

THE RECORD

Still The Second Best Thing About Payday

Senior Sleuths Sought

'Adventure in Science' Seeks a Few Good Guides

Help wanted: Science enthusiasts for temporary assignment working with youngsters with infectious curiosity; volunteers must be able to communicate passion for discovery. Warning: Learning may prove contagious. Lecturers need not apply.

It's not a real ad, but it could be. Adventure in Science (AIS), the hands-on education activity for children ages 8-11, is gearing up



Science adventurers from seasons past, David Staudt (l) and Eric Shaffer investigate the properties of "slime."

for its fall 1997 season at NIH and is looking to recruit new teacher-volunteers.

Begun 23 years ago in Gaithersburg by a now-retired NASA scientist who wanted to bring to life science concepts that schools often make boring, AIS is planning its fifth year at NIH. The program starts in October, meeting every Saturday for about 2 hours, and runs through March. Teacher-volunteers, many of whom have careers in science and math, agree to present interactive sessions to a group of about 8 to 10 children on one Saturday morning (or more, if they desire). Some past topics

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Paid Parking on Horizon

Campus Construction Boom Ushers In New Parking Era

To address the loss of campus parking spaces due to construction, the Office of Research Services (ORS) has developed a parking management plan that could forever change the face of parking on campus.

During 1996, a total of 450 parking spaces were lost due to repairs to the Bldg. 10 clinic parking garage and the essential maintenance and safety program in the Clinical Center. This month, 300 spaces will be lost as construction for the Consolidated Laboratory Facility (Bldg. 50) gets under way at the site of parking lot 13C. The utility tunnel and power plant expansion projects will claim another 100 spaces in July and August. The site work to relocate Center Drive for construction of the Clinical Research Center (CRC) will begin in the fall, and will result in loss of an additional 430 spaces. In 1998, NIH is expected to lose 500-700 more spaces temporarily as the foundations of the CRC affect the Bldg. 10 garage at the line where the new building meets old Bldg 10.

SEE WHERE TO PARK, PAGE 6

Archaeologists Uncover Evidence Of Indian Past on NIH Campus

By Jan Ehrman

A warm, summerlike breeze just might whisk you back there—to a youthful time when you ventured excitedly into your backyard with your best friend, shovel in hand, and proceeded to dig deep into the soil in hopes of finding a pirate's treasure—or whatever could be unearthed. Maybe your catch of the day turned out to be some bloodworms, a jagged piece of glass, or if you were more fortunate, a buffalo nickel or an Indian head penny. More realistically what you ended up with was filthy clothes, a dirty face, and a chiding from mom.

Recently, for nearly a month, a similar scene was replayed in our federal "backyard." Only the kids were adults—archaeologists to be precise. And there was no parental disdain, only the inquisitive minds of NIH



Many artifacts such as quartzite rock and ceramics, some as old as 3,000 years, have been plucked from NIH soil.

SEE ARTIFACTS, PAGE 4

'To Market, to Market...'

The Farmers' Market is back at NIH through Oct. 28. Open Tuesdays from 2 to 6 p.m. in parking lot 41-B (behind the National Library of Medicine), it offers a variety of products from Maryland and Pennsylvania farms, including homegrown and fresh-picked fruits and vegetables in season, fresh plants and dried flowers and herbs, bedding plants, houseplants, organic produce, pies, yeast and quick breads, cookies, and homemade jellies & jams. The market is sponsored by the Montgomery County Farmers' Market Association.

Gallaudet Students Visit NHGRI

Students from Washington, D.C.'s Gallaudet University, the world's only 4-year liberal arts university for students who are deaf and hard of hearing, recently got a behind-the-scenes look at the Human Genome Project during a visit to the National Human Genome Research Institute.

The 12 sophomores and their teacher, Gallaudet biology professor Dr. Kathy Arnos, toured several NHGRI facilities, including the FISH (fluorescence in-situ hybridization) lab, the microdissection lab, and the physical mapping area.

They also met with NHGRI researcher and Gallaudet graduate Debbie Mosbrook, who shared her experiences of being deaf and succeeding in science. Mosbrook, a predoctoral Intramural Research Training Award fellow in the lab of NHGRI principal investigator Danilo Tagle, explained her work on identifying genes involved in inherited neurodegenerative disorders.

Dr. Paula Gregory, from NHGRI's Outreach and Education Office, said the recent visit was the first time Gallaudet students toured the institute. Gregory, who spoke to Gallaudet students last winter about the Human Genome Project, has helped the university with a science teachers' workshop through a grant from the National Science Foundation.

"A lot of these students had never considered a career in science before," said Gregory. "They really enjoyed meeting Debbie, an excellent role model who showed them 'If I can do this, you can too.' And who knows? We might even see some of them again as summer students." ■



A Gallaudet student receives a hands-on demonstration from NHGRI's Dr. Paula Gregory (r).

Tube Down the Shenandoah

Discover the beauty and serenity of the Shenandoah River on Aug. 2 with the R&W Association. The slow-moving shallow river flows between the Blue Ridge and Massanutten Mountain and through the George Washington National Forest. The trip's finale is an all-you-can eat steak dinner, complete with all the trimmings. The cost is \$32 for adults or \$22 for ages 8 and under (tube and steak) or \$15 (tube only—no discount for kids). On the day of the trip you can rent an extra tube for your cooler. Details and directions are available when you register at the R&W activities desk, 6-4600. ■

NIH Sailing Association Open House

Join the NIH Sailing Association for its annual open house Saturday, July 12, 11 a.m. - 4 p.m. at Selby Bay, in Davidsonville, Md. (for directions to Selby Bay, see the NIHSA website: <http://www.recgov.org/r&w/sailing/sail.html>; click on NIHSA Guidebook; go to Table of Contents, then click on Location of the Boats). The event is a great time for prospective new members to check out the action and to sign up for the 6-week basic training course that begins Wednesday evening, Aug. 20.



