NIH Observes 'Take Your Children to Work Day'

The Office of Equal Opportunity, Federal Women's Program and the advisory committee for women (ACFW) recently sponsored a celebration of the Ms. Foundation's campaign “Take Your Daughters to Work Day.” The NIH version expanded its scope to include young men so that both young men and women could witness the important role of a diverse workforce in all aspects of the NIH mission.

The program was designed to have the children see, first hand, the NIH workplace and be involved in, whenever possible, the activities of the work environment. It

(See CHILDREN, Page 7)

Father of Modern NIH

Former NIH Director
James Shannon Dies

Dr. James Augustine Shannon, a medical investigator and educator who was NIH director from 1955 to 1968, died on May 20 at the Church Home, a retirement facility in Baltimore. He was 89. The cause was a ruptured aortic aneurysm.

Shannon's major scientific contributions were in pharmacology, chemotherapy and kidney disorders. He served on many advisory panels, including the President's Science Advisory Commission. But he was best known as a tough-minded leader who transformed NIH from what he called "a very small operation" in 1955 into the world's leading biomedical research institution.

He first came to NIH in 1949 as associate director in charge of research at the newly created National Heart Institute, where he

(See SHANNON, Page 2)

Gene Hunt Narrows

Breast Cancer Science Updated by Experts

As the search for the gene that causes breast cancer—implicated in about 5 percent of all cases of that disease—narrows to some 25 genes strewn along chromosome 17, a somewhat clearer picture is emerging about how this feared illness—destined to strike one in eight American women over the course of a lifetime (mainly after menopause)—begins, is detected, and is finally treated.

Five experts in the field tackled the topic “Breast Cancer” on May 19 in the fourth and final caucus of the Women’s Health Seminar Series sponsored by the Office of Research on Women's Health.

A Lipsett Amphitheater packed mainly with women heard Dr. Francis Collins, director of the NIH component of the Human Genome Project, announce that science is "about to uncover the single major gene" implicated in the predominantly hereditary form of the disease, a gene dubbed

(See BREAST CANCER, Page 4)

Palestinian Health Delegation Visits

By Irene Edwards

The first-ever visit of an official Palestinian health delegation to NIH took place recently at the invitation of the Fogarty International Center and NIAID. The delegation was made up of representatives from the emerging Palestinian health sector, and was headed by Dr. Fathi Arafat, president of the Palestine Red Crescent Society and the Palestine Council of Health (PCH), which is expected to form the basis of a future Palestinian Ministry of Health.

The Palestinian delegation's visit to NIH, designed to explore opportunities for bilateral and regional health research cooperation, was a forum for open discussion of existing mechanisms, possible opportunities, and realistic constraints that exist in the region. The

(See PALESTINIAN, Page 10)

New Heights Program Holds Open House

By Anne Barber

There was standing room only in Bldg. 1’s Wilson Hall on May 19, when an open house was held for the New Heights Recruitment Program. Of the 21 ICDS that attended, 14 of them, including OD and ORS, agreed to participate. A joint effort of the D.C. Public Schools and the D.C. Department of Human Services (DCHS), the program provides skilled interns in clerical support, word processing and administrative services for 3 months at no cost to NIH in return for work experience and potential employment with the

(See NEW HEIGHTS, Page 5)

Courage, But Also Cash

Patient Leaves Legacy to NCI’s Pediatric Branch

By Rich McManus

If all it took was the size of the fight in the boy, Jordan “Jordie” Rosenfeld, 13, would have given cancer a whupping.

The 8th grader at Rockville’s Herbert Hoover Middle School might have been physically slight—remembered one of the physicians who treated him here, but his stature belied a toughness that endeared him to friends, to the people who treated him during a bout with Ewing's sarcoma in the Clinical Center, and to dozens of schoolmates, many of whom didn't know him well.

Last fall, following just over a year of treatment in NCI’s Pediatric Branch, Jordie died. But the largeness of his spirit moved his classmates and friends to do something extraordinary in his memory.

(See LEGACY, Page 6)
SHANNON (Continued from Page 1)

recruited the initial staff and established the intramural program at NIH. He took a two-thirds cut in salary to come to NIH, but was given carte blanche in hiring (eventually some 150 of the brightest scientists then working), plus $5 million to decide how to spend. Two of his charter recruits later won Nobel Prizes—Dr. Julius Axelrod (1970) and Dr. Christian Anfinsen (1972)—and two others later became NIH directors—Dr. Donald S. Fredrickson (1975-1981) and Dr. James B. Wyngaarden (1982-1989).

Shannon assumed responsibility for in-house research at all the institutes in 1952. Later, as director, he oversaw a rapid expansion of the nation's biomedical research by using his influence in the executive branch and Congress to get money for the research.

While Shannon was NIH director, the budget increased about 15-fold. In 1955, when he first assumed directorship, the budget was about $100 million. In 1968, when he retired, it was more than $1 billion.

"Jim Shannon is perhaps most honored for the great growth of NIH programs between 1955 and 1965, when Congress, aroused by citizen-activists, had rare confidence in his abilities to convert high appropriations to expand federal investment in academic science," said Fredrickson. "However, I think of at least two other capabilities as his greatest assets. At NIH, he laid down the rule that the scientists, not the administrators, were responsible for the planning and execution of the research. He also had an uncanny eye for selecting gifted people and the knack of letting them choose their own paths to achievement."

"Dr. Shannon was probably the single individual most responsible for shaping the policies and practices that still guide the NIH, both intramurally and extramurally," said Dr. Edward Korn, NHLBI scientific director and a contemporary of Shannon's at NIH. "Biomedical scientists are forever in his debt."

On Jan. 18, 1983, NIH's first Bethesda building—the administration building completed in 1938 known as Bldg. 1—was renamed the "James A. Shannon Building" in his honor. Along with his name cast in bronze on the front of the building, an official oil portrait, a bronze head sculpture, and photographs commemorating these events remain on display in the lobby.

After retiring from the institutes in 1968, Shannon was an adviser to the president of the National Academy of Sciences. In 1970, he became a professor of biomedical sciences at Rockefeller University in New York and was special assistant to his president. He was an adjunct professor from 1975 to 1980, when he reached emeritus status.

Born in Hollis, N.Y., he graduated from the College of the Holy Cross in Worcester, Mass., where he made his reputation as a basketball star (he was the team captain his senior year and was considered a 1924 Olympic hopeful) rather than as a scholar. Applying to medical school as an afterthought, he was rejected by the first 4 schools at which he sought admittance.

He received his medical degree from New York University in 1929—finishing at the top of his class—and a Ph.D. in physiology from the university in 1935. "He got into NYU only because the dean of admissions had himself glimpsed in Shannon something special," wrote Dr. Edward Shorter, author of a book on NIH's early days. Shannon later served on the NYU faculty from 1931 to 1945.

Shannon made his mark early with discoveries in kidney physiology and clinical nephrology, the branch of medical science that deals with the kidney. His leadership in the development of antimalaria drugs, which were urgently needed by members of the armed forces serving in the South Pacific in World War II, earned him the Presidential Medal for Merit in 1948. This was the highest award at that time for civilian service in government.

From 1946 to 1949, Shannon was director of the Squibb Institute for Medical Research. He helped reorganize the institute and persuade the parent company, E.R. Squibb & Sons, to produce and market the antibiotic streptomycin for the treatment of bacterial diseases.

He received many honors including the Public Welfare Medal of the National Academy of Sciences (1962), the Rockefeller Public Service Award for Science, Technology, or Engineering (1964), and the President Distinguished Federal Civilian Service Award (1966).

