Kirschstein Takes Post as Acting NIH Director

Thirty-eight-year NIH veteran Dr. Ruth Kirschstein, director of NIGMS for the past 19 years, took over on July 1 as acting NIH director at the request of Secretary Shalala, who also elevated Kirschstein to status as NIH deputy director. Dr. Marvin Cassman, who was Kirschstein’s deputy at NIGMS, now serves as acting NIGMS director.

“The role of an acting director of NIH is to maintain stability and the current activities of NIH as a whole in an appropriate and excellent fashion so that, when he or she is named, the new NIH director can move right in,” said Kirschstein. “I don’t think an acting director ought to initiate new activities. I’ve been here so long that I know most of what’s going on already.”

Notified in early June by Dr. Philip Lee, who was recently confirmed as HHS assistant secretary for health, that she might be tapped as acting NIH director, Kirschstein met June 15 with Shalala, who told her this would happen. On June 30, when Dr. Bernadine Healy left office, Kirschstein learned for certain that she would inherit the reins on a temporary basis.

Office of Research on Minority Health Initiatives

NIDDK, ORMH Collaborate On Minority Health Studies

To expand research and training for the treatment and prevention of obesity, diabetes, and kidney disease in African-American and Hispanic populations, NIDDK and the Office of Research on Minority Health recently announced a joint research initiative: ORMH will provide nearly $5 million to NIDDK over the next 5 years for specific research programs in these diseases in minorities.

“This initiative is timely,” said NIDDK director Dr. Phillip Gordon. “It is a step toward ensuring that all Americans, regardless of race or ethnicity, are included in biomedical research.”

The four components of the initiative are: the primary prevention of noninsulin-dependent diabetes mellitus (NIDDM), long-term outcome (See INITIATIVE, Page 7)

Letter to NIHers

Task Force Invites Comments on Retaliation/Reprisal Issue

In May 1993, Dr. Bernadine Healy, the outgoing NIH director, established an NIH task force on fairness in employment practices specifically to respond to allegations of race discrimination at the agency. The task force is assessing the extent to which recruitment, hiring, promotion and advancement in the NIH workplace is adversely affected by race discrimination, nepotism or favoritism. Specifically, the task force is charged to:

1) Analyze and evaluate the policies, procedures and systems in place at NIH to address allegations of race discrimination, including their adequacy and timeliness in resolving disputes.

2) Assess and monitor progress in integrating ethnic or racial minorities into all levels of employment and management at NIH through recruitment, placement, career development and promotion.

3) Assess how to ensure that persons filing complaints of retaliation or reprisal are handled promptly and effectively.

4) Assess the adequacy of NIH policies to address complaints of race discrimination, retaliation or reprisal.

5) Assess how to ensure that NIH policies are disseminated to employees and NIH installations.

6) Assess how to ensure that NIH policies are effective and are being effectively applied.

7) Assess how to ensure that NIH policies are consistent with the policies of the Department of Health and Human Services.

8) Assess how to ensure that NIH policies are consistent with the policies of the Office of Management and Budget.

9) Assess how to ensure that NIH policies are consistent with the policies of the Office of Personnel Management.

10) Assess how to ensure that NIH policies are consistent with the policies of the Equal Employment Opportunity Commission.

The task force is assessing the extent to which NIH has complied with its responsibilities under the Civil Rights Act of 1964, the Equal Employment Opportunity Act of 1972, the Rehabilitation Act of 1973, the Age Discrimination in Employment Act of 1967, the Americans with Disabilities Act of 1990, the Civil Rights of Institutionalized Persons Act of 1980, the ADA Amendments Act of 2008, and other applicable laws and regulations.

The task force is evaluating the extent to which NIH has complied with its responsibilities under the Civil Rights Act of 1964, the Equal Employment Opportunity Act of 1972, the Rehabilitation Act of 1973, the Age Discrimination in Employment Act of 1967, the Americans with Disabilities Act of 1990, the Civil Rights of Institutionalized Persons Act of 1980, the ADA Amendments Act of 2008, and other applicable laws and regulations.

