dye use.

Previous studies of hair dye use have suggested that there may be an increased risk of lymphoma or leukemia in people exposed to dyes frequently. However, the populations most studied have been hairdressers, beauti-

cians, and cosmetologists. Personal use of hair dye in men was evaluated in an NCI study published in the *American Journal of Public Health* in 1988. Although the overall number of men who used hair dyes was small, the researchers found a doubled risk of leukemia and non-Hodgkin's lymphoma in these men.

Hair coloring products are widely used; almost half of the women in the control group used them. Estimates of current use in the United States range from 20 to 40 percent, although data on changes in patterns of usage over time is not available.

These products have also been known to contain chemicals that are mutagenic (may alter the structure of DNA) and carcinogenic (cancer-causing) to animals. The amount and type of these compounds vary by product type and color. Research has shown that some of the substances in hair dyes are readily absorbed during application. The researchers did not collect information on individual brands of hair coloring products.

The causes of lymphoma are poorly understood. Persons with damaged immune systems, caused by either immune disorders or immunosuppressive drugs, are known to be more susceptible to the disease. There will be about 18,000 new cases of non-Hodgkin's lymphoma diagnosed in U.S. women this year and 9,400 women will die of the disease.

Data from NCI's Surveillance Program show that new cases of non-Hodgkin's lymphoma have increased almost 3 percent per year in women from 1973-74 to 1987-88. Additional studies of hair dye use and cancer risk are under way by researchers from NCI and elsewhere. □

NIH Summer Computer Expo '92

The NIH Summer Computer Expo '92 will be held Thursday, July 23. The 1-day showing of microcomputer technologies will be open from 10 a.m. to 2 p.m. in Wilson Hall, Bldg. 1.

More than 30 different exhibitors from all over the United States will be on hand displaying the latest in advanced office automation, workstations, presentation systems, laptops, real time applications, hardware, software, etc. All are invited to attend. No registration or fee required. For information, call (301) 206-2940. □



NIAID's Dr. Mary A. Foulkes has been honored with the 1991 Washington Statistical Association President's Award for outstanding contributions to the professional association. A mathematical statistician in the Biostatistics Research Branch of the Division of AIDS, she served on the committee that organized a series of seminars commemorating the sesquicentennial of the American Statistical Association, the group's umbrella organization. One of these seminars was held at NIH on the Multicenter AIDS Cohort Study. Foulkes received her doctorate in biostatistics from the University of North Carolina in 1980 and has been at NIH since 1985.

NIH Funds Enrichment Program

Three universities have been chosen to receive contracts from NIH to create regional summer Science Enrichment Programs for high school students from underrepresented minority and medically underserved populations. The goal of the program is to provide "hands-on" experiences that will show students the career possibilities in biomedical science.

The University of Southern California, the University of Kentucky and the University of Massachusetts each received 2-year awards to fund 40 to 50 students in summer programs for 1992 and 1993. The contracts contain an option for an additional 2 years of funding.

The programs will provide classroom and laboratory experiences in subjects such as chemistry, mathematics, physics, biology, computer science and language arts.

The Science Enrichment Program is based on a 2-year pilot program sponsored by NCI in 1990 and 1991. About 250 nationally selected students from varied ethnic backgrounds lived in dormitories during the summer sessions at Hood College in Frederick, Md. That program found that participants showed increased interest in science.

The program is supported by NCI, NICHD, NIEHS, NIAMS, NIA, DRG and the Office of Research on Women's Health. □

NHLBI's Geller Wins Marriott 'Bridges' Award

By Louise Williams

Some bridges connect people and places. The Bridges program connects people with their dreams, helping students with disabilities cross from school to employment.

But no matter what it connects, every bridge needs a builder.

For his work building the Bridges program at NIH, Dr. Ronald G. Geller, director of NHLBI's Division of Extramural Affairs (DEA), recently received the first-ever "Chairman's Award" from the Marriott Foundation for People with Disabilities and TransCen, Inc.

The foundation is a nonprofit group that created Bridges in 1989; TransCen administers the program locally.

The program matches students in their final year of high school with employers who provide paid internships. A key part of the program is its use of "employer representatives," who help employers develop the jobs and remain available for guidance to both supervisors and students throughout the internship.

Students' disabilities range from hearing impairment to mental retardation to spina bifida and cerebral palsy. Internships are varied and include jobs in food and customer service, child care, security, construction trades, printing, and car radio installation.

The award cited Geller's outstanding efforts and exceptional commitment to Bridges, demonstrated by extensively promoting its mission and concept. It noted his efforts in advancing the Bridges concept within the workplace and his role in its wide-scale implementation at NIH.

The award was presented at a recent ceremony in Gaithersburg that featured a keynote address by Gallaudet University president Dr. I. King Jordan. Other honorees were Hewlett-Packard and the Potomac Electric Power Co., which received leadership awards.

NHLBI director Dr. Claude Lenfant praised Geller's efforts: "Supporting the hiring of those with disabilities has been a top priority of the institute, and we are very proud of Dr. Geller's initiative and industry in bringing this important program to the institute and to the NIH."

Geller in turn thanked Lenfant: "Dr. Lenfant's approval of letting us serve as the pilot project for NIH made everything possible."

That approval came in 1989, after the Marriott Foundation, having decided to start Bridges in its home territory of Montgomery County, held a breakfast session to recruit local company support. Dr. William F. Raub, former NIH acting director, attended for NIH and enthusiastically approved of the program.

Originally, Marriott had planned to seek



Dr. Ronald G. Geller (c), director of NHLBI's Division of Extramural Affairs, received the "Chairman's Award" from Richard E. Marriott, chair of the Marriott Foundation for People with Disabilities, and Joy Brown, chair of TransCen, Inc.

only private company involvement, says Geller. But a little research had shown that NIH is the county's biggest employer. So the public sector became a key builder in Bridges' future.

With Lenfant's support, NHLBI started its pilot project, becoming the test case for NIH. "The plan," says Geller, "was that we would run through the process and get a good idea of what was involved and then tell our experience to the other ICDs."

Marie Willet of DEA's Grants Operations Branch developed the internships. Then Geller and Willet took a supervisor training course, another special part of the Bridges concept. Designed by Milt Wright and Associates, a developer of workplace training, the course covers supervision, communication, discipline, and other issues.

Geller's division began by offering two internships—one student has already become a permanent employee; the other returned to school to finish her degree.

The fulltimer, John Carillon, "has proven to be a valued member of our staff," says Geller. "He controls the grant files, logging them into the computer, checking them out as needed, and delivering them. He also has developed computerized labels and performs such other tasks as helping to prepare the books for the four yearly institute advisory council meetings."

The pilot effort's success impressed the rest of NIH. Geller, along with Diane Armstrong, director of NIH's Office of Equal Opportunity; Joan Brogan, manager of the OEO Disability Employment Program; and a Marriott Foundation representative related the results to the ICD directors, who voted to

adopt Bridges throughout NIH.