Food, drink and boat rides will be available and volunteers are needed. Tom Murphy, the event coordinator, needs flyer distributors, chefs, sous-chefs, captains for ride-arounds and sign-up representatives. He can be reached at (301) 405-1874, (301) 262-8574, or by e-mail: tm34@umail.umd.edu.

Basic training class cost is \$110 plus \$35 club membership dues. The course includes six evening classroom sessions, a Saturday morning orientation at the marina and three or four weekday afternoons on South River, near Annapolis. For onboard instruction, there are two students and one instructor in the club's Flying Scots (19-foot, sloop-rigged centerboard daysailers). Students who successfully complete the course qualify to sail these boats for low charter fees. Students must be NIH/NOAA employees, patients, or contractors, as well as R&W members. Application forms and details on the sailing club are available at the R&W activities desk in Bldg. 31, Rm. B1W30.

NIH RECORD

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Finding Underscores Importance of Controlling Opportunistic Infections in AIDS Patients

One of the many questions surrounding AIDS has been where HIV comes from in the latter stages of the disease, when patients have low CD4 T cell counts. A report in the June 20 issue of *Science* identifies a source as tissue macrophages, and points to opportunistic infections as a trigger that sets off a wave of HIV production.

This finding has several important implications, say investigators Dr. Jan Orenstein of George Washington University and Dr. Sharon Wahl of the National Institute of Dental Research. "Preventing or eliminating opportunistic infections is not only essential to the immediate well-being of the patient, but can also slow the cycle of virus production that leads to further immune system damage," said Wahl. "The macrophage appears to be a key player in this scenario by functioning as a long-lived reservoir of virus production."

It has been known for some time that CD4 T cells are the primary target of HIV infection, and that their destruction leads to a weakened immune system and susceptibility to "opportunists"—microorganisms that normally don't infect a healthy individual. As HIV infection progresses toward AIDS, the CD4 T cells are the chief source of new virus, creating a cycle of escalating virus production and T cell death. The paradox has been how the levels of HIV continue to increase over the course of AIDS, at the same time the T cell population dramatically decreases.

Orenstein and Wahl thought macrophages might hold the answer to this riddle. Macrophages are immune cells that roam throughout the tissues for periods from months to perhaps years, seeking out and destroying invading organisms. The scientists knew that macrophages could be infected with HIV, but these voracious scavengers were not thought to be a significant source of virus production.

Close examination of lymph nodes from AIDS patients infected with a variety of common opportunists, including *Pneumocystis carinii* and *Mycobacterium avium*, proved otherwise. These patients not only had from 5 to more than 100 times the number of virus-producing macrophages found in the nodes of opportunist-free HIV patients, but the individual macrophages also demonstrated a much higher level of virus production.

The actual mechanism that switches macrophages from HIV carriers to producers is not yet known. Opportunistic microorganisms apparently act as a magnet, say the investigators, pulling together large numbers of both HIV-infected and uninfected macrophages. The opportunists then in some way stimulate the HIV-infected macrophages to produce virus, which ultimately spreads to uninfected macrophages and T cells.—Wayne A. Little **R**



NIH was recently nominated by TranCen staff and named Employer of the Year by the Marriott Bridges Program, which helps students with disabilities make the transition from school to work. The program was introduced at NIH in April 1990 and NIH has placed approximately 85 students in jobs here since then. Due in large part to the outstanding efforts of NHLBI's Dr. Ron Geller, who pioneered the agency's involvement in Bridges, NIH has grown to become the largest supporter of the program in Montgomery County. Shown above at the ceremony are former President George Bush (r) and Marriott executive Richard Marriott (l), who presented the award to Tony Itteilag (second from l), NIH deputy director for management, and Carlton Coleman, diversity program manager, NIH Office of Equal Opportunity.



NIH recently was recognized for its continuing contribution to the citizens and businesses of Montgomery County. An award was presented to the agency by George Griffin (second from r), on behalf of County Executive Doug Duncan, and by representatives of the county Chamber of Commerce Steven Robins (l) and Paul Gervas (r). Accepting the award are Janyce Hedetniemi, director, NIH Office of Community Liaison, and Dr. Leamon Lee, NIH associate director for administration.

Blue Cross/Blue Shield Service Day

Blue Cross/Blue Shield of the National Capital Area will be on campus Wednesday, July 9 to assist plan enrollees who have claims or enrollment problems. A representative will be available from 9 a.m. to 3 p.m. on that day in Bldg. 31, Conf. Rm. 8 armed with a laptop computer to access the enrollee's records at company headquarters.

No appointment is necessary. Assistance will be provided on a first-come, first-served basis. Blue Cross/Blue Shield comes to the NIH campus 1 day each month, usually on the second Wednesday of the month.

ARTIFACTS, CONTINUED FROM PAGE 1

employees trekking alongside West Drive, some of whom stopped to get the real "dirt" on the situation. Meanwhile, the determined excavators have since come away with considerably more than just bloodworms.

This archaeological dig took place on a plot of hilly, historic land termed "the Knoll," a tranquil site located between the Children's Inn and the Clinical Center. In the months to come, construction of the new Clinical Research Center will abut this property.

Led by Archaeologist Elizabeth A. Comer and a team of eight assistants, the crew spent several weeks during May and June digging 5-foot-square openings into the Earth, each 3-4 feet deep. Their efforts did not go unrewarded, yielding a wide variety of fairly well-preserved Native American cultural material that may have been around as far back as 3,000 years ago.