He was married for 44 years to Dr. Alice M. Waterhouse, a former classmate in medical school who died in 1977. He is survived by a daughter, Dr. Alice Shannon-Stolzberg of Baltimore; a son, J. Anthony of Rockville, Md., 11 grandchildren and 8 great-grandchildren. An NIH memorial service is planned.

He...had an uncanny eye for selecting gifted people and the knack of letting them choose their own paths to achievement."

NLM Exhibit Opens on Health Care to Native Americans

"If You Knew the Conditions...': Health Care to Native Americans" is a new exhibit on display through August in the National Library of Medicine's main lobby (Bldg. 38).

The exhibit traces the evolution of health care the government provided to Native Americans from the 19th century to the present. It follows federal responsibility through the executive branch Departments of War, Interior, and Health, Education, and Human Services.

The library's summer hours are 8:30 a.m. to 5 p.m., Monday through Friday, and 8:30 a.m. to 12:30 p.m., Saturday. For more information, contact David Vecchioli, History of Medicine Division, 6-5405.

The NIH Record

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NIH Health Fair Is a Big Success

Close to 1,000 employees and visitors attended the employee health fair, "NIH Health Odyssey—Discover What’s Good for You," held May 17-18 in the Visitor Information Center. Visitors came from the National Navy Medical Center, as well as from other PHS agencies in the Bethesda and Rockville areas. One PHS nurse came from a federal occupational health clinic in Arlington, Va., to collect materials for her clinic. No one went away empty-handed. In addition to literature on a variety of topics, the first 200 visitors each day received “stress balloons.”

“A fair of this magnitude would not have been possible without cooperation of many individuals. The institutes were wonderful in providing materials and volunteers,” said Susanne Strickland, fair chairperson, and coordinator of worksite health promotion. “My experience has been that NIH employees really are interested in their health and welcome opportunities to do things to make improvements. The success of this fair is further proof of that.”

Most employees indicated they would like the health fair to become an annual event, she added.

NIH deputy director Dr. Ruth Kirschstein (c) cuts the ribbon at the opening of the health fair sponsored by the Office of Disease Prevention, in cooperation with the ICDs and R&W. Dr. Jack Kalberer, NIH coordinator for disease prevention and health promotion, and Susanne Strickland, Office of Disease Prevention, were also present at the ceremony.

Staff from CC’s nursing department provided blood pressure screening to employees during the health fair May 17 and 18.

NEI’s Anne Groome tries out the treadmill at the Exercise and Fitness Booth sponsored by R&W’s Fitness Center and NIAMS.

Barbara Peoples of NHLBI gets a hug from Sparky the Fire Dog at the Fire Safety exhibit sponsored by the Division of Safety’s Emergency Management Branch.

NIH Dental Clinic staff gave free oral cancer exams at the booth titled, “What You Need to Know About Oral Cancer,” sponsored by NIDR.

NINDS acting director Dr. Patricia Grady stops at the Stroke Risk Reduction booth to check out the risk factors while Norman Oliver, also of NINDS, looks on.

Jodi DeOms (r) of R&W hugs Camp Fantastic camper Colleen McGowan at one of the fair booths.
BRCA1. “Eight laboratories around the world are now involved in an intense search for this gene, now narrowed to a stretch of about 25 genes. We may find it next week or 6 months from now,” he said.

About 1 in 200 women are believed to carry an altered version of BRCA1, which is associated with almost a 90 percent lifetime risk (and 50 percent risk by age 50) of breast cancer rather than the average 12 percent lifetime risk in the general population. “Half a million women in the U.S. are at risk of carrying an inherited abnormal copy of this gene,” reported Collins.

BRCA1 also carries with it a 15-50 percent greater risk of ovarian cancer. When detected in males, it appears responsible for a fourfold elevation in prostate cancer risk. “The risk of colon cancer also rises when this gene is present,” Collins continued.

Because breast cancer is curable when diagnosed early, intensive surveillance and screening once the gene is found could identify women who carry the gene and who are almost certain to develop the disease. However, the U.S. is not yet equipped, he said, to handle either widespread genetic counseling or high-quality mass DNA screening.

Collins said his personal experiences with genetic counseling have involved “unparalleled emotional intensity,” but he maintains he never saw a case where a patient regretted knowing about a potential health risk.

“Genetic testing does not always give you bad news,” he said. Sometimes it gives you very good news.”

Most American women who get breast cancer acquire what’s known as a “sporadic” case, arising from risk factors both surmised and unknown (BRCA1 may play a role here too, warned Collins). “Sixty percent or more of the breast cancer cases in this country are not explained by any risk factors known so far,” reported Dr. G. Iris Obrams, director of NCI’s Long Island Breast Cancer Study Project.

A dizzying succession of risk factors have been posited. Putting them in perspective was Dr. David J. Hunter of Harvard Medical School, who addressed lifestyle risk factors implicated in breast cancer.

There are large international variations in the incidence of breast cancer, he began. In Japan, the risk is only one-fifth of that among white women in the U.S. However, Japanese women who migrate to America quickly acquire the risk status of their adopted country.

The major known risk factors are: age, a family history of breast cancer, a history of benign breast disease, reproductive factors (a woman who never gave birth has a 50 percent higher risk than average; a woman who had her first pregnancy at a late age has a 60 percent higher than average risk; early menarche and late menopause are also risk factors), obesity (especially postmenopausally), leanness (premenopausally), height (“Studies in Europe and the U.S. have shown that tall women are at a higher risk of breast cancer, as much as 30-140 percent elevation in risk for each 6 inches in height,” said Hunter.), postmenopausal hormone replacement therapy (though this does lower risk of heart disease and osteoporosis, Hunter allowed), alcohol use (“Three drinks a day doubles the average risk and even one drink a day raises it 50 percent,” he said.), and lastly, dietary fat.

“Eight cohort studies offer no support for the hypothesis that a high-fat diet leads to an increased risk of breast cancer, when taken all together,” he said. “There is no evidence for reduced medium-term breast cancer risk (5-10 years) comparing a diet where 25 percent of calories come from fat versus more than 40 percent.”

“Lest the call for cake go out immediately, Hunter leaned his epidemiological observations with epicurean advice: “Low vegetable intake is associated with an elevated risk of breast cancer.”

Hunter also observed that, in studies using mice, even modest restrictions in caloric intake were associated with reduced incidence of mammary tumors.

In summary, he said, “We may have to intervene very early in life to prevent breast cancer later in life.”

At present, breast cancer mortality has been on a steady plateau for the past 50 years, said Obrams. Among postmenopausal Black women, however, there has been an unexplained 20 percent rise in mortality in the last two decades.

Regarding as somehow the mysterious sequelae of Western industrialized life, breast cancer mortality is highest in the northeastern U.S., and relatively less common in the Rocky Mountain states. However, it has been no easier—epidemiologically—to blame pesticides, power lines, nuclear plants or industrial solvents on this mortality than it has been to blame blow dryers, being born a Pisces, or listening to rap music, suggested Obrams, using the slide of a cartoon for emphasis.

“In a sense, being a woman is the key risk factor,” she said.

The breast cancer mortality statistics do show a south-to-north upward trend, especially on the east coast, suggesting that perhaps exposure to sunlight decreases risk, said Obrams. A related theory puts another twist on light’s alleged effect—some argue that artificial light at night adds to breast cancer risk by inducing the pineal gland to stop producing melatonin; suppression of this hormone is thought to elevate estrogen levels in women. The ubiquity of evening light could, like alcohol, increase circulating estrogen.