The new push soon gave Geller an unofficial second career as a Bridges speaker. "After the program was adopted by NIH," he says, "a number of us started going to other institutes to talk about the program, what it is and how it works. We spoke about our experiences and what the ICDs could expect and the kinds of training provided." Other speakers included Willet, Brogan, and various representatives of TransCen.

The effort was eased somewhat by the familiarity of supported internships for students with disabilities. Explains Geller, "It was not a new idea before the foundation created Bridges. NIH had already had some student interns. But the number was very small.

"Marriott's achievement was to greatly expand an effective model," he adds. "They used their resources and made it possible to give many more students such experiences."

The tally is impressive: DEA has gone on to offer four more internships and other ICDs have provided another 23 positions, bringing NIH's total to more than twice that of any other employer, including such big names as Pepco and Giant Foods.

Another 171 internships have been supplied by 84 other Montgomery County employers. That kind of success let the foundation fulfill its plans of starting Bridges programs in Washington, D.C., Chicago, and San Francisco.

NIH also has contributed to the program's success by suggesting refinements. One idea, says Geller, was "that TransCen not wait for employers to submit positions but to send out resumes of students. These are now distributed and prompt placements. The resumes highlight the students' abilities and that makes employers think of a certain spot where the intern might fit.

"So now we have two-way communication. The OEO sends out information on available students, with their abilities and work schedules, and we try to find the match."

Geller remains involved and committed, speaking often to promote wider federal participation in the program. His audience has included DHHS Secretary Sullivan and his senior staff.

Geller tells them to look beyond just hiring those with disabilities for internships; he asks supervisors to think of opportunities for training and promotions.

"Bridges," he says, "is just the start."

(See SIDEBARS on next 3 Pages)

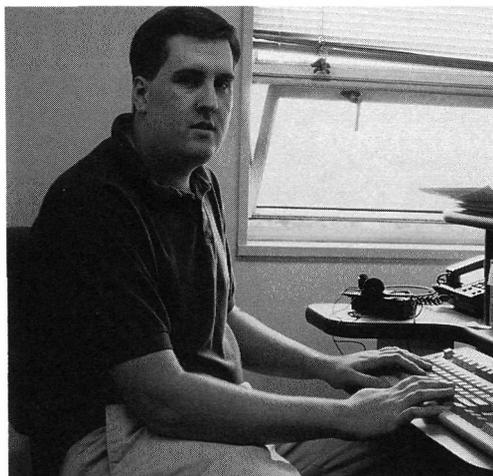
NHLBI Hires Carillon, NIH's First Bridges Intern

Profiles of Bridges Interns at NIH

By Anne Barber

The Record interviewed selected Bridges interns working presently at NIH along with one volunteer intern who found her job through Montgomery County's school system.

"There are several methods through which NIH'ers can hire a disabled person to work here," says Joan Brogan, Disability Employment Program manager, Office of Equal Opportunity. If interested, contact her on 496-2906 for more information.



John Carillon

John Carillon was the first Marriott Bridges intern at NIH and the federal government. He joined NHLBI's Grants Operations Branch about 2 years ago as a part-time clerk. As his

duties increased, he was promoted to clerk-typist and full-time permanent status.

When he first arrived on the job, his counselor from TransCen came along for the first 4 or 5 months. After that the counselor came only when called, but continued to check on Carillon's progress over the phone.

"NIH is an excellent place to work," says Carillon. "You can work hard and go upwards."

A graduate of Gaithersburg High School, he says he "liked the Bridges program. People were enthusiastic when the program was started. I was lucky. I was one of the first."

Carillon takes care of council files, logging them in the computer, keeping track of who checks them out, and later returning them to the file room.

NHLBI and the Bridges program have been good for Carillon, as well as for another member of his family. His sister, Jennifer, is working part-time on a 6-month internship in the same branch, but in a different section.

NIAID's Division of Allergy, Immunology and Transplantation Participates in Bridges Program



Kathia Schreiber (r) works on the computer while supervisor Laura Lawton checks details.

Kathia Schreiber works as a clerk-typist in the Division of Allergy, Immunology and Transplantation, NIAID. She began a 6-month Bridges internship last March. She graduated in June from Wheaton High School despite a disability in reading comprehension that was diagnosed when she was in the sixth grade.

"Over the years, I've learned to compensate for it," she says. "I write things down. If I have a problem, I can just go to anybody. Everybody here is so nice."

Schreiber basically has two supervisors—Laura Lawton, secretary to DAIT deputy director Dr. Lawrence Prograis, and Diane Martin, whose main duties include overseeing the council, which meets three times a year.

According to Lawton, five or six people were interviewed before Schreiber was selected. Martin, who is now out on maternity leave, called Schreiber "a godsend" because she relied so heavily on her for the past council meeting in May.

DAIT director Dr. Robert Goldstein and

Prograis, after attending a seminar given by Claudia Goad on the Marriott Bridges Program, expressed their desire to hire an intern. Goad is a member of NIH's advisory committee for employees with disabilities. Martin and Lawton then signed up to attend a seminar sponsored by Marriott about Bridges.

"The speaker was very good," Lawton said, "and helped us to understand the disabled employee. We wanted to match someone to our needs," she continued. "As long as we could do that we would be willing to hire an intern."

Schreiber was the second intern hired by DAIT through the program; the first one did not work out. "However, TransCen was exceptionally good at coming out when we called," said Lawton. "We are delighted with Kathia and would like to keep her, but we'll have to see what her plans are."

"I don't think I could find a good job like this if it weren't for the Marriott Bridges program," states Schreiber. "I applied to the program in the fall of 1991 but didn't get accepted until January 1992." Her future plans include attending Montgomery College to study art.

If interested in hiring an intern through the Bridges program, contact Gwen Brooks on 496-1012. She is NIAID's liaison for the program.

Occupational Safety and Health Branch Hires Four Interns

Dr. Harry Mahar, chief of the Occupational Safety and Health Branch, says that over the last 2 years, his branch has hired four students on a temporary basis through the Marriott Bridges Program. Of the four, three were brought on permanently—two still remain, Lisa Elwell and David Goodman; one, Johanna Burns, resigned recently to return to college. “These are very professional full-time employees,” he says. “In reality, they’re some of the hardest workers in the branch.”

Mahar says hiring a disabled employee made him restructure and rethink jobs so that workers and skills matched.

“I particularly liked this program because they came and interviewed us about the job. Lisa and Johanna came in for an interview and were hired first. TransCen stayed with them during training and helped minimize our initial time investment in training.”

Goodman came about 6 months later and TransCen also stayed with him for several weeks. “They coached us, as well as David, in dealing with problems. They offer a good support structure. And, to help us understand David, they even gave a seminar to all branch staff on communicating with autistic people. David is a long-term commitment here,” Mahar emphasizes. “He’s one of the family, one of the team.”

“We also have a hearing-impaired person in our branch who has been here more than 4 years—Susan Bush, a computer specialist in database management. She came to us through a referral, but has worked out great as well. We provide safety-related training and accommodate both hearing and hearing-impaired people.”