The archaeologists believe that the NIH grounds, and in particular the Knoll, were likely a hunting and gathering site for native tribes and early historic (European) settlement. The objects uncovered by the team, including gunflints, quartzite and other types of rock, ceramic plate, nails, glass, wire, oyster shells, and related items seem to tell much about these early inhabitants who used the land long before NIH became a household name. While it may be impossible to say which Indian tribes settled here, the artifacts provide intriguing lifestyle information to scientists such as Comer. Further historical research may reveal the names of early settlers who inhabited the site in the late 18th and early 19th century.

"Based on the Indian artifacts we have found, we estimate the time periods here to be Late Archaic to Early Woodland, or as far back as 3,000 years,"

said Comer. She added that whatever group lived on the Knoll, the evidence strongly suggests they were well adapted to the environment. "For example, some of the material we found, like

quartzite rocks, appears in some cases to have been sharpened into projectile points and used for hunting and protection (knives and arrowheads), for gathering and preparing food (cutting and skinning rabbit and deer hides), and for making clothes."

Further testimony to the prehistoric occupants' resourcefulness, Comer added, comes from their use of the environs. "The Potomac River was nearby of course, so there was always plenty of fresh water and fish available. These individuals were here for the same reason we're here—the area was habitable and attractive, and it had life-sustaining resources nearby. And, as always, adaptation to the local



Archaeologist Elizabeth A. Comer led the excavation of the NIH "Knoll" site.

The archaeologists believe that the NIH grounds, and in particular the Knoll, were likely a hunting and gathering site for native tribes and early historic (European) settlement...Further historical research may reveal the names of early settlers who inhabited the site in the late 18th and early 19th century.

environment was truly the name of the game," explained Comer, who first became interested in excavation around age 5. Her childhood interest was fueled by reading her parents' issues of *National Geographic*, so her career decision was very easy.

Noteworthy findings aside, the recent archaeo-

logical undertaking was not a serendipitous event. The fertile grounds of NIH, which used to be part of both Frederick and Prince George's counties, have been thoroughly researched over the years, and already lay claim to a good deal of landscape and archaeological history. Last November, Comer, who owns the Laurel, Md.,-based company that provided the month-long investigation (Elizabeth Anderson Comer/Archaeology) was chosen to conduct a preliminary basic survey or field examination of the Knoll. The survey is standard procedure in the trade. Prior to beginning any construction activities on projects with federal involvement, the Historic Preservation Act of 1966 dictates that a search must be conducted for cultural resources that might be eligible for admission to the National Register of Historic Places. "That is precisely why we're here," said Comer. "That and to capture and preserve information prior to the march of the modern world."

From the start, Comer believed the Knoll to be a particularly good site for excavation because the

A worker on Comer's team sifts through the soil for Indian artifacts.



grounds, formerly farmland, were never disturbed by natural disasters such as flooding, or by erosion, plowing, construction or underground utilities—factors that often inhibit or totally prevent excavation. “The natural soil levels here are really intact—we didn’t have any of that (upheaval) happen here,” explained Comer, currently a doctoral candidate at the University of Maryland. She noted that in excavating Knoll soil, she and her colleagues found artifacts as shallow as 6 inches below the surface.

Prehistoric “treasures” have previously been discovered on similar plots of NIH land, such as the Taylor site, an extensively investigated area approximately 600 feet long by 200 feet wide in the southeast corner of the NIH campus, close to the National Library of Medicine and Wisconsin Ave. According to the *NIH Record*, back in the 1970’s an NIH tree maintenance worker named Vernon Taylor spent his “leisurely” time walking around campus, picking up Indian artifacts from various NIH locations, including the eponymous Taylor and Knoll areas. According to Comer, “he was in reality a very good local collector.” (The *Record* reported that Taylor collected more than 500 arrowheads from all over upper Montgomery County). A bountiful quantity of artifacts was also recovered by archaeologists researching the Taylor location in the early 1980’s, especially debitage—debris left over from the manufacturing of tools such as projectile points or arrowheads, which were made primarily from quartz or quartzite. Shards of pottery were also obtained: one type, known as Accokeek pottery, was presumably made around 2,700 B.C. These endeavors set an encouraging precedent for Comer’s most recent dig.

“One thing the early inhabitants would do, for instance, is take rock, like the quartzite rock we’re finding, and use it as a hammer, hitting it against other rock. Doing so they formed knives, scrapers, and projectile points,” said Jennifer Flippo, an archaeologist working on the project with Comer. “What we’re pulling out are the flakes that came from the rocks when they were banged together.”

In the waning days of their project, Comer and her team are seizing information that may ultimately tell us a great deal not only about the past, but perhaps also the present. She admits that while there’s no evidence of teepees on the Bethesda campus (teepees were used by equestrian Plains tribes in the West during the post-European contact period), “what our findings from this site will do is enable us to more fully comprehend the prehistoric settlement of these early Native American pioneers—their diet, lifestyle rituals, survival mechanisms, religion and other issues of the time.” We may also come away with a better understanding of ourselves, she concluded. ■

NIDDK Scientists Honored by Washington Academy of Sciences

Three NIDDK scientists were recently recognized by the Washington Academy of Sciences.

Dr. Herbert Tabor, chief of the Laboratory of Biochemical Pharmacology, investigates the biochemical functions of polyamines. Along with Drs. Celia Tabor and Sanford Rosenthal, he discovered the biosynthetic pathway for polyamines and showed their importance in growth and development. He won the academy’s highest award, the Distinguished and Outstanding Career in Science Award. He was cited for his biochemical research, his



Dr. Herbert Tabor

leadership in training and mentoring three generations of scientists, and his service as chief editor of the *Journal of Biological Chemistry*.