Undeniably a risk factor, Obrams stated, is high doses of ionizing radiation, particularly before age 20. In studies of women who underwent high-dose chest x-rays (fluoroscopy) for tuberculosis in years past, such procedures resulted in a 29 percent rise in breast cancer risk. Pesticides and other substances that can act like estrogens are currently being brought under study.

“We can’t make preventive statements now except, ‘Avoid high-dose ionizing radiation,’” concluded Obrams. She said that NCI also recommends that women adopt a low-fat, high-fiber diet, and consume at least five servings of fruits and vegetables a day.

For those whose bad fortune it is to get breast
cancer, advances in treatment and diagnosis are on the horizon, said the meeting’s last two speakers.

Dr. Nancy Davidson of the Johns Hopkins Oncology Center said new biologically based therapies offer more specific means of attacking breast tumors. Used in combination with chemotherapy, the new therapies—targeted to steroid receptors and peptide growth factor receptor—will be “the wave of the future,” she predicted. Therapies aimed at cutting off a tumor’s means of getting blood (antiangiogenic therapy) are also being investigated.

Very aggressive chemotherapy is also being attempted, with occasionally impressive results, Davidson noted. High-dose drugs, however, damage bone marrow, which is extremely susceptible to cancer drug toxicity. Bone marrow transplants, used in combination with high doses of chemotherapy, have resulted in a high rate of complete responses, but data are premature, she warned.

“Survival rates (after bone marrow transplant) are beginning to look similar to those we get with standard therapy over time for women at high risk of breast cancer,” said Davidson.

New drugs taxol and its chemical cousin taxotere have shown effectiveness in ovarian cancer, and now in breast cancer, she added, but characterized them modestly as “at least as effective as what’s been available up to now.”

On the diagnosis front, Dr. Lawrence Basett of UCLA said digital mammography and magnetic resonance imaging are the technologies most likely to be rewarding in the near future for early detection of breast cancer.

“The new methods are promising, but not without their problems and limitations,” he cautioned. The currently available warhorse—screening mammographies using low-dose x-rays and film—remains a proven method for significantly reducing breast cancer mortality.

UCLA’s Dr. Lawrence Basett says digital mammography appears to be on the way to replacing film mammography as a diagnostic tool in breast cancer.

Steven Austad To Give Annual Shock Lecture

Dr. Steven N. Austad of the University of Idaho will give the fifth annual Nathan W. Shock Memorial Lecture on June 16. Austad, who will be honored for his research on longevity and evolution, will discuss “Size and Aging: The Biomedical Implications.”

Austad is professor of zoology, department of biological science, University of Idaho, in Moscow, where he has examined the genetic factors that guarantee survival and long life. His work focuses on the role of evolution in determining aging and longevity. Currently, he is studying dietary restriction and the manipulation of lifespan in certain species. He has written or coauthored numerous publications on animal models of aging, including birds and mammals. This year, Austad received the biological sciences distinguished publication lecture award of the Journal of Gerontology: Biological Sciences.

Earning his Ph.D. in biological sciences from Purdue University in 1981, Austad taught and conducted research at Harvard University and the University of New Mexico before going to Idaho. He is an advisor to the science unit of National Public Radio and is an associate of mammalogy for the Harvard Museum of Comparative Zoology. In addition to his research, he is an expert animal trainer.

The Shock lecture is sponsored by NIA’s Gerontology Research Center as a tribute to the center’s founding director. The lecture is scheduled for 3 p.m. on June 16 at the Johns Hopkins Asthma and Allergy Center Auditorium, 5501 Bayview Circle, Hopkins Bayview Medical Center, Baltimore. For more information, call the GRC information office, (410) 558-8114.

NEW HEIGHTS (Continued from Page 1)

agency.

The open house was held to acquaint NIH managers and supervisors with the program and offer informal interviews with approximately 37 interns seeking jobs. Sponsored by OD’s EEO advisory committee (ODEEOAC), speakers included Fatima A.H. Abdullahi, New Heights Recruitment Program coordinator; Shari Curtis, chief, Bureau of Training for DCHS’s Income Maintenance Administration; Dr. Ruth Kirschstein, NIH deputy director; Diane Armstrong, OEO director; Nikisha Vail, a former intern who presently holds a position in NIH’s OEO office; Nadine Heath of OD, NIH’s host for the event; and Molly Eng, ODEEOAC chair. A video was also shown in which presently employed interns and their supervisors gave comments on the program.

Kirschstein said, “I am delighted we have such a good turnout for this event. Since New Heights’ inception here, NIH has trained 86 persons.” She applauded the program as having one of the best ways to mentor people, through its shadowing program (see NIH Record article Mar. 15, 1994).

Armstrong noted that this program “provides us a chance to become partners with our communities.”

“This program is the perfect example of what Nancy Middendorf of NIH’s Committee Management Office interviews Tonya Lambright.

President Clinton proposes to do for people in his welfare reform policy,” said Curtis. The program provides recipients of Aid to Families with Dependent Children, between the ages of 16 and 21, with educational development, clerical skills, and workplace behavior training. The 3-month internship augments the training.

A testimonial was provided by Vail, who came to NIH 1 1/2 years ago to work in OD’s OEO office. Because she demonstrated skill, she was offered a job and is now a certified EEO counselor.

Abdullahi praised NIH for using the New Heights Program. “We hope to continue the relationship with NIH for a long time,” she said.

After the speakers concluded, all were invited to chat and conduct informal interviews with the interns.

“We have managed to assign all 37 interns,” said Heath. “It was a very successful open house.” For more information, contact Heath, 2-0714, or Abdullahi, (202) 724-5050.
LEGACY OF COURAGE HANDED DOWN BY YOUNG PATIENT

(Continued from Page 1)

just a few weeks ago, some 6 months after he died, Jordie’s classmates and teachers at Hoover decided to do more than wallow in the pain of a life cut short. They decided they would rather do something to affirm the value of Jordie’s brief existence than to mope in its confusing aftermath. They decided to put on an all-day charity basketball game.

The deal was this, explained physical education teacher Cheryl Pokorny, a faculty leader of the fundraiser: from second through seventh period, any kid in the school could use his or her phys ed class to play in a continuous basketball game against faculty and parents at the school. The only requirement was that each student secure a pledged donation—even as little as a penny a point—for each point he or she scored.

“We weren’t expecting to raise much,” said Jordie’s mother, Judi Rosenfeld, who recently braved a return to the site of a devastating family tragedy to present an outsized check to Dr. Philip Pizzo, chief of the Pediatric Branch, NCI. “We had hoped to get maybe $1,000. But we ended up with more than $4,000.”

“Wow! This is a knocks-your-socks-off effort, I would say,” said Pizzo upon being handed the check. “This can lead to some very significant progress. It’s an extraordinary accomplishment.”

Like Jordie himself, there was more to the fundraiser than met the eye. Pokorny recalls that the school was gripped by a wave of positive energy in the weeks leading up to The Game.

“The students did all of the advertising and the publicity,” she recalls. “They got really involved, making posters and going out into the community to collect pledges. They made a daily effort to pump up the interest. A lot of the students sponsored themselves—the money came out of their own pockets on game day.”

“I was amazed that a lot of the kids who worked so hard on this event didn’t even know him,” marveled Mrs. Rosenfeld, surrounded by sixth, seventh and eighth graders from Hoover who joined her at NIH for the check presenta-

On game day, the students eventually triumphed over the faculty when Jordie’s little brother Matty scored a tie-breaking 3-point shot, his second of the day.