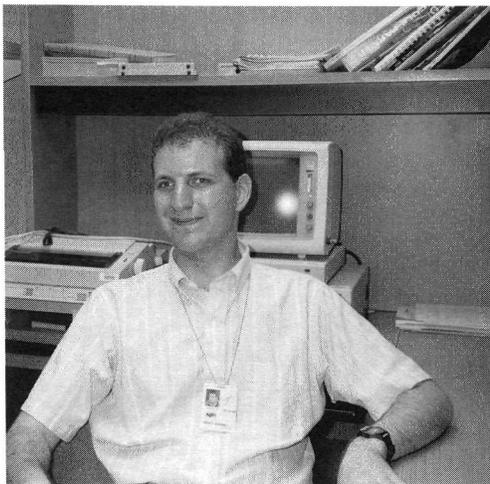
Mahar points out, “This has certainly heightened my awareness of the subtle discrimination that occurs to the disabled.”

David Goodman, Office Automation Clerk

David Goodman works as an office automation clerk in the safety support section, Occupational Safety and Health Branch, Division of Safety. His boss is Dr. Randy Larsen, chief of the section.

“David is autistic. Before hiring him, we were concerned,” says Larsen. “Now, we are so delighted that we hired him. He truly does an excellent job and has grown tremendously in his performance.”

“When David first came here, he was less interactive with people,” Larsen stated. “It took patience to explain tasks to him, but his TransCen counselor came every day to assist us.” At first Goodman was given only accident reports to enter on the computer. “We certainly underestimated what he can do,” Larsen says, smiling. “He is very efficient, very capable on the computer.” He now logs



David Goodman

data on safety programs and asbestos records, types labels for permits, and works through a backlog of accident data entry. “As long as you show him what to do, he retains it,” boasts Larsen.

Goodman has also become more comfortable in not only the office setting but NIH overall, adds Larsen. “He is not afraid to approach someone and ask for directions. He now enjoys going to lunch with people in the office, retirement lunches, etc. He didn’t always do that.”

Continuing to brag about Goodman, Larsen says, “David has a tremendous work ethic. He gives us a true 8 hours of work for his 8 hours on the job. He has never been late to work. He has taken only 1 sick day since he has been on the job.”

“We have all received great satisfaction from seeing David mature and grow in his skills, personal as well as work. He is really a wonderful employee.”

Goodman thinks his job is just great. “I like working on the computer a lot. The people here are nice, and the TransCen staff were really nice, especially my counselor.”

Lisa Elwell, Secretary

Lisa Elwell, a former Bridges intern, recently received a promotion. She is now secretary to the chief of the technical assistance section, Occupational Safety and Health Branch, DS.

“While Lisa originally joined the branch via the Marriott Bridges program, she was hired for this job through open competition,” said Dr. Debbie Wilson, chief, TAS. “She got this job based on her own abilities.”

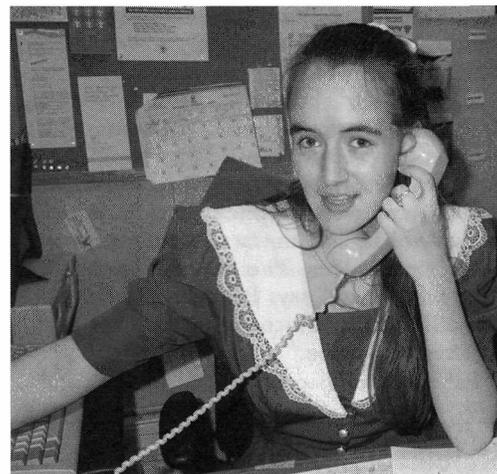
“Lisa not only works for me, but also for six other professional staff members, each one

with a different expertise. She is very good on the computer and has an excellent telephone manner. The latter is very important because many of our calls are emergency calls—people usually call only when they have problems,” Wilson explains. “Lisa has to synthesize the information and make the appropriate referral. It’s not unusual for callers to have been transferred several times before finally reaching us—they can be pretty upset by the time Lisa gets them.”

According to Wilson, “Lisa takes on more than just her job. She finds time to oversee David’s work on a daily basis, especially his database entries.”

Elwell says she doesn’t mind working with Goodman. “In fact, I enjoy working with him,” she said. “He is fun and great to work with. He is dependable, cheerful, positive, flexible and will do any task you ask of him.”

Elwell also finds time to take advantage of



Lisa Elwell

classes offered here at NIH. She attends Montgomery College’s night courses on campus offered through the Training Development Services Program. Wilson says she has always had young people working in her section through stay-in-school or cooperative education programs, but TransCen has the interest and ability to help match jobs with employees.

“We are very pleased with TransCen staff because they have provided individual support for the young people they have placed with us,” she says.

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Shelley Belgard Volunteers for the Office of Equal Opportunity

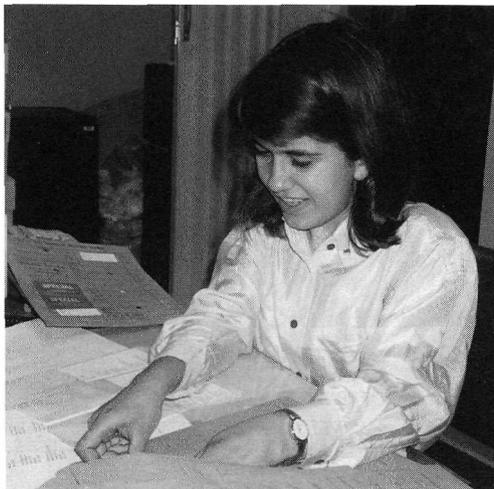
Shelley Belgard, who worked as a volunteer in the Office of Equal Opportunity for several months during the school year and is continuing during the summer months, came to NIH through a different program. "She came through the Montgomery County School system, which has a similar program to Bridges except they are volunteers," says Joan Brogan, OEO's Disability Employment Program manager. "Their program is designed basically to expose the students to work."

Belgard was diagnosed with hydrocephalus (more commonly referred to as fluid on the brain) when she was born. "What this basically means," she says, "is that I have problems with memory, especially long-term memory. I have to write everything down. I carry a notebook in my purse, not only for school and work, but also for home. I have to write where everything is located and how to get there."

Belgard works from 2 to 4 hours, 2 days a week for OEO, helping file, attaching labels, stuffing and mailing envelopes, and making copies.

Marla Balfour, her job coach from the Walter Johnson Learning Center, has been working one-on-one with Belgard since last October. "We work on general living skills such as traveling by public transportation so Shelley will be able to travel, going to work and shopping alone. This program was tailor-made for Shelley," says Balfour. "It helps her gain office skills, which should help her get a job after graduation."

Balfour accompanied Belgard to work and



Shelley Belgard

stayed for the first hour to help her get acclimated to the tasks for that day. After work, Belgard's parents picked Shelley up at NIH.

Belgard is active in several social clubs outside of school that are designed for learning-disabled teens—Time Teens and Civiteen. She also takes part in a school-sponsored club for the disabled that travels monthly to elementary schools to talk about their disabilities. "It promotes self-awareness for the disabled," she says. "We tell the kids to not look down on them (the disabled), but respect them. All the while you learn yourself, but teach at the same time. I don't want to be called disabled," she stresses. "I have a problem, that is all." □

Basnight Is NIGMS EEO Officer

Karen M. Basnight was recently appointed the equal employment opportunity (EEO) officer at NIGMS.