Dr. Paul Torrence, chief of the section on biochemical chemistry, researches the chemistry and biochemistry of a unique oligonucleotide called the 2’-5’ oligoadenylate, the 2-5A system. His investigations have led to a wholly new approach to the targeted destruction of mRNA. This technology has promise for novel therapies for viral infections, inflammatory and cardiovascular disease, and certain cancers.



Dr. Paul Torrence

Torrence received the Outstanding Achievement in the Health Sciences Award.



Dr. E. Neil Lewis

Dr. E. Neil Lewis, a scientist in the Laboratory of Chemical Physics, sits in Bldg. 5 behind a door marked “DANGER - Laser in Operation,” where he conceived of and developed a powerful, nondestructive tool to probe the chemical composition of complex biological systems. His infrared absorption and Raman emission microscopes can detect silicone gel in human breast tissue and other samples as small as 1 micron without damaging the sample. He won the Outstanding Achievement in the Physical Sciences Award. ■

Hormone Study Seeks Women

The NIMH Behavioral Endocrinology Branch is seeking women who are postmenopausal (no menstrual period for at least 1 year) and medication free to participate in a study investigating the effects of hormones on behavior. Hormonal evaluation will be performed and payment is provided. For information, call Linda Simpson-St. Clair, 6-9576.

WHERE TO PARK, CONTINUED FROM PAGE 1

A survey of all campus parking facilities earlier this year showed that, in parallel to an overall shortage of spaces, chaotic parking patterns dominate the parking picture, with a significant number of illegally parked cars and an extremely high deficit in visitor spaces.

"In developing alternative solutions, we have tried to cope with this loss and maintain capacity while finding ways to more efficiently manage the spaces we have," explains Stella Serras-Fiotes, master planner in ORS's Division of Engineering Services, who is coordinating the new parking plans.

The ORS plan includes the following strategies: create new capacity for employee parking, including new temporary spaces to offset losses due to construction; increase management and control of parking by contracting with Colonial Parking, a private parking management service, to provide attendant-assisted parking; increase visitor parking; institute parking fees for visitors; and increase off-campus parking facilities.

Some plan details:

☛ In early July, temporary lots will add about 400 spaces to the parking inventory, primarily to offset parking losses associated with construction of Bldg. 50. The lots are to be located south of parking lot 41B (south end of campus); east of the Natcher Bldg.; near the National Library of Medicine; by the electrical substation at Bldg. 17 (near Rockville Pike); and in front of the Lasker Center.

☛ By August, visitor parking will be consolidated and expanded to a capacity for approximately 1,200 cars. This will be accomplished through four attended visitor parking facilities, managed by Colonial Parking, and installation of parking meters near buildings. Visitor parking will be located in the following areas: MLP-8, top 2½ levels; lot 4A (partial); Natcher Bldg. temporary lot (partial); the existing P3 level of the Bldg. 10 parking facility; and parking meters at the Natcher Plaza and Bldgs. 13, 36, 38 and 31.

☛ Also by August, ORS plans to implement paid visitor parking (except for patients, patient visitors and authorized users of the P3 level in Bldg. 10). NIH has received permission from GSA to collect the fees, which will help pay for the contract to provide attended parking services campus-wide. Rates are proposed to permit short-term visitor parking at a reasonable rate (\$2/hour up to 3 hours) and discourage nonvisitors from purchasing daily parking (\$12/day). The ICDs would have the option of prepurchasing validated stamps to provide visitor parking at no cost to their visitors.

☛ At the same time, all other existing visitor spaces will be converted to employee parking.

Additionally, managed attendant-assisted parking for employees will be implemented in the lower levels of MLP-8.

☛ Also beginning in August, construction contractors will park at a new off-campus facility and will have a dedicated shuttle service to the campus. This will free about 200-250 spaces on campus for use by employees.

☛ By October, a net gain of approximately 330 new employee spaces will be achieved through management of employee parking at all the Bldg. 31 parking lots by Colonial Parking. This added capacity will offset parking losses associated with Clinical Research Center construction and relocation of Center Drive. The operation calls for first-arriving employees to self-park cars in existing spaces. Once lots are full, attendants will direct employees to aisle parking where parkers leave their car and ignition key and receive a claim ticket. Vehicle keys are secured by attendants using key security locks. As self-park spaces open, the "stacked" cars will be moved into available spaces. Departing stacked employees will present a ticket to an attendant who will move any blocking vehicles.

☛ Finally, the capacity of the NIH leased parking facility at Mid-Pike Plaza has been increased to 425 spaces. Regular shuttle bus service to this lot, as well as the other off-campus facilities such as Garage 57 in Bethesda and 6006 Executive Blvd. in North Bethesda, is available from the campus.

The already established TRANSHARE Program, which provides a subsidy for commuters using public transportation; the Ridefinder Network, a carpool/vanpool matching service; satellite lots; and bicycling amenities will continue to operate and expand as opportunity allows.

"Eventually in later phases, we anticipate enhanced managed operations of all parking and transportation resources on and off campus," notes Stephen Ficca, NIH associate director for research services. "One central Transportation and Parking Management Center will then encompass the full range of parking initiatives including phasing in the management of parking at other campus facilities, shuttle operations and satellite parking." Costs would be offset by revenues recouped from visitor paid parking.

More parking and transportation information can be found on NIH's parking and transportation Web page (<http://www.nih.gov/od/ors/parking/parking.htm>). For information on these and other commuter alternatives, including TRANSHARE and the Ridefinder Network, call the Employee Transportation Services Office, 2-RIDE. ■



Dr. Mark Klebanoff of NICHD's Division of Epidemiology, Statistics and Prevention Research was elected as 1998-99 president of the Society for Pediatric Epidemiologic Research, an organization founded in 1988 to provide pediatric scientists a forum to exchange research and information. As president, he will primarily be responsible for organizing the annual meeting in 1999. Klebanoff is a pediatrician and epidemiologist who has been with the institute since 1983. His research interests span a broad range of topics in maternal and child health epidemiology, but currently focus on the epidemiology of preterm delivery and suboptimal fetal growth.