“You must have had some help from Jordie on that shot,” offered Pizzo, to which Matty nodded assent.

Some 591 total points were scored in the marathon contest, an event that Hoover principal Carole Goodman calls the “most exciting and beautiful day in my 21 years as an educator.”

A longtime family friend of the Rosenfeld’s—who can even recall the day Jordie was born—Dr. Philip Pizzo, who welcomed the family and students recently in a brief ceremony in the 13th floor solarium in Bldg. 10. “Jordie harvested a lot of friends. We’re very pleased and proud that you’ve done this. This is not a common occurrence.”

Pizzo said the true value of the gift was that “you recognize the importance of a life, not so much the dollar amount that was raised. You should feel proud of what you have been able to do.”

He explained a little to the youngsters about the difficulties of fighting a formidable enemy such as cancer, emphasizing the hard-won success physicians have had: “Twenty-five or 30 years ago, almost everyone who came down with cancer in childhood died of their disease. Now, 60 percent or more childhood cancers can be treated successfully...Hard work and luck are needed in this struggle, as well as gifts of money. From wherever they come, these gifts help us in this mission.”

One of the NCI physicians who took care of Jordie, Dr. Leonard Wexler, then remembered his patient.

“What I recall most about Jordie was his tremendous courage, and the tremendous strength marshaled into his tiny little body. His ferocious spirit was larger than the body that contained it. His cancer may have defeated him, but it certainly did not defeat his spirit.”

Pizzo observed, in consoling remarks to the children, that youngsters with cancer “often fight back more courageously than their parents.”

“The fact that you made this effort is remarkable,” concluded Wexler. “This is truly a wonderful act that you all have made in Jordie’s memory.”

Pizzo then offered the students a copy of a book Lori Wiener of the Pediatric Branch and he coauthored, Be A Friend—Children Who Live with HIV Speak, to be kept in the Hoover library. He ended the visit by leading a tour for faculty and students of the Pediatric Branch.

“I’ve been here 6 years and I’ve never seen anything like this,” observed Marie Priest of the Pediatric Branch. She said the donation, now in the official NCI gift fund, might possibly be used to acquire a VCR and videotapes to help children relax during therapy in the branch’s clinic.
CHILDREN
(Continued from Page 1)

provided concentrated programs in "Patient Care" and "Laboratory Science" and a broad spectrum of NIH activities in a "Little of Everything" category.

The children were welcomed in Wilson Hall, where NIH deputy director Dr. Ruth Kirschstein gave opening remarks. She set the mood for the morning by emphasizing the importance of exposing children early to the wonders of science. She spoke of how she included her only child, a son, as much as possible in her work and strongly encouraged others to do the same. Before embarking on their NIH journey, however, the children were fortified with a breakfast of bagels, orange juice and fruit.

The hazardous nature of some NIH work put additional burdens on participating departments. Clad in gowns and gloves, children visiting the Clinical Center’s clinical pathology department looked through microscopes at various cell types and discovered the difference between normal and abnormal cells. They performed laboratory tests and discovered a new world of microorganisms.

The CC nursing department provided an equally interesting program where children visited a patient care unit, the NIH Blood Bank and the cardiac catheterization laboratory. The youngsters handled equipment and worked side-by-side with physicians, nurses, and other patient care staff to better understand the complex world of heart catheterization, and blood product handling and processing.

On another front, the "Little of Everything" groups were awed as physicians from the CC department of rehabilitation medicine demonstrated advancements made in patient prosthetics and rehabilitation. On the surgical observation deck, kids saw the surgical suite and learned about equipment used in surgical procedures. These groups also visited the patient activities department, a patient care unit, and clinical pathology.

At the end of their tours, the children assembled in Lipsett Amphitheater where they completed an evaluation of their activities and received a bag of NIH "goodies" provided by the institutes and an NIH T-shirt. In addition, names were drawn to receive door prizes.

A special thank you is extended to the ICDs, parents, and NIH employees who contributed to the "goodie bags," purchased name buttons, assisted with logistical arrangements, took photographs and videorecorded the day’s activities, said OEO's Lucretia Coffer.

Hilda Dixon, EEO officer for OD, said her daughter was glad to accompany her to work and learned a lot about NIH's mission. Herb Casey, chief, Recruitment and Employee Benefits Branch, said that his sons were extremely pleased to have an opportunity to be exposed to the NIH workplace.

Though relatively modest in quantity, the program was rich in quality. Because this was NIH's first endeavor in this campaign, the program was limited to 100 children.

"We regret not being able to accept additional children," said Coffer. "The overwhelmingly favorable responses from the children, parents, and employees have prompted the ACFW to start planning next year's program. The ACFW plans to include more children next year while sustaining the high standard of quality established in this year's program."  

Tenure Policy Is Forum Topic

The NIH Office of Education is sponsoring a postdoctoral fellows forum. The topic will be "A Discussion of NIH Tenure Policy," by Dr. Michael Gottesman, acting NIH deputy director for intramural research.

The forum will be held Monday, June 13 at 3 p.m. in Masur Auditorium, Bldg. 10. Simultaneous transmission will be provided to the Gerontology Research Center, Rm. 1-117 and to the FCRDC, Bldg. 549 auditorium. All NIH trainees and other interested staff members are invited to attend.

Questions on the tenure policy may be faxed in advance to OE by Thursday, June 9. The fax number is 2-0483.
Under Baleful Skies

17th NIH Institute Challenge Relay Race Draws More than 200

The skies might have been heavy this year but spirits were light as more than 200 NIH'ers gathered in front of Bldg. 1 for the 17th annual running of the NIH Institute Relay race on May 18.

The event is a team competition in which each of five team members completes a half-mile loop around Bldg. 1, passing a wooden baton to each successive runner. Teams comprise open and master divisions, divided into all-male, all-female and mixed squads.

In the first heat, Mobius Curves ran away with the open all-female division in a time of 16:25. The Fantastic Four team, winners of the master mixed division, ran a fine time of 16:16.

The second heat, however, was the real barn burner. Several teams exchanged the lead at various times. On the last leg, the eventual winner of the open mixed division, Chariots for Hire, was just on the heels of the winner of the open all-male division, Group of Five. After a titanic last-lap struggle, the Group of Five held on to record the fastest overall time of the day, 12:55. Very close at the end were Chariots for Hire in 13:02, which set a new course record in the open mixed division.

The race is organized each year by the NIH Health's Angels Running Club under the directorship of Dr. Peter Pentchev.

"The continued popularity and success of the race during nearly two decades can be attributed in large part to the help and contribution of this and many other NIH organizations," Pentchev said. "We hope to see everyone at next year's race, scheduled for May 19, 1995."
The Mobius Curves took the open female division crown. They are (rear, from l) Beth Seidel, Mary Paulson and Robin McKenzie. In front are (from l) Kathryn Chantry and Janet Dale.

Winning the open male division was Group of Five. They are (rear, from l) Alfredo Garzino, Jason Long and Mike Ross. In front are (from l) Rich Crowley and Paul Whittaker.

Master mixed division champions for 1994 are the Fantastic Four (actually five). Members include (rear, from l) Mark Challberg, Jack Bennink and Jon Yewdell. In front are (from l) Pat Earl and Polly Matzinger.

Limbering up before the race can be almost as difficult as straining to break the tape at the finish line.
visit began with a 2-day meeting organized by Dr. Claire Hubbard, program officer for the Middle East and Africa, FIC, and Dr. Kathryn Aultman, deputy chief, Office of Tropical Medicine and International Research, NIAID.