In this position, she will develop strategies to recruit and retain underrepresented minority employees, advise the NIGMS director and key staff on employment policies and practices affecting EEO, and implement and monitor the NIGMS affirmative action plan. She will also plan and conduct EEO workshops, symposia, and training sessions for NIGMS staff. In addition, she will serve as a technical advisor to NIGMS delegates to various special emphasis groups, and will provide counseling services to NIGMS employees concerning equal employment.

Prior to joining NIGMS, Basnight worked at the Equal Employment Opportunity Commission as an investigator in the Washington field office. She interacted with individuals and their attorneys in investigating allegations of employment discrimination.

She joined the commission in 1987 as an investigator support assistant.

As a result of Basnight's EEOC experience, NIGMS director Dr. Ruth L. Kirschstein says, "She brings to the position extensive knowledge of EEO law, regulation, and policy, and considerable experience working with people."

Before working at EEOC, Basnight was employed by two agencies of the Public Health Service, the National Center for Health Statistics and the Health Resources and Services Administration. While attending college, she also worked for the United Way of Southside Virginia Volunteer Action Center.

Since 1987, she has also worked part-time as an instructor in the continuing education program at the Lt. Joseph P. Kennedy Institute. In this capacity, she provides educational and supportive services to mentally and physically handicapped individuals.

A native of Washington, D.C., Basnight received a B.S. degree in sociology and social work from Virginia State University in Petersburg.

Among her honors are membership in the Alpha Kappa Delta National Honor Society and the Alpha Delta Mu National Honor Society. In 1986, she was named an Outstanding Young Woman of America.—Wanda Wardell □

Herbert Horrell Retires After 49-Year Federal Career

Herbert Horrell, equipment specialist in the Standards and Specifications Branch, OD, retired May 1.

His government career started in January 1943 with the U.S. Navy, where he served in the medical corps; his naval career lasted 23 years. In 1965 he started his second government career at NIH, where he served for more than 26 years. While at NIH, Horrell spent 4 years as an engineering technician, 10 years as manager of the NIH Scientific Equipment Rental Program, and 8-plus years as an equipment specialist in SSB. He was the original manager of the rental program and was instrumental in starting it.

In the last month of his career, Horrell won an HHS employee of the month citation.

Some excerpts: "After nearly 50 years in the work force and at age 68, Horrell still had the drive and dedication of a 25-year-old...he always far exceeded the normal requirements of his position."



Herbert Horrell

Horrell was also a blood donor, and donated his annual leave to those who needed it. Though he said he will miss NIH's people and mission, he looks forward to enjoying retirement with his wife, Mary.

Child Care Center Has Openings

The NIH infant/toddler childcare center run by Childkind, Inc., in Bldg. T-46 has spaces available for kids 18-24 months old. A subsidy program is available. For information, call Lee Ettman, 496-8357. □

NIEHS Briefs Congress on Toxic Metals

The second briefing in the 1992 NIH congressional luncheon series, "Biomedical Research and You," recently drew more than 180 congressional staffers, interest group members, and others to the Rayburn House Office Bldg. on Capitol Hill. The series, sponsored by the NIH Office of Science Policy and Legislation, in conjunction with the "Partners In Discovery," a private sector consortium, is designed to present topics at the cutting edge of science.

Organized by NIEHS, "Lead and Other Toxic Metals: Everyone At Risk?," and the opportunity to get water from home tested for lead, attracted one of the larger audiences. Almost 100 samples of tap water were turned in by those attending, who will get lead analysis results by mail; the information also will go into a database being compiled by NIEHS.

The audience was welcomed by Dr. Jay Moskowitz, NIH associate director for science policy and legislation; he and Peatsy Hollings, wife of Sen. Ernest F. Hollings (D-S.C.), made introductory remarks.

Dr. Kenneth Olden, NIEHS director, moderated the program, drawing on scientists from two university-based centers where cutting-edge research in metals is being conducted—Dr. Philip Landrigan, chairman of the department of community medicine at Mount Sinai School of Medicine in New York City, discussed sources of lead exposure, human health effects, and preventing exposures; Dr. Bernard Weiss, professor of toxicology at the University of Rochester School of Medicine, provided similar information for mercury.

Following the theme of educating the public, actress Susan Keith of the ABC daytime drama *Loving* shared two case reports on mercury and lead poisoning that made the point, "Everyone needs to know." In those reports, children were seriously injured because the adults around them did not know the hazards of exposure to lead and mercury.

A clinician and NIEHS consultant, Dr. J. Routt Reigert of the Medical University of South Carolina at Charleston, talked about the importance of doctors and parents being aware of the hazards of lead exposure. As an example, Robert M. Hollings, Jr., the senator's nephew, described what his family went through with his daughter's lead poisoning in the course of restoring their old Charleston home.

As Landrigan told the gathering, lead is the single most widespread environmental toxin in the United States. Millions of children and an estimated half million workers are at risk for elevated blood lead levels because of their exposures. Children are exposed mainly through lead-based paint, drinking water, and



Participants at the recent Capitol Hill briefing are (from l) Dr. Philip Landrigan, Dr. Bernard Weiss, Dr. Routt Reigert, NIH associate director for science policy and legislation Dr. Jay Moskowitz, Susan Keith, NIEHS director Dr. Kenneth Olden, Peatsy Hollings and Robert Hollings.

lead in soil and dust. Paint is the main high-dose source of lead for children.

Lead affects the nervous system, red blood cells in bone marrow, kidneys, and reproductive organs. The most serious outcome of low-level lead exposure in children is damaged learning and behavioral responses, and permanent neuropsychological impairment. Landrigan noted that the irreversibility of these effects makes preventing exposure especially important.

Weiss outlined concerns about exposure to mercury, specifically methylmercury. The unborn appear to be the most sensitive to effects of low levels of exposure. In the U.S., a key concern has been for pregnant women consuming mercury-contaminated fish. If a woman takes in enough mercury in fish, it can lead to defects and developmental abnormalities in the child exposed *in utero*.

Because mercury gets into oceans and lakes through global air transport, fish with elevated levels of mercury can be found away from highly developed or industrialized areas. In addition, mercury is concentrated as it moves up the food chain from microscopic organisms that methylate the mercury—older and larger fish at the top of the aquatic food chain are also those with the highest mercury concentrations. As Weiss noted, prevention is key to public health, and prevention requires public education about sources to be avoided.

For many years, NIEHS has been the leader in supporting the basic research that has expanded the frontiers of understanding of the effects of low level exposures to lead, especially the subtle effects on cognition and other neurological endpoints. Olden pointed out that while preventing environmental exposures and effects is the goal, there is much to be done for those who have been

exposed to lead and who will continue to be exposed for some time.

Future lead research priorities at NIEHS include prevention; better treatments for lead toxicity including chelation and nutritional intervention; biokinetics and mechanisms of action of lead in humans; and biomarkers of exposure and toxicity.