Bonds that Heal?

Seminar Series Examines Social Relationships, Health

By Sophia P. Glezos

People who are more likely to maintain health or survive severe illness are those who have one or more intimate and supportive relationships, or otherwise gain a sense of belonging through several but less close relationships. Conversely, those at increased risk for mortality from a broad spectrum of illnesses are socially isolated—without close relationships or a feeling of social connectedness.

These findings—which add to mounting scientific evidence that biology often interacts with behavior and social factors to affect health or illness—emerged from preliminary results of new studies and from a literature review of population-based, mortality-risk research published in the last two decades.

Dr. Lisa F. Berkman, chair of the department of health and social behavior at Harvard School of Public Health, recently discussed her findings at a lecture that was part of a monthly seminar series sponsored by the NIH Office of Behavioral and Social Sciences Research.

“The extent to which we maintain close personal relationships, or the degree to which we feel rooted in our community or have deep, abiding social and psychological resources, help to determine how protected we are against biological, environmental, or interpersonal assaults,” she said.

Recent studies conducted by Berkman and colleagues, as well as research published between 1976 and 1994 that she examined, have led her to conclude that illness and death rates reflect social patterns and are in need of more scrutiny.

“Once we recognize the social patterning of the distribution of diseases,” she said, “it seems incumbent upon us to explore what it is about people’s social circumstances that relates to disease risk. In order to make meaningful medical advances, we have to acknowledge that health exists in a social context...when we remove it from that context—which is composed of other factors such as social class, economic status, race and ethnicity—we become removed from something that...may be a significant cause of disease.”

Biomedical research that Berkman examined in her effort to learn how social experience can get “under the skin and inside the body” suggests that multiple biologic pathways, such as the neuroendocrine or immune systems, may be involved. One study she reviewed focused on cardiovascular reactivity; volunteers were required to complete two laboratory tasks. Half of the subjects worked alone, the other half worked with an accompanying friend or “supportive partner.” In the end, those in the latter

group showed beneficially reduced heart rate and blood pressure. The researchers suggested the “friend’s presence may have acted as a conditioned stimulus or a ‘safety signal,’ altering neural input to the heart during challenge.”

Another mechanism of influence on the body may be more indirect. “When someone is socially isolated and has little or no sense of belonging,” Berkman said, “he or she may drink more, smoke more, eat more, and so on, in an effort to fill the space.”

Some populations Berkman highlighted as being at-risk for social isolation are the widowed whose main source of support was their spouse; people who have moved away from their families and close friends; immigrants; and those whose jobs relocate them frequently. In the latter two groups, although many of them may have tight family connections, she said, they are typically missing the kinds of extended relationships and contacts that would help them negotiate life in their new surroundings.

Berkman also discussed current research on social factors that transcend the individual’s immediate surroundings. Harvard’s Dr. Ichiro Kawachi asked participants in a national survey to agree or disagree with the following: “Most people would take advantage of you if they got the chance.” In preliminary results, the researcher found that states whose residents felt confident about people’s trustworthiness had the lowest death rates, and those who believed people are exploitative whenever possible had the highest mortality rates.

Berkman described two of her NIH-funded studies that are testing whether psychosocial prevention interventions can reduce morbidity and mortality rates. One 6-month study, supported by NINDS and NIA, is looking at people who have had a stroke. Based on findings from earlier research, she hypothesized that early social-network interventions might favorably influence health outcomes.

While Berkman expects that future studies will continue to confirm the relationship between social ties and health status, much remains unknown about how these factors interact.

“Since we have mostly mortality data,” Berkman concluded, “we have very little understanding of where within the disease process these factors have their greatest effects. This would be very important to know in terms of prevention education campaigns, whether we should be focusing on primary prevention or whether our efforts should be secondary.”

The next OBSSR seminar will feature Dr. James S. House of the University of Michigan on “Social Inequalities in Aging and Health,” Friday, July 11, from 10 to 11 a.m. in Natcher Conference Center, E1-E2. ■

“The extent to which we maintain close personal relationships...help[s] to determine how protected we are against biological, environmental, or interpersonal assaults.”

ADVENTURE, CONTINUED FROM PAGE 1

have included "M&Ms and Data Analysis," "A Visit to the Fourth Dimension," "Inside a Frog," and "Why a Fly?"

Although the program's main goal is to show children the fun of exploring scientific topics, many of AIS's volunteers also claim both personal and professional benefits from their experiences with the children.

"One of the unintended bonuses I've found from doing activities like AIS is that it can give me a whole new perspective on my own work," explains Dr. Rosemarie Hunziker of NIAID's Division of Intramural Research. Impressed by program organizers during the initial interviews for volunteers back in 1992, she has been an AIS teacher ever since. "Children ask very naive but intelligent ques-

tions. We have to break our knowledge down to 'first principles' to answer some of their queries, and sometimes it gives us pause. I have come back from a session with third graders and realized that I learned something myself from answering their questions."

Dr. Robert Yarchoan, chief of NCI's HIV and AIDS Malignancy Branch and a 3-year AIS volunteer who last season offered a session on "Increasing Your Body's Energy Output," agrees. "It has been quite rewarding to see the world through their eyes and to see how quickly they can grasp concepts," he says. "I have found that teaching an AIS course gives a new sense of the process of science and how to ask



Future scientist (or future chef?) James Kolb ponders the mysteries of squid anatomy.

PHOTOS: DR. EDWARD MAX

good questions."