The task force is assessing the extent to which NIH has complied with its responsibilities under the Civil Rights Act of 1964, the Equal Employment Opportunity Act of 1972, the Rehabilitation Act of 1973, the Age Discrimination in Employment Act of 1967, the Americans with Disabilities Act of 1990, the Civil Rights of Institutionalized Persons Act of 1980, the ADA Amendments Act of 2008, and other applicable laws and regulations.

3D Structure of Critical Muscle Protein Discovered

By Elia Ben-Ari

In the culmination of a 10-year effort, researchers have determined the three-dimensional structure of myosin, a muscle protein without which we could not move or breathe. By means of x-ray crystallography, a technique in which x-rays are used to probe the structure of crystals of pure protein, the researchers determined the structure of a critical portion of myosin down to the precise arrangement of its individual atoms. Their results are described in two articles in the July 2 issue of Science.

“The whole field of muscle biology changed as of July 2,” said Dr. Ralph Yount, a biochemist at Washington State University in Pullman, who has been studying myosin for many years. “The myosin crystal structure, he says, is probably one of the most important structures ever solved.”

Myosin is a “molecular motor,” harnessing chemical energy to generate motion the way an engine uses gasoline to make a car move. Found in all animals, as well as plants and fungi, myosin powers diverse types of movement ranging from the transport of substances within individual cells, to cell division, to muscle contraction. Myosin makes it possible.

Navigating by Sun

NIH Crew Completes 5-Day Atlantic Sailboat Race

By Rich McManus

Five campus employees recently completed a 5-day ocean sailboat race from Marion, Mass., to Bermuda aboard a 34-foot sloop guided solely by sextant.

The yacht, owned and skippered by Dr. Raymond Dionne, chief of NIDR’s clinical pharmacology unit, included Brent Jaquet, director of NIDR’s Office of Planning, Evaluation and Communications; Art Fried, NICHD budget officer; Dr. Agu Pert of NIMH’s Biological Psychiatry Branch; Dr. Geoff Sobering of NCRR’s Biomedical Engineering and Instrumentation Program; and Leon Sanchez of FDA’s computer center at Parklawn.

“We call ourselves a ship of fools,” joked Jaquet, a sailor for the past 18 years who resides on the Rhode River in Annapolis, where he docks a 25-foot sailboat of his own. He and Dionne, veterans of some 7 years of sailing together, decided last January to participate in the Marion to Bermuda Cruising Race 1993, an event begun in 1975 to keep alive the tradition of navigating by the stars rather than electronically.

One hundred and fifteen boats started the (See MYOSIN, Page 2)
MYOSIN
(Continued from Page 1)
for single cells to move within the body, aiding processes such as blood clotting, wound healing, and the response to infection.

"Human motion, indeed the breath of life, depends on the contraction of skeletal muscle," says Dr. Richard Lymn, director of the Muscle Biology Branch, NIAMS, which supported much of this research. These results, he says, "further our understanding of the inner workings of the molecular motors responsible for muscle power."

Muscle force is generated by the direct conversion of chemical energy into mechanical power by these fast and efficient protein motors. Myosin generates force through its interaction with another protein, actin. The energy required for this is produced when myosin burns a chemical fuel, adenosine triphosphate (ATP), which is produced from the food we eat.

The three-dimensional structure of the portion of myosin that generates motion is described in an article by NIAMS grantees Dr. Ivan Rayment, Dr. Hazel Holdren, and their coworkers at the University of Wisconsin, Madison, and NIAMS grantees Dr. Donald Winkelmann at Robert Wood Johnson Medical School. This work is a significant technical advance in that myosin has more complex functions and is larger than most proteins that have been studied by crystallography. Myosin, as part of its normal function, undergoes large fluctuations in shape to generate motion; this has hampered previous attempts to produce the large and stable crystals necessary for this type of study.