The third and final 1992 luncheon briefing, "Women's Health Research: The Time is Now," will be held Monday, Oct. 5, Rm. B338, Rayburn Bldg.—Hugh James Lee □

Van Coverden Joins Inn Board

Tom Van Coverden, executive director of the National Association of Community Health Centers, Inc. (NACHC) and president of the organization's affiliated corporations (the Community Health Center Capital Corp., the National Primary Care Institute, and the NACHC Insurance Consortium), has become a member of the board of the Children's Inn at NIH.

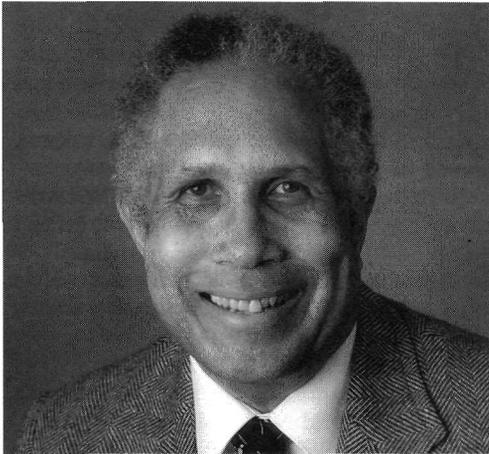
For the decade prior to becoming the chief staff member of NACHC in 1985, Van Coverden served as the association's director of policy analysis. He also worked as a legislative assistant to Rep. Martha Griffiths and as a liaison to the House ways and means committee.

Van Coverden also serves on the board of Health Care for America, the Society for the Advancement of Ambulatory Care, and Special Love, Inc. □

ANNIVERSARY*(Continued from Page 1)*

ricula, seminars, off-campus research experiences, and other special activities. As a result, these institutions are able to produce students who are well prepared to go on to graduate school and eventually to pursue biomedical research careers. The program also provides assistance to faculty members who wish to obtain advanced degrees and research training in major university, government, and industrial laboratories.

The MARC program reports that, to date, about 3,000 students have participated in its honors undergraduate research training program, more than 230 faculty members have



MARC Director Elward Bynum

received training and/or degrees through its faculty fellowship program, and more than 150 students have received MARC predoctoral fellowships for studies leading to the Ph.D. or combined M.D.-Ph.D. degree.

With more than 60 grants to undergraduate colleges, the MARC program has a FY 1992 budget of about \$13 million. "What started in the 1970's as a small activity has grown to a program cited by the [congressionally mandated] task force on women, minorities, and the handicapped in science and technology as a model minority student intervention program for other agencies to emulate," says Elward Bynum, who has been MARC director since 1976. "MARC scholars have distinguished themselves in many fields of the biomedical sciences."

Science Revitalized at Minority Schools

The MBRS program began as an effort to strengthen research capabilities at minority institutions and to provide for faculty and student participation in research. Faculty members who receive research project support are expected to submit their results for publication in peer-reviewed journals, to make

presentations of their research at scientific meetings, to try to obtain other research support, and to involve undergraduate and graduate students as active participants in research projects. The program also sponsors an enrichment component, which includes support for technical workshops, seminar series, attendance at national scientific meetings, and off-campus research experiences for faculty and students from small undergraduate colleges.

Today, the program supports about 100 eligible institutions in the United States, Puerto Rico, Guam, and the U.S. Virgin Islands. Its FY 1992 budget, including co-funding from other NIH components and the Alcohol, Drug Abuse, and Mental Health Administration, is approximately \$45 million.

"MBRS has sparked a scientific renaissance at minority institutions," says Dr. Ciriaco Gonzales, who has been MBRS director since 1975. "Many institutions, which otherwise would not have had the capability to involve faculty and students in biomedical research, now have active research programs and are flourishing as a direct result of MBRS support."

The MBRS program reports that about 700 faculty members and 1,500 students participate in 650 research projects each year. Since its beginnings, the program has involved approximately 17,000 student participants. More than 300 MBRS participants have completed the Ph.D. degree, over 1,300 have obtained the M.S. degree, and over 900 have obtained professional degrees.

Programs Developed from Cooperative Efforts

Both programs resulted from the combined efforts of individuals in the minority academic community, scientists and administrators in the federal government, and members of Congress—most notably Rep. Louis Stokes of Ohio, former Sen. Edward Brooke of Massachusetts, and former Rep. Augustus Hawkins of California—who were influenced by events of the late 1960's. At that time, demonstrations protesting prevailing social, educational, and political inequalities were at their peak.

"The civil rights movement was in full swing and Dr. [Martin Luther] King was leading his crusade," says Dr. Charles A. Miller, director of the NIGMS Cellular and Molecular Basis of Disease Program, who was then associate chief of the institute's Research Training Grants Branch. "It was an exciting time."

During this period, Dr. Geraldine P. Woods, a scientist and prominent leader in many national educational and political endeavors, was appointed to the National Advisory General Medical Sciences Council. As a council member, Woods says, "I read many applications for research and training grants. Of these thousands of applications, I

seldom read one from an HBCU [historically Black colleges and universities] . . . [yet] I knew that these colleges had a lot of potential." After her council term was over in 1969, Woods was asked by former NIGMS director Dr. Frederick Stone to serve as a special consultant to the NIGMS Office of the Director, with the assignment of working out a plan for the development of science training and research programs for HBCUs.

Miller and Woods, along with Stone, Drs. Carl Kuether, William Gay, George Hayden,

"MARC and MBRS participants are an essential part of tomorrow's scientific and medical discoveries."

and other NIH administrators, visited many of the HBCUs and other institutions serving minority students to offer information about NIH and to assess faculty, institutional, and student needs.

"We found that they needed financial assistance for purchasing instruments and equipment," said Woods. "Many of the professors at the colleges did not hold doctoral degrees. Faculty research training was needed so that they could move into research and improve student training. These institutions were eager to make improvements."

Meanwhile, at the Division of Research Resources, development of the MBRS program had already gathered momentum. The goal of the program proposed by former DRR director Dr. Thomas Bowery and his staff was slightly different: to build the research capabilities of minority institutions in order to prepare students better for graduate study. Many DRR staff members were involved in the initial phases of the MBRS program, including two consultants working with DRR, Dr. Henry Sayles from Bennett College in Greensboro, N.C., and Dr. Bernard Woodson from Virginia State University in Petersburg. In 1989, when the Division of Research Resources became the National Center for Research Resources, administration of the MBRS program was transferred to NIGMS.

From Promising Beginnings to Successful Programs

In 1972, DRR launched MBRS with \$2 million in grant awards to 38 charter institutions. Besides HBCUs, the initial MBRS grantee schools included 6 institutions that primarily serve Native American, Pacific Islander, Puerto Rican, and Hispanic populations. Under the leadership of Dr. DeWitt Stetten, Jr., who became NIGMS director in 1970, the first MARC components—the Faculty Fellowship and the Visiting Scientist Programs—began in 1972. Five years later,

under the leadership of current NIGMS director Dr. Ruth Kirschstein, the MARC Honors Undergraduate Research Training Program was added and the first 12 grants, totaling \$1 million, were made to 15 institutions. The MARC predoctoral fellowship was established in 1981.