Dr. Philip Schambra, FIC director, and Dr. James Hill, NIAID deputy director, welcomed the delegation. Schambra stated that “disease knows no borders,” said this visit was an “opportunity to establish links which will be of enduring mutual benefit.” He said FIC would help promote contacts between Palestinian and American researchers and to foster regional research cooperation. Hill congratulated the delegation on the recently developed national health plan for the Palestinian people, and said that NIAID stands ready to assist in any way it can. For his part, Arafat spoke fervently of the needs of the people of the area at this crucial juncture. He said conditions of life in the region have had a serious impact on the physical and mental health of its people, and stressed the need to act quickly to address health issues and to assure effective coordination of any assistance efforts that are undertaken.

The first day focused on opportunities for bilateral cooperation. The Palestinians identified priority research areas including infectious diseases (acute respiratory infections, diarrheal diseases, hepatitis A, B, and C, and brucellosis), parasitic diseases, diabetes, cancer, cardiopulmonary diseases, family planning, and mental health. NIAID, NICHD, NIMH, NHLBI, NCI and NIEHS made presentations in these areas and expressed interest in working with Palestinian researchers through existing NIH mechanisms. The Palestinians were enthusiastic about participating in bilateral projects with the U.S.; Schambra invited them to participate in the FIC International Research Fellowship Program, which supports junior postdoctoral scientists for periods of research in laboratories in the U.S.

On the second day, which focused on regional collaboration, the meeting was attended by Middle Eastern health researchers from Egypt, Israel, Jordan, Lebanon, Morocco and Tunisia who are principal investigators of the NIAID-USAID Middle East Regional Cooperation Program (MERC). Also attending were representatives from several NIH institutes, and scientists and administrators from USDA, USAID, the Department of State and the Institute of Medicine of the National Academy of Sciences. Working groups addressed issues of laboratory studies, training, field studies, and clinical studies, and developed proposals for collaborative mechanisms and activities. Specific needs identified by the Palestinians included development of a management information system to process demographic, epidemiological and administrative data, maintenance of excellent academic and health institutions, and enhancement of research capacity through further training, infrastructure development, joint collaboration, and access to health information systems.

USDA, USAID, and the Institute of Medicine described their existing research programs in the region, and NIAID described the 14-year history of its involvement in the MERC program, which was established to foster Arab-Israeli ties following the 1979 Camp David peace accords. The NIAID-MERC program provides formal research awards to scientists in the region and sponsors a series of workshops and conferences designed to strengthen infectious disease control in the area. NIAID invited the Palestinian scientists and health care professionals to participate in these activities.

Arafat proposed that a subsequent workshop be held in Jericho to develop further the ideas raised during the meeting. He emphasized the need to facilitate communication and discussion, specifically mentioning access to electronic communication networks such as Internet, Health Net, and Medline. He invited an NIH delegation to visit researchers and institutions in the West Bank and Gaza at the earliest opportunity.

Members of the delegation were guests of honor at a dinner and reception at the Lawton Chiles International House. It was the first official NIH visit of a Palestinian health delegation.

Chinese American Association Holds Symposium, June 25

The NIH-FDA Chinese American Association will hold its annual symposium on current topics in biomedical medicine on Saturday, June 25, in Bldg. 31, Conf. Rm. 10 from 9 a.m. to 1 p.m.

Giving a special lecture at the symposium will be Dr. Savio Woo, director, Center for Gene Therapy, Baylor College of Medicine. He has been a pioneer in the field of gene therapy, contributing importantly to advances in the technology of gene transfer into hepatocytes. His work has led to innovative therapies for phenylketonuria and alpha-1 antitrypsin deficiency. Woo will speak on “Gene Therapy for Metabolic Disorders and Cancer.”

Other speakers and topics include Dr. C.S. Yang, “Molecular Etiology and Prevention of Esophageal Cancer”; Dr. A. Lu-Chang, “DNA Mismatch Repair Is Linked to Protection Against Cancer”; Dr. K.T. Jeang, “Approaches Toward Constitutively and Conditionally Attenuated HIVs: Implications for Live Virus Vaccines”; and Dr. A. Chang, “Expression and Function of Beta-1 Integrins in Mouse Thymocytes.”

Opening remarks will be given by Dr. Ruth Kirschstein, NIH deputy director. The symposium is cosponsored by the Society of Chinese Bioscientists in America and funded in part through a donation from the Ming K. Jeang education fund. All interested individuals are welcome. For more information call 6-6680.

Herpes Vaccine Study

Healthy men and women age 18 or older are sought to participate in a research study of an experimental vaccine for prevention of genital herpes. Individuals are needed who do not themselves have genital herpes, but who are in a stable relationship with a single sexual partner who is known to have the disease. Both partners will be screened to confirm study eligibility. Compensation is provided. For more confidential information, call 6-1836.
Olden Meets with Rural Coalition

NIEHS director Dr. Kenneth Olden addressed members of the Rural Coalition (RC) on environmental health during its annual meeting in South Carolina. A multicultural national alliance of organizations concerned with rural needs and issues, RC is committed to grassroots-directed solutions to rural problems. Among issues the coalition addresses are the health concerns of many rural communities faced with exposures to pesticides, hazardous waste, nuclear materials and other environmental hazards.

Olden is a federal leader on environmental justice, the concern that lower socioeconomic groups and minorities suffer greater exposure to pollutants and the attending health effects because of where they live, work, and play. "NIEHS is committed to a new paradigm for environmental health research, one that includes high risk communities and workers as active participants in all aspects of the research venture," he told the more than 200 participants at the RC meeting.

**FAES 1994-95 Chamber Series Set**

The FAES Chamber Music Series will present nine concerts in its 1994-95 season:

- **Oct. 9** Rudolf Firkusny, piano
- **Oct. 30** Bach Aria Group
- **Nov. 20** Gary Schocker, flute
- **Dec. 4** John O'Connor, piano
- **Jan. 15** Aulos Ensemble
- **Jan. 29** Cherubini String Quartet
- **Feb. 12** Lila Zilberstein, piano
- **Mar. 5** Mischa Maisky, cello
- **Mar. 19** Borrowo String Quartet

Concerts are held on Sundays at 4 p.m. in Masur Auditorium, Bldg. 10. Tickets are required. For more information, call 6-7975.

**Postmenopausal Vols Needed**

The Cardiology Branch, NHLBI, needs postmenopausal volunteers for a study of premarin, tamoxifen, placebo related to cardiovascular flow. Participants must not be currently taking vitamins or estrogen. Volunteers will be paid. Call Ruth Litzenberger, 6-8033, extension 315.

**DHHS Honor Awards Presented to NIH'ers**

The DHHS Honor Awards Ceremony was held on May 12. Dr. Harold Varmus, NIH director, assisted the Secretary in presenting awards to the following NIH recipients:

- **DHHS Distinguished Service Awards (Administrative)**
  - Levon O. Parker
  - Equal Employment Opportunity Manager
  - Office of the Director
  - National Institute of Neurological Disorders and Stroke
  - "In recognition of sustained superior performance in managing the NINDS's affirmative action, equal opportunity and civil rights programs."

- **DHHS Distinguished Service Award (Biomedical Research)**
  - Dr. William J. Blot
  - Head, Biostatistics Branch
  - Epidemiology and Biostatistics Program
  - Division of Cancer Etiology
  - National Cancer Institute
  - "In recognition of outstanding biomedical research which has helped clarify the role of nutritional and other factors in the etiology and means of preventing cancer."