"It took almost 6 years to work out a way to get good crystals; it took another 3 years to solve the crystal structure," says Rayment, who began this project 10 years ago, when he was a postdoctoral researcher at Brandeis University. In fact, researchers have been trying to crystallize myosin since the 1960s. Rayment was able to obtain crystals of the protein after subjecting it to a mild chemical modification that he says had little effect on the molecule's structure.

In the accompanying article, Rayment and colleagues combine this new structural information on myosin with data from previous studies to "set forward a structural model of how chemical energy gets changed into movement" during muscle contraction, explains Rayment. "Many details are still missing from this model," he says, "but having the crystal structure of myosin is exciting because it allows us to test our model in future studies. This will help us understand all processes that use myosin-based motors."

Information vital to constructing the model of how actin and myosin interact during muscle contraction came from electron microscopic studies by NIAMS grantees Dr. Ronald Milligan and coworkers at the Scripps Research Institute. Researchers from the Max-Planck Institute for Medical Research in Heidelberg, Germany, also contributed to the model-building work.

The results in these two papers fill a gap in understanding the workings of molecular motors and muscle contraction. Skeletal muscle, the most-studied site of myosin action, has a highly ordered structure made up of multiple repeats of the basic unit, the sarcomere. The contractile machinery of the sarcomere consists of alternating rows of thin filaments containing actin and thick filaments containing myosin. During contraction, a portion of myosin that sticks out from the thick filament grabs onto a neighboring thin filament and pulls, causing the sarcomere to shorten. The motion of individual actin and myosin proteins generates forces that add up to produce whole-body motion.

Muscle function is essential for eating, breathing, moving, and pumping blood through the body. Laboratory studies on invertebrates have shown that serious defects in the contractile proteins (actin and myosin) are lethal, and this is presumably true for humans. Some rare diseases, such as familial hypertrophic cardiomyopathy (FHC), are caused by defects in myosin. FHC is a heart condition that is a leading cause of sudden death in apparently healthy young athletes.

"The primary importance of the findings reported here lies in our understanding of how the molecules in muscle use energy to produce force and motion," says Lymn. "Since motion is essential to human activity and energy balance is important for health, these studies are basic to understanding both normal body function and musculoskeletal fitness."

Photos with Healy Available
Persons attending Dr. Bernadine Healy's drop-in coffee on June 23 who think they may have been photographed greeting Healy can visit the Visitor Information Center in Bldg. 10 to receive a copy of their photo.

The NIH Record
Published biweekly at Bethesda, Md., by the Editorial Operations Branch, Division of Public Information, for the information of employees of the National Institutes of Health, Department of Health and Human Services, and circulated to nonemployees by subscription only through the Government Printing Office. The content is reprotntable without permission. Pictures may be available on request. Use of funds for printing this periodical has been approved by the director of the Office of Management and Budget through September 30, 1993.

NIH Record Office
Bldg. 31, Room 2B-05
Phone 621-25
Fax 21485

Editor
Richard McManus

Assistant Editor
Anne Barber

Associate Editor
Carla Garrette

Editorial Assistant
Marilyn Berman

Correspondents:
CC, Sara Byars
DCRT, Anne P. Enright
DRG, Andrea Taylor
FIC, Jim Bryant
NCI, Patricia A. Newman
NCRR, Leslie Fink
NCRI, Kathleen Canavan
NIE, Linda Hus
NLHIB, Louise Williams
NIA, Vicky Cahan
NIAAA, Ann M. Bradley
NIAMS, Amy Iadarola
NICH, Carol Floreance
NIDA, Karen Rogich
NIDDK, Fay Blatt
NIDDK, Eileen Corrigan
NIHR, Mary Daum
NIDH, Hugh J. Lee
NIMH, Wanda Wardell
NINDS, Sharron Garret
NINR, Marianne Duffy
NLM, Roger L. Gilkeson