The programs have had a significant impact on both institutions and individuals. "I remember how excited we all were at the prospect of receiving financial support for state-of-the-art equipment, supplies, travel, and for undergraduate research," says Dr. Joyce Verrett, dean of the college of arts and sciences at Governors State University in University Park, Ill., who was a new faculty member at Dillard University in New Orleans, La., when MBRS was launched. "The MBRS program made all these things possible, and the achievements in student, faculty, and institutional development have been stellar."

"MARC and MBRS graduates go into Ph.D. or professional programs at a rate three to four times higher than that for all undergraduates in the sciences at my institution," according to Dr. Herbert Silber, the MARC program director at California's San Jose State University. He has noticed that MARC and MBRS students become some of the best campus recruiters, both for admission to the programs and to science careers in general. "This factor helps to make the programs highly visible and highly competitive," he says.

Participants Gather at Annual Symposium

In addition to participating in research for the first time through MARC and MBRS, students often present their results for the first time in a formal scientific meeting at the NIGMS minority programs symposium. MARC and MBRS students gather at the symposium to present their research data in either lecture or poster form, hear talks by leading biomedical researchers, see demonstrations of current research technologies, and meet with representatives of many academic institutions offering some of the best graduate and professional training programs in the country.

The MBRS and MARC programs began having national annual meetings starting in 1973 and 1981, respectively; the first combined symposium was held in 1987, in honor of the NIH centennial, and the next was held in 1989, following the transfer of MBRS to NIGMS. About 1,500 science students and faculty members from over 120 grantee colleges and universities gather at the symposium. The participants also have the opportunity to visit local university or NIH laboratories, depending on the meeting location, and to meet with local high school science students. "These meetings have proven



MBRS director Dr. Ciriaco Gonzales

to be important experiences for the students and I am glad to see that they have become a tradition," Woods says.

Some Graduates Pursue Careers at NIH

"When the MARC and MBRS programs began in the 1970's, we all hoped to see the graduates become either faculty members and leaders at prestigious academic institutions or staff members of major research and industrial organizations," says Kirschstein, "and this is already happening."

Eighty-five percent of new entrants into the nation's workforce will be members of minority groups or female by the year 2000.

Many former MARC and MBRS students have pursued their careers at NIH. Dr. Lawrence J. Prograis, Jr., once a MARC student at Xavier University in New Orleans and later an MBRS-supported faculty researcher at Meharry Medical College in Nashville, Tenn., was recently appointed deputy director of the NIAID Division of Allergy, Immunology, and Transplantation.

Dr. Paulette S. Gray, who was an MBRS student at Clark Atlanta University, is currently chief of the Review Logistics Branch in the NCI Division of Extramural Affairs. Dr. John Ruffin, NIH associate director for minority programs, was a MARC faculty fellow at Harvard University in Cambridge, Mass., an MBRS investigator and MARC program director at North Carolina Central University in Durham, and member and chair of the initial review group for the MARC program.

Among the program graduates who have become NIH staff scientists is Dr. Daisy Delgado De Leon, a senior staff fellow in the NCI Metabolism Branch, who is studying the role of insulin-like growth factors in human breast cancer and the intracellular modulation of lysosomal transport in collaboration with Dr. S. Peter Nissley, chief of the NCI endocrine section. She was an MBRS participant at the University of Puerto Rico, San Juan, and later received a MARC faculty fellowship to finish her doctorate in endocrinology at the University of California, Davis. Her husband, Dr. Marino De Leon, also received a MARC faculty fellowship for his postdoctoral work at Davis. He is a staff fellow in the NIDR Neurobiology and Anesthesiology Branch whose research focuses on nerve regeneration.

Dr. Ricardo Parker, a senior research fellow in the NCI Clinical Oncology Program, received support from the MBRS program while attending Tennessee State University before moving to Oregon State University to complete a Ph.D. in microbiology. He is currently studying platinum drug resistance in cancer patients with Dr. Eddie Reed.

Dr. Myra Rosario, once an MBRS undergraduate student at the University of Puerto Rico, Medical Sciences Campus, received a Ph.D. in medical microbiology and immunology from the University of Oklahoma Health Sciences Center and is now a senior staff fellow in the NIEHS Laboratory of Reproductive and Developmental Toxicology.

More Scientists Needed To Keep Pace

According to the task force on women, minorities, and the handicapped in science and technology, 85 percent of new entrants into the nation's workforce will be members of minority groups or female by the year 2000, and the number of minority biomedical research scientists is still significantly lower than what demographics would predict. Despite two decades of achievement, MARC and MBRS are now even more critical to the future of science than ever before. As Kirschstein notes, "MARC and MBRS participants are an essential part of tomorrow's scientific and medical discoveries. They are among the bright new researchers who will serve to expand our knowledge and push back the frontiers." □

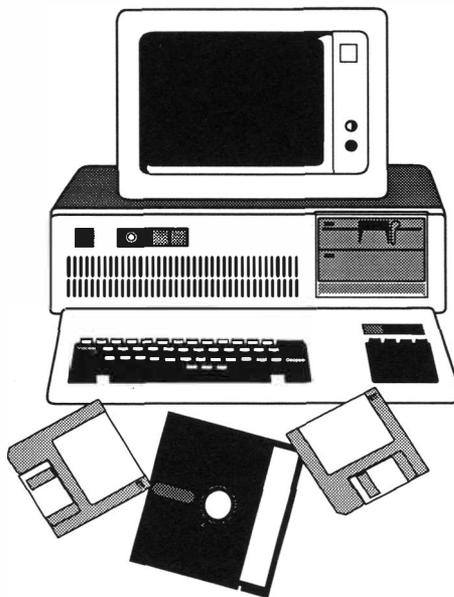
DCRT Offers New Electronic Guide to Grants, Contracts

DCRT is pleased to announce that it is now possible for registered NIH Computer Utility users to examine current and past issues of the *NIH Guide to Grants and Contracts* interactively via the new WYLBUR "ENTER EGUIDE" command.

Electronic issues of the NIH Guide, called the EGuide, are available for examination via ENTER EGUIDE for at least 1 year after their publication date. Once an EGuide issue is selected (by date), the ENTER EGUIDE command displays the electronic index. You may then examine one or more of the individual entries displayed in the index; browse full text for a Request for Application or Program Announcement, if it is available; display an entry on your terminal, interactively download it, print it on an offline printer or a hardcopy printer attached to your DOS-based personal computer, or transmit it to an e-mail address; request that a list of NIH Guide keywords and their corresponding entry identifiers for this issue be displayed; and examine a combined keyword index with associated EGuide dates and entry numbers for all available issues.

The ENTER EGUIDE facility should be invaluable to many NIH'ers involved in the

extramural program. The electronic version of the NIH Guide is distributed on Friday of each week, at the latest. This means that the electronic version is available via ENTER EGUIDE days before the paper version is received.