Dr. Ed Max, an FDA scientist who helped bring AIS to NIH, compares taking an "adventure in science" to being a detective on the way to solving some fascinating puzzle. Science presented in school is often just another thing to memorize from a book, he believes, "but if young people are actually involved in picking up the clues, it makes it a lot more fun and they learn a lot more. For me and a lot of the other volunteers, watching a new idea dawn on kids—an idea they've never seen before or something they've never really understood—creates an excitement and a joy for us all."

What AIS needs currently are some "senior sleuths" who will donate a couple of hours one Saturday (or more) to demonstrate some lab technique or scientific concept for a group of eager young apprentices. Volunteers can create the projects themselves, or use some that have worked well in the past—as long as there is decidedly more hands-on than hands-off.

"One of the things I say to the kids is that sometime in your scientific career you will be the first person in the universe to know a particular thing, probably at the end of some really neat experiment," says Hunziker. "That moment of discovery is one of the most satisfying, exhilarating, peaceful, terrifying, joyful, astonishing, fulfilling, thrilling human experiences.

"This program has been successful for over 23



Soap star: David Procelli gazes into his crystal...bubble.



It's rocket science: Pauline Yu constructs her own spacecraft.



Dr. Lou Staudt of NCI shows students how to pipette DNA.



Marc Yarchoan watches as Dr. Kathy Kelly of NCI assists Alex Lo in loading an electrophoresis gel.

years because of a very simple formula: scientists who love their work spend Saturday mornings with curious children who love to ask questions and 'get dirty,'" she concludes. "What more could you ask for?"

For more information on AIS, or to volunteer, call site coordinator Blanche O'Neill, 5-3726. ■

The R&W Annual Meeting on June 9 got a big kickoff from Channel 4 weatherman Bob Ryan (above, r), who wields a



knife to cut a cake for guests. Joining him are (from l) Linda Doty, president of R&W, Karen Ciaschi of R&W, Larry Chloupek of Special Love, Inc., Linda Smith, also of Special Love (and the Clinical Center recreation therapy section), Ruth Sragner of R&W, Dave Smith of Special Love, and R&W General Manager Randy Schools. Ryan was on hand to donate to Special Love proceeds from his weather book. Honored (below) at the meeting in Lipsett Amphitheater were recipients of certificates of appreciation for their work in the NIH community. They are (front row, from l) Kathleen Dietrich, Philippe Thevenaz, Leslie Boggs, Dana Chambers and Ruth Browne. At rear are (from l) Gregory Pochevko, Doty, Jeanne Barrie, Alice Smyth, Shirlene Hamilton and Pamela Jenkins.



DCRT WWW Service Gives Employees Easy Access to Personnel Data

"What will my monthly income be if I retire 5 years from now? What will my heirs receive from FEGLI if I die tomorrow? What does the government contribute to my health insurance or Thrift Savings Plan?" Not long ago, questions like these could only be answered by your ICD personnel specialist unless you were ready to do some heavy research on your own. But thanks to the World Wide Web and a new DCRT service, many NIH staff now have immediate access to customized personnel information from their desktop computers.

"The system gives employees fast, secure access to updated information about benefits, salary, awards, leave, savings, performance, and retirement," says Jack Vinner, who led the DCRT team that designed the Human Resource Information and Benefits System (HRIBS). "The information is updated quickly, and an online calculator gives retirement estimates in seconds." The retirement estimates apply only to federal employees enrolled in CSRS or FERS, not to contractors, visiting fellows, or members of the Commissioned Corps.

To use the system, staff in participating ICDs need a DCRT mainframe account or PIN number and access to the Web with a graphical Web browser such as Netscape Navigator or Internet Explorer. There is no additional software to buy or install. Available 24 hours a day, the system provides links to other useful Web sites such as the Social Security Administration, where an employee can request an estimate of Social Security benefits, and the Office of Personnel Management, which provides information about pay scales and open seasons for health insurance.

"Staff who've used it have found it extremely useful, especially those who are contemplating retirement," says Howard Chernoff, head of the NIGMS Human Resources Office. "It's a tool that enables people at a glance to find out a lot about their own personnel situation." NIGMS is one of 11 ICDs including NIAID, NIAMS, NICHD, NIDA, NIDR, NHLBI, NIMH, NLM, DCRT, and ORS that provide the service to their employees.

For a demonstration, see <http://eos4.dcrtr.nih.gov~dcrtr/> and click on Human Resource Information and Benefits. When prompted for an account, enter ZHRsrb7 and for password, enter HRIBS2.—Joan Chamberlain ■

Adults with Down Syndrome Sought

Adults ages 18 and older who have Down syndrome are sought by the NIA Laboratory of Neurosciences to participate in memory and aging studies. For more information call 6-4754 from 9 a.m. to 4:30 p.m., Monday-Friday; or 6-4273, after hours. ■

Injured on the Job?

Do you have a work-related upper extremity problem or injury, i.e., carpal tunnel syndrome, tendonitis, or repetitive strain injury of the fingers, wrist, elbow or shoulder? USUHS is conducting a study that includes a \$40 payment. Volunteers must be ages 20-60, seen by a physician within the past month and currently working. Call (301) 295-9659.

Kalberer Ends 31-Year Career at NIH

By Bill Hall

Dr. John T. Kalberer, Jr., recently retired from federal service, ending a public health career that began at NIH 31 years ago.

A New York City native, he received his Ph.D. from New York University in 1966 and came to NIH that same year, accepting a grants associate position with the Division of Research Grants. A year later, he moved to the National Cancer Institute as assistant program director for epidemiology in the extramural activities division. Kalberer spent 12 years with NCI, moving on to become associate director for program planning for NCI's Division of Research Resources and Centers and serving as executive secretary to the two subcommittees of the National Cancer Advisory Board.