Helping out at the recent Camp Fantastic Barbeque, which for the 11th year raised money for the summer camp for children with cancer, were (from l) oncee Barbara Brits, a DJ at radio station WRQX-FM, Robert Gray, executive director of the Children's Inn at NIH, NIDCD director Dr. James Snow, NCI director Dr. Samuel Broder, NIAID director Dr. Anthony Fauci, and NIDDK director Dr. Phillip Gordon. This year's event, held under flawless skies, raised some $5,000.
Many Women Face Obstacles to Oral Contraceptive Use

By Anne Blank

In the three decades since oral contraceptives (OCs) first became available, millions of women have used this highly effective, easy-to-use, reversible method of contraception. Currently, at least 10.7 million women in the United States are using OCs.

At the same time, however, 40 percent of the total number of births in this country are unintended. When pregnancies ending in either induced or spontaneous abortions are factored into the equation, experts estimate that more than half of U.S. pregnancies each year are unintended. With more women today postponing childbearing, nearly 40 million U.S. women—more than two-thirds of women ages 20–44—are at risk for unintended pregnancy and its accompanying social, economic, and emotional burdens.

With the widespread availability and use of OCs today, why are there still so many unintended pregnancies among U.S. women? The reasons are complex, but may be partially due to the many obstacles to effective OC use that still exist, according to a group of medical experts who met recently at an international conference sponsored by NICHD, in cooperation with the Association of Reproductive Health Professionals. Participants at the conference, entitled “Preventing Unwanted Pregnancies: The Role of Hormonal Contraceptives,” represented a wide range of disciplines, including contraceptive research, obstetrics and gynecology, reproductive health, endocrinology, fertility, and epidemiology.

“Many women today spend the majority of their childbearing years faced with the risk of unintended pregnancy,” said Dr. Florence Wingo, chief of the Fertility Epidemiology section at the CDC. “Risk seems to decrease among women under age 35 OC use slightly increased the risk of breast cancer, but they also show that among men 45 and older OC use slightly decreased breast cancer risk, said Phyllis Peterson, chief of the epidemiology section at the CDC. Risk seems to decrease with increased length of time since OCs were first and last used. Some of the differences could be due to chance and variations in the way older women used OCs—for relatively few years—compared with the way they are used today by younger women, who may take OCs for an extended length of time. “The conflicting results are difficult to reconcile,” Wingo added.

Although OC use does not appear to affect a healthy woman’s lifetime risk of breast cancer, there is increasing evidence that a subgroup of women may be at higher risk, according to Peterson. Physicians do not know how to identify these women, he said, but they are the same women for whom pregnancy is a risk because the hormonal changes associated with pregnancy may cause breast cancer to be diagnosed at a young age. The cause of this increased susceptibility is unknown, but may be genetic, he added.

Also, since OCs have only been available for 33 years, experts concede that most epidemiologic studies have an upper age limit of 55–60 years. Since a woman’s risk of breast cancer increases with advancing age, not enough time has elapsed to study the risk of former OC use in older women who are in their seventies and eighties. “We do not yet have data regarding the relationship between oral contraceptives and breast cancer at the ages at which breast cancer usually occurs,” Peterson explained.

While the effects of OC use on breast cancer risk may be unclear, studies indicate that hormonal contraceptives are linked to a number of serious health concerns. Controversial and inconclusive reports linking OCs to an increased risk of breast cancer have left many women confused about the long-term safety of this contraceptive method. The extent of this confusion was apparent in a 1985 Gallup Poll, which found that 75 percent of single women under age 35 believed that oral contraceptives caused cancer. Although many more women today view the pill favorably, confusion still surrounds the issue of OC use and breast cancer.