The paper version of the NIH Guide is distributed to more than 30,000 researchers worldwide each week. For nearly 2 years, the NIH Computer Utility, in a cooperative effort with the Office of Extramural Affairs (OD), the Division of Research Grants, and Johns Hopkins University, has been distributing the EGuide via BITNET; it now goes to more than 340 research institutions throughout the world. Each institution is then responsible for making it available to scientists and researchers at that site.

For more than 1½ years, the DRGLINE bulletin board in ENTER BBS has enabled people at NIH to download issues of the EGuide and associated full text RFAs to their personal computers or workstations. DRGLINE has been accessed more than 7,500 times in that period—a response that stimulated the development of the new facility specific to the EGuide.

To try the ENTER EGUIDE facility, sign on to WYLBUR and type ENTER EGUIDE. If you are not currently a registered user, call 496-6146 to request a set of NIH Computer Utility initials and an account. □

Database Expert Teaches Course Through DCRT

Starting on July 21, Dr. Aaron Navarro of MITRE Corporation and Johns Hopkins University will be teaching a 4-day course titled "Managing Information: The Database Paradigm." Navarro worked formerly at the National Library of Medicine, where he was the acting director of the Office of Computers and Communications.

The course will address data models, distributed architectures, database fundamentals, emerging technologies, design, and normalization.

Navarro gained expertise in these areas through 20 years of work in the private and public sector as a technician and manager. He has a broad range of experience with large-scale information systems development, operation, and maintenance, having worked on major projects for DoD, NASA, FAA, and NLM. His other interests include systems engineering, human-computer interaction, training, prototyping, networking, computer center operation, and technology transfer.

Anyone interested in managing information is encouraged to attend. The course is being offered without charge through the DCRT Training Program, July 21, 23, 28, and 30 from 5 to 6:30 p.m. To get more information or to register for the class, call the DCRT Training Program, 496-2339. □

Computer Center Branch's INTERFACE Now Available Online

Users of the NIH Computer Utility now have another way of accessing INTERFACE, the technical notes issued by the Computer Center Branch, DCRT. The new INTERFAC bulletin board, within NIH's Bulletin Board System (ENTER BBS), contains text from past and current issues of INTERFACE, along with article summaries and indices.

INTERFACE, issued six times a year, includes articles on subjects such as NIHnet features, protection of data against disasters, and international access as well as highly technical notes on use of the IBM System 370 and Convex mainframes.

Once in the bulletin board, users can view files according to the order in which they appear in INTERFACE. The directories are broken down into three sections: general, technical and Convex. The files can then be downloaded for use in WYLBUR or a PC or Mac.

Like many other bulletin boards, INTERFAC also contains a conference section. There is presently only one conference: FUTURE, which allows users to offer ideas and suggestions for upcoming INTERFACE articles. The moderator has also prepared summaries of articles from the general section of recent INTERFACE issues for those who want to see an overview of the publication's features.

Accessing the bulletin board system is a

simple process. Once logged into WYLBUR, just type ENTER BBS. From there you will be able to explore the INTERFAC board as well as many others. For more information on the bulletin board system, call the DCRT Training Program, 496-2339. □



Brickie LeRoy—secretary to the National Library of Medicine's deputy director, Kent Smith, for 12 years—has retired. Her career with the government began in 1945 with the Department of the Army, and also included 17 years with the National Institute of Mental Health as secretary to the chief of the Laboratory of Physiology (1963-1980).



TRAINING TIPS

The NIH Training Center, Division of Personnel Management, offers the following "hands-on" IBM and Macintosh computer courses:

Personal Computing Training 496-6211

<i>Courses Titles</i>	<i>Starting Dates</i>
Welcome to Macintosh	7/27, 8/12, 8/26, 9/11
Advanced Macintosh Techniques	8/3
MacWrite	8/4
Advanced WordPerfect 2.0 (Mac)	8/27
Intro to Microsoft Word (Mac)	8/11
Excel Level 1	8/7
Excel Level 3	8/19
Excel Level 4	7/29, 9/10
4th Dimension	8/5
MacDraw PRO	7/28
HyperCard Authoring & Scripting — 2	8/20
3Com PC Network-Level 1	8/10
3Com PC Network-Level 2	8/17
3Com PC Network Management-Level 1	8/24
Intro to Personal Computing for New Users	8/14
Disaster Recovery and Data Retrieval for the PC	9/11
Intro to DOS 5.0	8/3, 8/20
Intro to Windows 3.0	8/11
Intro to WordPerfect 5.1	8/17
WordPerfect 5.1 — Advanced Topics	8/4
Printing with WP 5.1 and Laser Printers	8/13
Intermed. Harvard Graphics, Rel. 3.0	9/11
Intermed. Harvard Graphics, Rel. 2.3	8/14
Intro to Paradox	9/9
Intermed. Paradox	9/10
Intro to dBASE IV (New)	8/13
Intermed. dBASE III+	8/19
Intro to Lotus 1-2-3, Rel. 2.2	8/24
IMPACT System for Personnel Staff	8/11
IMPACT System for MSCs	8/17, 9/2
IMPACT System for Administrative Staff	8/31
IMPACT System for Professional Staff	8/31

Headquartered at NIEHS

National Toxicology Program Review Under Way

The National Toxicology Program, established in 1978, coordinates toxicology studies in the Department of Health and Human Services, including NIEHS (where it is headquartered), the Centers for Disease Control's National Center for Occupational Safety and Health, and the Food and Drug Administration's National Center for Toxicological Research.

Shortly after assuming his new dual directorship of NIEHS and NTP in June 1991, Dr. Kenneth Olden called for a review of the NTP to assure that the program serves the public health by strengthening its role as the nation's premier toxicology research and testing program. The review is under way with opportunity for public review and comment later this summer and early fall.

The NTP board of scientific counselors, chaired by Dr. Daniel Longnecker, professor of pathology, Dartmouth University Medical School, is made up of 25 members who were assisted in the review by several consultants. Members are authorities in biological sciences, biostatistics, and related fields. The board formed three work groups, reviewing NTP studies on carcinogenesis, reproduction and heritable effects, and on other toxicities and disposition.

The NTP executive committee was requested to review a fourth issue, how to alert regulatory agencies and the public about test results on chemicals, especially data that suggest a potential hazard to humans.

The committee, composed of heads of fed-

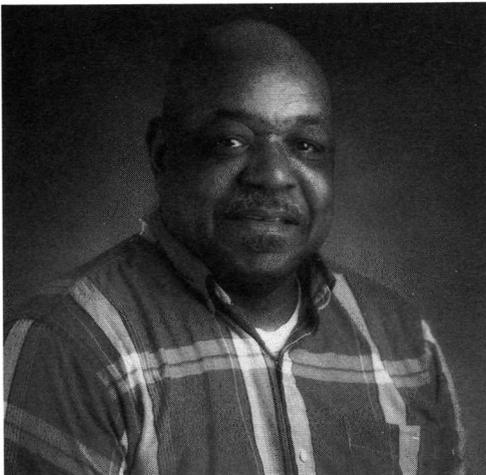
eral health research and regulatory agencies, provides primary program oversight to the NTP, and is chaired by Dr. J. Donald Millar, director of the National Institute for Occupational Safety and Health.