- **DHHS Distinguished Service Award (Heroic - Administrative)**
  - Claude W. Snell
  - Shift Head
  - Maintenance Engineering Branch
  - Division of Engineering Services
  - Office of Research Services
  - "In recognition of exemplary dedication to duty in responding to a critical emergency situation in the face of great personal danger."

- **DHHS Secretary's Special Citation for 10 Outstanding Employees of the Year**
  - Kellee C. Miller
  - Personnel Assistant (Office Automation)
  - Personnel and Management Analysis Section
  - Office of Administrative Management
  - Office of the Director
  - National Institute of General Medical Sciences
  - "In recognition of consistently outstanding performance, steadfast commitment, and exemplary customer service to the NIH and NIGMS in the area of human resources management."

- **DHHS Secretary's Distinguished Volunteer Service Award**
  - Michael K. Adelson
  - Administrative Officer
  - Office of the Director
  - Division of Engineering Services
  - "In recognition of twenty years of outstanding volunteer service with the American Red Cross Water Safety programs for handicapped children and adults."

**Chamber Music Concert Set**

On Sunday, June 19 at 3 p.m., the Rock Creek Chamber Players will perform Mozart's Quartet in D major for flute and strings, Florent Schmitt's "Hazzard" for piano quartet, and Dvorak's piano trio in F minor, in the 14th floor assembly hall, Bldg. 10. This concert, sponsored by the recreation therapy section, Clinical Center, is free and open to all. More information is available at (202) 337-8710.

[The Record page 11 June 7, 1994]
The ride in the 4-wheel-drive jeep was rough. The heavily rutted, orange-red clay road stretched only 50 miles across the Malian savanna, but Dr. Christopher Plowe, would not reach his destination until sundown.

A clinical research associate in NIAID's Laboratory of Malaria Research (LMR), Plowe was traveling with a Malian research team to Kolle to study drug-resistant malaria. A remote village may be an unusual place to conduct cutting-edge science, but for Plowe and his colleagues from the Malian Malaria Research and Training Center, the choice was easy. The dispensary in Kolle usually does not stock drugs to treat malaria, so families must travel 3 miles on foot to a neighboring village to buy drugs. The investigators now have come to Kolle to find if such hardships cause lower rates of drug-resistant malaria.

Plowe and the African researchers from the center, established in part by NIAID, have surveyed several Malian villages in the country and outskirts of cities. What the scientists glean about patterns of drug resistance will help the Malian Ministry of Health prepare for the newest waves of resistant malaria sweeping the country.

“Easy access to a wide spectrum of drugs may be the reason drug-resistant strains of malaria are appearing in Mali,” Plowe says. “We found that although villages closer to urban centers have many people with strains resistant to the drug pyrimethamine, more remote villages like Kolle have none.

“These high rates are troubling because Fansidar, a combination of pyrimethamine and sulfadoxine that is the most acceptable chloroquine substitute, is increasing relied upon in Africa for treatment when chloroquine fails,” Plowe explains. "Affordable, effective alternatives are just not available."

He discussed their findings at the annual meeting of NIAID's International Centers for Tropical Disease Research, held recently.

Chloroquine (CQ) is the cheapest and most common antimalarial drug in the world. At just 9 cents per treatment, CQ is economical and effective when used correctly against susceptible parasites. But that doesn't always happen, even where supplies are plentiful.

"People begin a course of therapy, but they don't always complete it," explains Dr. Robert W. Gwadz, chief of LMR's medical entomology section. "Because of the characteristic cyclical fever of the disease and because the drugs have begun to work, people feel better and stop their therapy before all of the parasites are killed. Some of the parasites survive the shortened therapy, which facilitates the development of resistance."

The indiscriminate use of CQ has made the drug virtually useless in much of East Africa, and soon it may also be so in West Africa. Other antimalarial drugs such as quinine are more expensive—$1.50 per dose. Pyrimethamine, widely used with sulfadoxine in the combination drug Fansidar for treating uncomplicated malaria, is not resistant as well. Throughout Africa in the 1980's, resistance to CQ caused marked increases in outpatient visits, hospital admissions, and deaths of children. Whether to use CQ, Fansidar, proguanil or other antimalarials is critical to national policy for countries like Mali that can spend only a few dollars per person each year on health care. Centuries ago, Mali was one of the wealthiest countries in the world because of its role as a hub in the gold and salt trades. Today, relying largely on an agricultural economy plagued by the sub-Saharan drought in recent decades, Mali is very poor.

Mali is not alone in facing malaria. The disease in Africa accounts for 90 percent of the world's cases and kills one out of every 20 children before they reach the age of 5.

Almost half of the world's population is at risk of developing the mosquito-borne illness. Each year, more than 300 million people contract the disease and at least 1 million die.

Worldwide, the annual economic drain of malaria will be more than $1.8 billion by 1995, estimates the World Health Organization (WHO). Almost half of the world's population is at risk of developing the mosquito-borne illness. Each year, more than 300 million people contract the disease and at least 1 million die.

Arriving just before dusk, Plowe and his colleagues from the center are welcomed in Kolle. They sit in a big circle eating a traditional beef and rice stew from a communal bowl with their fingers. After the meal, the Malian scientists introduce Plowe to the village elders in a series of formal greetings and then the researchers settle down to sleep in the dispensary.

The next day, the scientists collect fingerstick blood samples on slides and on filter papers from more than 300 village children. A gas-powered generator runs the microscope needed to detect the parasites on the slides. The team takes the filter paper samples back to the center for study.

Plowe explains that the filter paper method is easy to use among large populations, and the fingersticks do not harm the children. Also, the paper does not require refrigeration.

Back at the center in Bamako, the scientists use a sensitive research tool, polymerase chain reaction (PCR), to analyze parasite DNA extracted from the filter paper. These techniques avoid the problems of transporting and disposing of toxic chemicals. The researchers find that no one in Kolle has malaria parasites resistant to pyrimethamine. However, their survey of Bougoula, a village closer to a city, shows a pyrimethamine resistance rate of 22 percent, and at Mopti, a city of about 200,000 people, a rate exceeding 50 percent. Fortunately, neither site has yet yielded proguanil-resistant strains, even though Bougoula has begun using the drug in a prenatal malaria prevention program.

The Malian Ministry of Health has recognized the work that the center scientists have been doing and has designated the center as Mali's primary agency for waging war on the disease, allowing the scientists to formulate a country-wide policy and develop control and treatment plans.

WHO is pleased as well, recently designating the facility, directed by Dr. Yeya Toure, as a Regional Centre for Research and Training in Tropical Diseases. "WHO's designation is a great recognition of the excellent quality of the center's research," says Dr. Louis H. Miller, chief of NIAID's LMR.

The center has roots in the department of epidemiology of parasitic diseases, headed by Dr. Ogobara Doumbo at the Malian National School of Medicine and Pharmacy. In 1988, WHO gave the department a capital grant to pursue innovative ways of controlling malaria.

The center formally began in 1989 with support from NIAID, WHO, and the Rockefeller Foundation. Subsequent support has come from these institutions as well as the U.S. Agency for International Development, U.S. Department of State, International Atomic Energy Agency, and the MacArthur Foundation.

"The center has grown into a premier research facility, directed and staffed by African..."
scientists, that already has contributed much to our knowledge about the prevention, control, and treatment of malaria," says Miller. "The center will continue to make important advances in the future. Unfortunately, the center is one of the few such laboratories in West Africa."