Most health care providers, however, seem to feel that, based on current knowledge, OCs are safe and effective for healthy, nonsmoking women. The best assessments of available data indicate that OC use does not affect the lifetime risk of breast cancer for women in good health, according to Dr. Herbert Peterson, chief of the Women’s Health and Fertility Branch, CDC. And for most healthy women, the benefits of oral contraceptives outweigh the medical risks of an unintended pregnancy.

While observational studies indicate that among women under age 35 OC use slightly increased the risk of breast cancer, they also show that among men 45 and older OC use slightly decreased breast cancer risk, said Phyllis Peterson, chief of the fertility epidemiology section at the CDC. Risk seems to decrease with increased length of time since OCs were first and last used. Some of the differences could be due to chance and variations in the way older women used OCs—for relatively few years—compared with the way they are used today by younger women, who may take OCs for an extended length of time. “The conflicting results are difficult to reconcile,” Wingo added.

Although OC use does not appear to affect a healthy woman’s lifetime risk of breast cancer, there is increasing evidence that a subgroup of women may be at higher risk, according to Peterson. Physicians do not know how to identify these women, he said, but they are the same women for whom pregnancy is a risk because the hormonal changes associated with pregnancy may cause breast cancer to be diagnosed at a young age. The cause of this increased susceptibility is unknown, but may be genetic, he added.

Also, since OCs have only been available for 33 years, experts concede that most epidemiologic studies have an upper age limit of 55–60 years. Since a woman’s risk of breast cancer increases with advancing age, not enough time has elapsed to study the risk of former OC use in older women who are in their seventies and eighties. “We do not yet have data regarding the relationship between oral contraceptives and breast cancer at the ages at which breast cancer usually occurs,” Peterson explained.

While the effects of OC use on breast cancer risk may be unclear, studies indicate that hormonal contraceptives are linked to a number of serious health concerns. Controversial and inconclusive reports linking OCs to an increased risk of breast cancer have left many women confused about the long-term safety of this contraceptive method. The extent of this confusion was apparent in a 1985 Gallup Poll, which found that 75 percent of single women under age 35 believed that oral contraceptives caused cancer. Although many more women today view the pill favorably, confusion still surrounds the issue of OC use and breast cancer.

Most health care providers, however, seem to feel that, based on current knowledge, OCs are safe and effective for healthy, nonsmoking women. The best assessments of available data indicate that OC use does not affect the lifetime risk of breast cancer for women in good health, according to Dr. Herbert Peterson, chief of the

impossible to eliminate completely in these kinds of studies.

Although cancer gets the most public attention by far, the major health hazard associated with OC use by certain groups of women, especially those who smoke, is cardiovascular disease. According to Dr. Goran Samsioe, professor in the department of obstetrics and gynecology at Lund University Hospital, Sweden, the risk of metabolic side effects increases in susceptible women as contraceptive efficacy rises. Although today’s low-dose OCs are much safer than the original high-dose version, there are certain women who, through their medical history, may be identified as high-risk, and should not be given OCs. “I wonder if we need to find a pill for specific kinds of women, rather than one that will suit all women,” Samsioe said.

In addition to safety concerns, other potential obstacles to successful OC use include noncompliance and lack of education about effective contraception. According to Dr. Louise Tyrer, medical director for the Association of Reproductive Health Professionals in Washington, D.C., nonuse is the greatest risk factor for unintended pregnancy, not the contraceptive methods themselves. Noncompliance may not be intentional, but may occur because it is difficult for some people to remember to take a pill every day, or they have not received adequate information regarding successful OC use. Some women may not only forget to take a pill, but may then overdose to compensate for missed pills. Memory cues, such as keeping OCs with one’s toothbrush, may help remind some women to take their daily pill. “Between one-quarter and one-third of women who are using OC pills need help in using them more effectively,” said Dr. Deborah Oakley, professor in the school of nursing at the University of Michigan. But, she added, “We’re never going to reach 100 percent; we shouldn’t be under the illusion that we’re going to reach every woman and make them perfect OC users.”