In general, recommendations called for refinements to procedures rather than complete changes, including suggestions on the nomination of chemicals for NTP studies. The process needs to be more accessible to a wider network of sources, and nominations need to include toxicity endpoints other than cancer.

The board recommended greater emphasis on mechanistic or hypothesis-driven research to facilitate interpretation of data, more collaborative work with scientists inside and outside NTP to expand knowledge of toxicity, and the use of mechanistic data in designing toxicity studies. Further, the board concluded that no alternative systems are available to replace the test systems currently in use by the NTP.

The board recommended that an inter-agency committee be formed to develop and use alternative systems within the government, and that NTP, as the nation's coordinating center for toxicological issues, should develop a national toxicology strategy.

The board's recommendations will be submitted to Olden, published in the *Federal Register* with a request for public comment, and a public meeting will be held in Washington, D.C., in the fall to allow for additional comments on the issues and recommendations. □



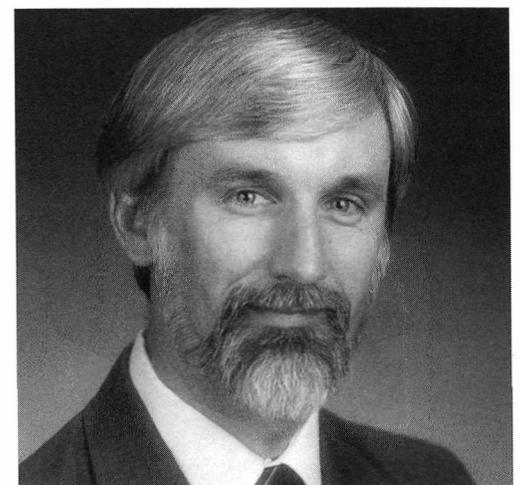
Willie Perkins, supervisor in the animal health and care section in NINDS' Division of Intramural Research, recently retired from NIH, marking 37 years of dedicated service. He began his career as a laboratory technician on Mar. 7, 1955. In the mid-1970's he transferred to the animal health and care section, where he cared for a wide variety of animals including cats, dogs, monkeys, rats, mice, hamsters, and chinchillas. A former cat breeder, Perkins believed that cats were the most gentle animals to work with, but, he said recently, "I liked them all . . . I really had no favorites."

Martin Named NIGMS Deputy Associate Director

Dr. Michael R. Martin has been named deputy associate director for program activities of the National Institute of General Medical Sciences, where he will help set grant funding policies and procedures. He also will serve as the NIGMS liaison to the Division of Research Grants and will be the institute's alternate representative to the NIH extramural program management committee.

Martin, who has worked at NIH since 1977, served as director of the Basic Cancer Biology Program at the National Cancer Institute for the last 6 years. Prior to working at NCI, he spent a year as a grants associate in the Office of the Director, NIH. He first came to NIH as a staff fellow in the Laboratory of Neuro-otolaryngology, where he later became a tenured pharmacologist.

A native of San Francisco, Martin received his B.A. in physiology/anatomy from the University of California, Berkeley, and his Ph.D. in physiology from the University of Bristol in



Dr. Michael Martin

England. He did postdoctoral research in the department of physiology at the University of Bristol. □

Hypertension Campaign Wins Rosa Parks Award for NHLBI

The International Society on Hypertension in Blacks recently presented the National Heart, Lung, and Blood Institute with its most prestigious honor, the Rosa Parks Award, for contributions to the control of high blood pressure worldwide.

The society was founded in 1985 and is based in Atlanta, Ga. It named the award for the Alabama woman whose refusal to sit in the back of a segregated bus helped inspire the U.S. civil rights movement. The award signifies the society's goal of achieving equality in health status for all people and particularly of reducing African Americans' excessive morbidity and mortality from hypertension.

Dr. Elijah Saunders, chairman of the society's board of directors, presented the award, an original oil painting and a plaque, to NHLBI director Dr. Claude Lenfant at a ceremony in Washington, D.C. Attending the ceremony were society board members and institute staff.

"This award is not given yearly," Saunders told the gathering, "but only when a recipient is found worthy." He explained that the NHLBI and its National High Blood Pressure Education Program had done much to educate the public and health professionals about the dangers of hypertension and to create local programs to improve the care of the poor and underserved.

Speaking next, Dr. James Reed, the society's president, added that the award is unique partly because a new painting is commissioned for each recipient. "The artist, Shelley Israeli, takes the theme of the recipient's contributions and tries to capture it in a painting.

"The institute's efforts," he continued, noting the painting's depiction, "will make the life—the future—of this child better."



NHLBI director Dr. Claude Lenfant (second from r) receives the Rosa Parks Award from members of the International Society on Hypertension in Blacks (ISHIB). They are (from l) C. Alicia Georges, ISHIB executive committee member, past-president of the National Black Nurses Association, and now with the division of nursing at Lehman College; Dr. Charles Curry, ISHIB executive committee member and professor of medicine at Howard University; Dr. James Reed, ISHIB president and professor of medicine at Morehouse Medical School; and Dr. Elijah Saunders, ISHIB board chairman and clinical director of the hypertension center at the University of Maryland School of Medicine.

Lenfant expressed the institute's appreciation at the honor. "The institute staff and

Natcher Comments Welcome

The Environmental Assessment (EA) for Phase I of the Natcher Bldg. has been completed, resulting in a "Finding of No Significant Impact" (FONSI). Copies of the EA and FONSI are available for review in the National Library of Medicine and in the NIH Visitor Information Center in Bldg. 10. The public record is now open for a 30-day comment period. Send comments to: Thomas Flavin, Office of Communications, OD, Bldg. 1, Rm. 350.

myself are deeply committed to the mission of working to better the health of minorities. This award represents the partnership between the institute and the society that is so vital to our achievement of that goal." □



Mary Tyler Moore, Juvenile Diabetes Foundation (JDF) International chairperson, presented NIDDK director Dr. Phillip Gorden with the "Partner for the Cure Award" at a recent JDF awards luncheon. Recently, NIH and JDF, whose 1992 theme is, "The Only Remedy Is a Cure," jointly funded six diabetes research grants in a combined effort to help find a cure for diabetes. "It's the spirit and cooperation of the thousands of people with diabetes that energizes our efforts, the JDF's efforts, and makes us all proud," Gorden said, upon receiving the award. "I look forward to a short partnership because we'd like to get to where we're going—a cure—soon."



Participants in the Summer Institute for Undergraduate Faculty, sponsored by the NIH Extramural Associates Program, met recently with NIH deputy director for extramural research Dr. John Diggs (r). They are (from l) Dr. Cesar Hernandez of New Mexico Highlands University; Dr. Vera Zdravkovich of Prince George's Community College; Dr. Yvette Myers-May of Sojourner-Douglass College; Dr. Francine E. Jefferson of Cheyney University of Pennsylvania; and Dr. Jafara S. Turay of St. Augustine's College.