Drug resistance studies are one of the cornerstones of the center’s research portfolio. The center was the first laboratory in a malaria-endemic area to evaluate the Krogstad rapid test, which determines if a malaria parasite is CQ-resistant. Currently, center scientists and Plowe are examining the knowledge, attitudes and practices involved with access to antimalarials. "Malian sociologists and anthropologists from the center will interview pharmacists, family doctors, village health care workers and villagers to find the relationship between use and resistance," Plowe explains.

Another focus of the center’s expertise is the genetic analysis of populations of the Anopheles gambiae mosquito that carry malaria parasites. The investigators use PCR technology and molecular probes, coupled with their long-standing expertise in the architecture of chromosomes, a field of study called cytogenetics. "Because of their groundbreaking work, the Malian entomologists have become a primary African resource for cytogenetics," says Gwadz. "The center’s analyses promise to yield valuable information needed for strategies to control malaria that rely on attacking the insect vectors." Gwadz and his NIAID colleagues currently are helping the Malians fine-tune their molecular techniques being applied to the studies of mosquito vector populations.

Other ongoing center research includes serving as a WHO-designated evaluation center for the pesticides used to impregnate bed netting used for malaria control, and the identification of risk factors for severe malaria. Additional scientific partnerships involve institutions such as NIAID, the U.S. Centers for Disease Control and Prevention, Tulane University, Johns Hopkins University, the University of Rome and the Institute Pasteur (Paris). Dr. Richard Sakai, the NIAID resident scientist in Mali, helps coordinate several of these studies.

To help maintain and improve the caliber of scientists, the center has sent three investigators to the U.S. for postdoctoral fellowships at NIAID, the University of Maryland Biotechnology Institute and Tulane. Three other researchers, all with Malian doctorates, have received WHO fellowships to pursue second doctoral degrees at Tulane, University of Rome and Johns Hopkins. In addition, WHO is supporting doctoral training for younger scientists at the center, often with American or European advisors.

**Workshop on Pain, Arthritis**

On June 26-28, a workshop on chronic pain, pain control, and patient outcomes in rheumatoid arthritis and osteoarthritis will take place in Bethesda.

In recent years, the subject of chronic pain and its control has received increased attention from the biomedical community. Little is known, however, about the role that pain plays in the eventual outcome of rheumatoid arthritis and osteoarthritis.

The purpose of the workshop, which will include presentations and group sessions, is to examine the role pain might have in preventing damage; pain as an independent component of the illness; and pain as the object of treatment. The goal is to develop a research agenda for targeting areas in need of more investigation.

The workshop is cosponsored by the National Advisory Board for Arthritis and Musculoskeletal and Skin Diseases and NIAMS. Registration and other information can be obtained by contacting the conference department, Prospect Associates, (301) 468-MEET. Registration deadline is Friday, June 17. Space is limited and early registration is recommended.

**Bike Club Spring Fling**

The NIH R&W Bicycle Commuter Club will hold its annual "Spring Fling" at the FAES House, 9101 Old Georgetown Rd. (corner of Cedar Ln.), on Thursday, June 9 from 5 to 8 p.m. Admission is $1 for members and $2 for nonmembers. Meet your fellow bike commuters for a wine and cheese social and learn about the club’s recent accomplishments and future plans.

**Camera Club Holds Contest**

The NIH R&W Camera Club recently sponsored its annual NIH-wide photo competition. There were three top winners in each category. Cash prizes were awarded in black-and-white prints to: 1st—Harvey Kupferberg, 2nd—Richard Sprott, 3rd—Lois Kochanski. In color prints, awards went to: 1st—Virginia Blow, 2nd—Kyomi O’Conner, 3rd—Olena Bartoszewicz. Several honorable mentions were awarded in each category. A total of 10 door prizes were awarded to participants and guests.

The officers of the Camera Club thank all of the competitors for their efforts, and congratulate the winners. They also note that more than $100 was raised for the recent Patient Emergency Fund auction by sale of photographs donated by members of the club.

The club’s next meeting will be Tuesday, June 14 at 7:30 p.m. at FAES House on the corner of Cedar Ln. and Old Georgetown Rd. For more information, call Virginia Blow, 6-1758, or Sharon Antonelli, 6-4131. All interested people are invited to attend.

**IG Opens Suboffice on NIH Campus**

On May 10, June Gibbs Brown, HHS inspector general, met with NIH director Dr. Harold Varmus as part of the IG’s official opening of its suboffice located on campus. The opening marks the beginning of a joint effort by the IG’s Office of Investigations (OI) and Office of Audit Services (OAS) to create a government that works better and costs less.

The two offices will work together to build a more open relationship with the NIH community by helping management streamline operations, reduce unnecessary regulations, improve customer service, and minimize costly, duplicative and inefficient procedures.

The OI originally established the suboffice in 1991 to better safeguard NIH’s programs by preventing, deterring, and prosecuting fraud and abuse. During April of this year, the OAS established a permanent presence on campus in order to create more opportunities for identifying and reporting ways to improve the economy, efficiency, and effectiveness of NIH’s programs and operations. The OAS had previously served the NIH community from its PHS audit division in Rockville.

The staffs of both offices welcome any ideas or concerns NIH’ers may have about NIH’s programs and operations. To contact the IG, stop by Bldg. 31A, Rm. B1E36-40 (behind the R&W gift shop) or call 2-1538. The OIG fraud hotline is 1-800-368-5779.
The NIH Life Sciences Education Connection

As study after study (most recently the one sponsored by the New York Museum of Natural History) come out pronouncing that the American public is illiterate in science, the Public Health Service agencies are beginning to explore even more ways to increase the public’s understanding of science.

On June 13 at the Bethesda Marriott Hotel, about 50 representatives from the eight agencies that comprise PHS will convene for a day-long forum to discuss strategies to increase public understanding of health and science. The strategies forum will bring together PHS science educators, health educators, public affairs officers and health communication staff to share ideas and materials for increasing public understanding of science. The event is being coordinated by the NIH Office of Science Education Policy on behalf of the PHS Life Sciences Education and Science Literacy Board. For more information contact OSEP, 2-2469.

Also remember to attend the June 9 meeting or about the Adventure in Science Program to the NIH campus.

This introductory meeting will be held at 1 p.m. in Bldg. 31, Conf. Rm. 7. A short video from the American Chemical Society on how scientists might approach teaching elementary school students will also be shown and discussed. For more information about this meeting or about the Adventure in Science Program in general, contact Dr. Ed Max, 2-0484.

Correction

The article on the Adventure in Science Program that appeared in the last issue of the NIH Record incorrectly characterized NIDR researcher Dr. Donna Messersmith. Her scientific background is indeed in anatomy, contrary to what was reported; she holds a Ph.D. in anatomy and cell biology.

Karate Classes at Navy

Classes for adults and children in karate and self-defense are offered at the Bethesda Naval Hospital’s gym (Bldg. 23). Courses are Tuesday and Thursday evenings for adults—beginners go from 6 to 7 and advanced students go from 7 to 8. Children ages 4-10 practice Wednesday evenings from 6 to 7. Cost is $49 monthly, pay as you go. Free uniforms are available for those who sign up for 4 months. Private sessions are available. Call Peter Polander of Ryukyu Kempo Karate, (301) 942-9090.

Mouse Gene Linked to Defective Cartilage Development, Cleft Palate

Scientists have identified the genetic defect that produces a lethal condition in mice known as cartilage matrix deficiency. Culling a search that began well over a decade ago, this finding opens an avenue to investigate the cause and treatement of human cartilage disorders.