Other obstacles to OC use include side effects such as breakthrough bleeding and weight gain; age, with younger women being more likely to have difficulties with compliance; poverty, social issues; service delivery; and packaging.

To overcome some of these obstacles and improve compliance, some panelists suggested that schools and health care providers need to improve education about contraception. Additionally, scientists are now working to develop new and better methods of hormonal contraception for those couples who cannot or will not use OCs. Among the methods under study are hormonal implants such as Norplant, which provides 5 years of protection against pregnancy; long-acting injectables such as depot-medroxyprogesterone acetate, which was recently approved by the Food and Drug Administration for contraceptive use; new progestins; antiprogestins such as RU486; and hormonal contraceptives for men.
KIRSCHSTEIN ACCEPTS TWO NEW ROLES

(Continued from Page 1)

Kirschstein says she comes to the acting directorship "with a long history of activities related to fair employment practices and the need to assure equal employment opportunity for everyone." She served at the request of Secretary Sullivan on a federal task force on women, minorities and handicapped people in science and technology, which produced a report—"Changing America"—in 1989 predicting that, by the year 2000, it will be not only a moral but also an economic imperative to employ more women, minorities and the handicapped.

She also served as cochairman, again at Sullivan's behest, of an HHS task force on meeting the needs of and providing opportunities for women, minorities and the handicapped in the department. At the first full meeting of the ICD directors at which she presided, Kirschstein led a discussion of the importance of equal employment opportunities at NIH.

Kirschstein recently accepted the 1993 FASEB Public Service Award, which recognizes outstanding contributions to the cause of biological and medical research. She was cited "for the leadership she has shown in the areas of basic research, research training and women's health issues during a distinguished career of public service...She has been a strong proponent of women's health issues and from 1990 to 1991 served as acting director of the NIH Office of Research on Women's Health."

"I was very moved that it was the same award that (former NIH director James) Dr. Wyngaarden had gotten," she said. "It's an award that I feel very good about receiving."

Other recent recipients include Reps. Tip O'Neill and Silvio Conte (1992), Dr. James Shannon and Dr. Lewis Thomas (1988), and Mary Lasker (1987).

After receiving the award on June 29, Kirschstein gave brief remarks that could sum up her approach to her new job: "I have felt, and still feel, that there is no more worthy endeavor than to serve the country, its people and the science which has given me so much joy."—Rich McManus

Two NCI Scientists Honored at ASPO Annual Meeting

Two NCI scientists recently received awards at the annual meeting of the American Society for Preventive Oncology (ASPO). The awardees were Dr. Thomas Glynn, acting associate director of the Cancer Control Science Program and chief of the Cancer Prevention and Control Extramural Research Branch, and Dr. Joseph Fraumeni, Jr., associate director of the Epidemiology and Biostatistics Program.

Glynn received the Joseph W. Cullen Memorial Award, which memorializes the former deputy director of the Division of Cancer Prevention and Control and program coordinator for NCI's Smoking Tobacco and Cancer Program from 1982 to 1989, who helped build the largest tobacco intervention health advocates in the fight against tobacco use and tobacco-related disease. Glynn has consulted on tobacco issues with a wide variety of international and domestic organizations and has published more than 60 papers on related topics.

Fraumeni received the 1993 Distinguished Achievement Award, recognizing outstanding achievement in cancer prevention and control. An ASPO tradition, the award has been given annually since the early years of the organization. Selection is based on an individual's research accomplishments in cancer etiology and prevention. Fraumeni's career achievements include more than 500 articles on cancer epidemiology and etiology. One of his notable accomplishments is the discovery, with Dr. Frederick Li, of the Li-Fraumeni familial cancer syndrome, in which an inherited mutation of the p53 tumor suppressor gene predisposes affected individuals to cancer development.
New Elevator Safety Devices Installed