In the late 1970's, NIH was becoming involved with the relatively new field of technology assessment and had established the Office of Medical Applications of Research (OMAR) to carry out activities in this area. Kalberer left NCI and joined OMAR in 1979 as its deputy director and was instrumental in guiding the NIH Consensus Development Program in its early years. The consensus program today has established itself as the premier technology assessment program in American medicine.

As the importance of disease prevention and health promotion became ever more apparent in the early 1980's, Kalberer was tapped to help NIH sharpen its research focus in this field of public health. In 1983, he was named NIH coordinator for disease prevention and health promotion and in that role served as chairman of the prevention research coordinating committee until his retirement. In this position, he was responsible for helping to formulate the objectives for Healthy People 1990, which were the first standardized national health goals. These were followed by the development of the Healthy People 2000 and the Healthy People 2010 objectives. Kalberer and Dr. Robert S. Gordon, then special assistant to the NIH director, established the NIH definition for disease prevention, which was later adopted by DHHS. In 1987, at the request of the NIH director, Kalberer took the lead in implementing the NIH-wide ban on smoking. This "no smoking" policy became a model for other government and private sector organizations.

Kalberer's research interests during his years at NYU focused primarily on barophysiology, decompression sickness, and vasoactive substances.



Dr. John T. Kalberer, Jr.

Additionally, he has written more than 50 publications on these and other public health-related topics.

An avid hiker and photographer, Kalberer has hiked the Grand Canyon from the north to the south rim and has taken exotic photo adventures to Antarctica, the Galapagos Islands, and Nepal, to name a few trips, as well as captured on film some of the more beautiful scenery in the American Southwest, New England and Alaska. While he certainly has become a world traveler in recent years, Kalberer always makes time for another of his passions—tennis. He is a member of the tennis committee at Bethesda Country Club, and has won several member-guest tournaments there. However, he says, "I think my proudest achievement is twice winning the NIH doubles championship 20 and 22 years after the first time I won it."

In his post-NIH life, Kalberer plans to continue his active lifestyle but will be moving his base of operations to Williamsburg, Va., where he is building a home surrounded by two rivers, a marina, a golf course, and, of course, tennis courts. "My vocation will be to commune with nature while my avocation will be an occasional consultancy and teaching continuing education at the College of William and Mary." ■



Members of the Internet Dental Forum (IDF) listen to Dr. Pam Robey (far r) discuss research in NIDR's Intramural Craniofacial and Skeletal Diseases Branch. During the visit, the dentists met with NIDR director Dr. Harold Slavkin and toured the labs. IDF, which now boasts over 1,000 members worldwide, invites dentists to discuss cases and clinical practice information via the Internet. IDF was established 2 years ago by Arizona dentist Dr. David Dodell. Recently, 3M Dental gave the group an educational grant to expand its efforts.

Normal Children Sought

NIMH is recruiting healthy, normal behavior girls and boys ages 5-18 for a safe, noninvasive brain imaging study; Asian and Hispanic Americans are especially needed. They should not wear braces or have learning disabilities, and will be paid. Leave a message with day/evening phone numbers at 6-3175, ext. 2. ■

Memory Loss Study Recruits

Individuals with mild to moderate memory loss who are suspected to have Alzheimer's disease are sought by the NIA Laboratory of Neurosciences. For more information, call 6-4754 from 9 a.m. to 4:30 p.m., Monday-Friday; or 6-4273 after hours.



DWD Training Tips

The Division of Workforce Development, OHRM, offers the courses below. Personal computer training is also available through User Resource Center hands-on, self-study courses, at no cost to NIH employees. Additional courses are available by completing the "Training by Request" form in the back of the DWD catalog. For more information call DWD on 6-6211 or consult DWD's home page at <http://www-urc.od.nih.gov/dwd/dwdhome.html>.

Courses and Programs *Starting Dates*

<i>Management and Supervisory Development</i>	
Supervision: New Skills and New Challenges	7/8
Assertive Leadership	7/15
How To Make Your Attitude Work for You	7/16
Managing & Valuing Workforce Diversity: Skills for Utilizing Differences	7/17
Performance Appraisal Session: How to Make It Work	7/26
Managing Conflict in the Workplace	7/30
Budget Formulation	7/14
<i>Communication Skills</i>	
Presentation Skills with PowerPoint	7/28
<i>Administrative Skills</i>	
Renewing Motivation & Self Esteem	7/22
Reviewing Math Skills	7/24
<i>Administrative Systems</i>	
Federal Wage System Time & Attendance Using TAIMS	7/28
Title 38 & Baylor Plan Time & Attendance Using TAIMS	7/29
<i>Human Resource Management</i>	
Qualifications Analysis	8/7
<i>Career Transition</i>	
NIH Retirement Seminar (CSRS)	7/21, 8/6
Career Assessment & Planning - Grades 9 & above	8/4
Researching Job Leads	8/14
Understanding the Federal Employment Process	8/14
Goodbye 171, Hello Federal Resume	7/24
<i>Computer Applications and Concepts</i>	
WordPerfect 6.1 for Windows	7/21
MS Word 6.0 for Windows	7/29
Advanced PowerPoint 4.0 (Win/Mac)	7/9
Introduction to DOS 6.0	7/10
Web Page Design Introduction - Overflow	7/10
Web Page Design - Advanced	7/14
Intro to Internet	7/16
Advanced Internet	7/16
Welcome to Macintosh	7/17
Eudora Mail for Macs	7/21
MS Mail for Macs	7/21
Introduction to WordPerfect 3.5 (Mac)	7/22
MS Exchange for Windows 95	7/23

DCRT Courses and Programs

All courses are on the NIH campus and are given without charge. For more information call 4-3278 or consult DCRT's home page at <http://csb.dcrn.nih.gov/training/index.html>.