The study was conducted by a research team led by investigators from NIDR. The results were released in the June issue of Nature Genetics.

Cartilage matrix deficiency, or "cmd," refers to the molecular framework, or matrix, that normally gives cartilage its shape and shock-absorbing resiliency. The cmd mice are born with poorly formed cartilage, are deformed in appearance, have cleft palate, and die just after birth. The implicated gene produces a large protein called aggrecan, one of the major components of cartilage.

Although aggrecan is crucial to the structure of both mouse and human cartilage, mutations in the gene have not yet been linked to human disorders. However, the symptoms in cmd mice are similar to certain genetic conditions in which affected infants have severe developmental abnormalities and reduced levels of cartilage throughout the body.

"In the cmd mice, aggrecan may play a regulatory role in cartilage formation and the development of the palate," said Dr. Hideto Watanabe, of the NIDR Laboratory of Developmental Biology (LDB) and lead author on the paper.

Evidence from Tissue Studies

"We have evidence from tissue culture studies that the addition of aggrecan protein can reverse the abnormal matrix produced by cmd cartilage-forming cells. We would anticipate that the abnormalities observed in cmd mice could be prevented by introducing the normal aggrecan gene."

Cmd mice inherit a defective gene from each parent, and die shortly after birth. However, littermates that inherit one normal gene and one defective gene appear healthy but have about half the normal aggrecan content in their cartilage.

These animals, termed "heterozygous" because they carry two versions of the gene, may also provide important insights into human disease, according to Dr. Yoshihiko Yamada, chief of LDB's molecular biology section and study director.

The investigators frequently see abnormalities in spine alignment and lower limb movement in older heterozygous animals. These mice have symptoms that resemble spinal paralysis and osteoarthritis in humans. According to Yamada, the physical degeneration could be due to cartilage in the vertebra and joints wearing out prematurely.

"There may be a connection between a defective aggrecan gene and the development of ruptured vertebral discs and osteoarthritis in these mice, as well as in aging human populations," he said. "The cmd heterozygous mice could prove to be a useful model for testing therapeutic strategies."—Wayne Little

Fresh Seafood Is at NIH

For the last 10 years, Salt River Lobster has been bringing high-quality seafood at wholesale prices to NIH. Its truck drives all night from Boothbay, Me., arriving Friday morning with a wide selection of fresh seafood.

A variety of products are featured such as live lobster, fresh shrimp, scallops, and other shellfish. Also offered are salmon, swordfish, cod and tuna, when in season.

For lunchtime or afternoon snacks, the company has smoked trout, marinated mussels, and spiced shrimp, all ready to eat.

The seafood stand is in the parking lot behind Bldg. 14A every Friday from 10 a.m. to 6 p.m. For more information or special orders, call Don, (301) 865-3139, or Andrew, (301) 434-3420.
NCRR’s Jackson Is Mourned

Capt. Nathan N. Jackson, a veterinarian who served NCRR’s Veterinary Resources Program for 15 years and an officer of the Public Health Service, died on Apr. 25 after a long battle with cancer.

Jackson was a graduate of Kentucky State University and Tuskegee University, where he received his bachelor of science and doctor of veterinary medicine degrees, respectively. He served three branches of the U.S. armed services during his 28-year career and, within the Veterinary Resources Program, he also played many key roles, including chief of the genetic resources section and, most recently, assistant to the director.

Jackson was former president of the District of Columbia Veterinary Association and an active member of many professional and community organizations, including the national and local chapters of the Tuskegee Veterinary Alumni Association and the Alpha Phi Alpha fraternity.

He is survived by his wife Evelyn, four sons, and three daughters.

*NCRR’s Jackson Is Mourned*

The Children’s Inn will host its third Family Reunion on Saturday, June 25 from 12:30 to 4:30 p.m. All pediatric patients and their families are welcome to attend and spend the afternoon visiting with friends and catching up on inn news. The afternoon will feature a picnic lunch, arts and crafts, planting, playground fun, a tour of the inn, and a brief gathering to hear from a few friends and be entertained by the children.

NIH care providers who interact with the pediatric patients and their families are welcome to attend, but are asked to RSVP by calling Peggy Nelson, director of volunteers, 6-5672.

*In a ceremony full of medieval pageantry, Dr. Gerald Chader received an honorary doctorate, Medicinae Doctorem Honoris Causa, from the University of Lund in Sweden. Shown above with his wife Carla, he was awarded a special hat with the insignia of the medical school as a symbol of the degree. The degree was conferred in the Lund cathedral, which dates from the 10th century. Afterwards, Chader delivered a series of lectures on his current research at the Universities of Lund and Gothenburg in Sweden.*

Work on the interphotoreceptor retinoid-binding protein (IRBP), which he discovered with Dr. Barbara Wiggert, biochemistry section chief in the LRCMB.

IRBP is now recognized as an integral part of the visual cycle, shuttling retinoids between retinal photoreceptors and the retinal pigment epithelial cell layer.

Currently, Chader is applying advanced molecular biological techniques to uncover retinal functioning, his primary quest being “an enhancement of our knowledge of the visual system and a better understanding of ocular disease processes.”

The research for which he received his present Alcon Award is focused on a new protein, pigment epithelium-derived factor, which acts as a neurotrophic and neuron-survival factor in specific retinal and brain cells.

Among his many honors, Chader has earned the Friedenwald Award from the Association for Research in Vision and Ophthalmology; the Kopolowitz Award from Georgetown University, and a DHHS Senior Executive Service Award.

He was also recently awarded an honorary doctorate from the University of Lund. Chader presented his paper and received a cash award at the recent 11th annual ARI scientific symposium in Ft. Worth.

*NEI’s Chader Receives Second Alcon Award, Honorary Degree*

A researcher at NEI for 23 years and chief of NEI’s Laboratory of Retinal Cell and Molecular Biology (LRCMB) since 1985, Dr. Gerald Chader has received his second award from the Alcon Research Institute (ARI) for his outstanding contributions to vision research.

He received his first Alcon award in 1985 for...
NIH recently marked "Taste of Asia," its 22nd annual NIH Asian/Pacific American Heritage celebration, featuring a lunchtime program of international food from China, India, Japan, Korea, the Philippines, Thailand, and Vietnam; demonstrations of Asian arts and crafts; and an evening program of Asian music and dance. Sponsored by the NIH Asian/Pacific American cultural committee and the Asian/Pacific Islander American advisory committee, Office of Equal Opportunity, the celebration also included demonstrations of bonsai, Chinese brush painting, and Kendo. A percentage of the proceeds will be donated to the Patient Emergency Fund at the Clinical Center.

Afternoon diners were serenaded with Indian sitar music performed by Dr. Brian Silver, chief of the Urdu service at Voice of America.

Li-Chung Ba-Chu demonstrated the Chinese art of brush painting.

Two Thai selections were danced: "Kridda-Piniborn" ("Dance of Benediction"), for special celebrations, and the "Poothai Dance," done on festive occasions.

A mock Kendo battle is waged on the patio outside Bldg. 31 during the 22nd annual NIH Asian/Pacific American Heritage celebration.

Elaborate costumes (above) were featured during this traditional Thai dance. Below, members of Tanghalang Filipino (Philippine Theatre) engage in the Sayan Sa Bangko dance at NIH's evening program.

The lunchtime Japanese sushi stand was a hit recently during "Taste of Asia," NIH's Asian/Pacific American Heritage celebration.