EFUG - Electronic Forms Users' Group	7/2
Acquiring Services through CERTAN Information Technology Support Services Contracts	7/7
WIG - World Wide Web Interest Group	7/8
Relational Database and Client/Server Access Overview	7/8
Fundamentals of Unix	7/8-9
Preparing Scientific Images for Publication and Display	7/9
Introduction to HTML	7/9
NIH Data Warehouse: Property Management	7/10
Managing Your Team with MS Team Manager	7/10
Introduction to the Helix Systems	7/10
Advanced Features of HTML	7/11
NIH Data Warehouse: Procurement and Market Requisitions	7/11
SILK Web Technology	7/14
Getting Started with C	7/14-17
NIH Data Warehouse: Property Management Mini Session	7/15
Computer Security Issues for Unix Administrators and Users	7/15
Using Tango to Integrate Databases into the Web	7/15
NIH Data Warehouse: Budget and Finance Mini Session	7/16
Internet Explorer	7/16
Windows 95 Start Up	7/16

Officers' Orientation Program

NIH will sponsor an all-day orientation for commissioned officers on Wednesday, July 2, in the Natcher auditorium, balcony C. If you plan to attend, contact the Division of Senior Systems, 6-1443, for a registration form. All are invited.

Achievement awards and certificates of appreciation were presented at a recent meeting of the automatic data processing extramural programs (ADP/EP) coordination committee by Chairperson Carol Martin (second from l). A group achievement award for being instrumental in the development and deployment of an NIH collaborative council book application was presented to Carolyn McHale (c), Tom Mason (l), and Donald Tiedemann (not shown). An individual achievement award for leadership of the information technology central committee was given to Colleen Barros (second from r). Michael Cox (r) received an individual achievement award for providing creative leadership in the development of the ERA training activities initiative. A certificate of appreciation for a lifetime career of achievements in the service of the NIH computing community was given to McHale. Jim Hill (third from l) received a certificate of appreciation for a long and fruitful career at NIH as a systems programmer. A certificate of appreciation was presented to Lynda Bennett (third from r) for outstanding leadership of the ADP/EP coordination committee during her tenure as chair.



Breast Cancer Coalition Tours NCI

A group of 145 members of the National Breast Cancer Coalition traveled to NIH recently to get a glimpse of breast cancer research and treatment facilities at the National Cancer Institute and the National Naval Medical Center. Many of the members from around the United States stayed an extra day at the end of their annual Advocacy

Training Conference held in Washington, D.C., to attend a scientific presentation and tour coordinated by NCI's Office of Liaison Activities and the Division of Clinical Sciences.

NBCC members gathered with NCI breast cancer researchers in Lipsett Amphitheater to hear about gene testing and counseling,

gene therapy, novel drug screening approaches, genetic fingerprinting of cancer progression, and prevention. Dr. Alan Rabson, NCI deputy director, welcomed the group. Other speakers included Dr. Edison Liu, director, Division of Clinical Sciences; Dr. Ken Cowan, head, medical breast cancer section; Dr. Patricia S. Steeg, chief, women's cancer section, Laboratory of Pathology; Dr. Lance Liotta, chief, Laboratory of Pathology; Dr. Joanne Zujewski, clinical investigator, medical oncology; and Dr. Ilan Kirsch, acting chair, genetics department, Medicine Branch.

FAES Graduate School Announces Fall Course Schedule

The FAES Graduate School at NIH announces the schedule of courses for the fall semester. The evening classes sponsored by the Foundation for Advanced Education in the Sciences will be given on the NIH campus.

Courses are offered in biochemistry, biology, biotechnology, chemistry, immunology, languages, medicine, microbiology, pharmacology, psychiatry, statistics, toxicology, administration and courses of general interest.

It is often possible to transfer credits earned to other institutions for degree work, and many courses are approved for category 1 credit toward the AMA Physician's Recognition Award.

Classes will begin Sept. 15; mail registration ends Aug. 29 and walk-in registration will be held Sept. 3-9. Tuition is \$100 per credit hour, and courses may be taken for credit or audit. Courses that qualify for institute support as training should be cleared with supervisors and administrative officers as soon as possible. Both the vendor's copy of the



Dr. Maria J. Merino (r), chief of Surgical Pathology, NCI, explains how pathology slides are made to NBCC members during their tour of the Clinical Center.

After the presentations, the NBCC members broke into separate groups to tour the Breast Care Center at National Naval Medical Center, NIH's Clinical Center, and NBCC's "The Face of Breast Cancer: A Photographic Essay" exhibit. On display for a week at the CC, the memorial exhibit pays tribute to women from every state and every walk of life who have died of breast cancer.

Dr. Edison Liu, director of NCI's Division of Clinical Sciences, presents an overview of breast cancer research and the "Zen of Oncogenes" to 145 members of the National Breast Cancer Coalition in Lipsett Amphitheater.



training form and the FAES registration form must be submitted at the time of registration.

Fall catalogs are available in the graduate school office in Bldg. 60, Suite 230, the foundation bookstore in Bldg. 10, Rm. B1L101, and the business office in Bldg. 10, Rm. B1C18. To have a catalog sent, call 6-7976. ■

Healthy Volunteers Wanted

The NIA Laboratory of Neurosciences is seeking healthy volunteers ages 18 and older to participate in research studies. Participation involves full medical evaluation, psychological testing, and brain scans (MRI, PET). Procedures require approximately 13 hours and participants will be paid \$300 to \$500 depending on time involved. For more information, call 6-4754, 9 a.m. to 4:30 p.m., Monday-Friday; or 6-4273, after hours. ■



NBCC members visit their exhibit, "The Face of Breast Cancer: A Photographic Essay," on display in the Clinical Center's balcony atrium.