The Maintenance Engineering Branch (MEB), DES, has an ongoing program to upgrade the elevator systems throughout campus. Recent years have brought an explosion in new technologies that have increased the reliability, "rideability," and safety of elevators. One such improvement is the infrared curtain unit (ICU). This device takes the place of several older safety systems, both of which worked to reopen elevator doors in the event someone or something obstructed their closing. One of the old systems, the safety edge, is a movable device that requires the "nose" of the edge to come into contact with an obstruction before the doors open. This system was frequently abused by passengers who wanted to reopen doors to get in. A second system, the photoelectric eye-ray, provides two beams at different heights which, when broken, cause the doors to reopen. Although this system was an improvement, the photo-eyes are in need of constant realignment and cleaning, and are therefore somewhat unreliable.

The new ICU technology is a two-piece device using transmitters and receivers installed 2 inches apart for the length of both halves of the door. This set-up provides a cascading effect that covers the entire opening and causes the doors to reopen when any obstruction occurs within the area.

Although the ICU will reopen the doors several times in succession, it will not cause reopening indefinitely and is not a means by which a car can be held endlessly at a landing. After a certain number of automatic reopenings, usually three or four, a buzzer will sound indicating the door is in a "forced close" mode that can only be overridden by pushing the "door open" button. MEB has installed ICUs on all elevators in the Clinical Center complex and in several other buildings throughout campus. Eventually, all of the older door reopening devices will be replaced with ICUs as part of a continuing effort to improve elevator service at NIH.

MINORITY
(Continued from Page 1)

of $40 million, to address health problems suffered disproportionately by minorities at every stage of life. Funds provided through the agreement will be apportioned between research programs relating to environmental justice—pollution and environmental health risks distributed across socioeconomic classes and racial groups.

Four major efforts are covered under the agreement:
- Three to 4 million children in the U.S. have elevated blood lead levels; NIEHS will support a clinical trial to establish the effectiveness of a drug (chelating agent) that will remove lead from the body. Succimer is a new drug that holds promise for this purpose but has not been adequately tested clinically for this purpose. Succimer is the first new chelating agent since 1950.
- The agreement will fund research on lead in pregnant women, to learn whether the release of lead stored in bone is increased during pregnancy. This may help scientists understand how the developing fetus may be exposed to lead via exposure of the mother years prior to pregnancy. The research will focus on women from Eastern Europe who have been heavily exposed to lead and who then have migrated to Australia. This provides a unique population for study because of recognizable differences between bone-lead exposure in Europe and blood-lead exposure in Australia. In most other populations, the many kinds of lead in bone and blood make such a study impossible.
- NIEHS will fund developmental centers at universities near areas of special environmental concern. The first center has been established jointly at Tulane and Xavier universities in New Orleans to address environmental concerns associated with the petrochemical industry there.
- This agreement will also allow NIEHS to sponsor a national meeting July 28-29 in Washington, D.C., that will address environmental justice.

Employee Says Thanks

Gwen Green of NCI’s Division of Cancer Etiology would like to thank all her friends at NCI and NHLBI for their support, encouragement and kindness during her mother’s terminal illness.

Figure Skating Tickets Available

R&W has tickets to World Professional Figure Skating on Saturday, Dec. 11. Lower level seats are $42 each and upper level are $27. Call R&W for more information, 66061.

NIGMS Sponsors Structural Biology Workshop, Aug. 16-17; George Feher of UCSD To Present Keynote Address

In recognition of the crucial role that membrane proteins play in life processes, a great deal of research has focused on their structure and function. However, there has been relatively little utilization of the most powerful tools for determining structure, x-ray crystallography and nuclear magnetic resonance (NMR) spectroscopy.

The potential for greater activity in the field of membrane protein structural research is the subject of an NIGMS-sponsored workshop scheduled for Aug. 16-17. The meeting, entitled “Structural Biology of Respiratory Enzymes: Crystallography and NMR of Membrane Proteins,” will be held in Bldg. 31, Conf. Rm. 6, starting at 8:30 a.m. each day.

The workshop will bring together crystallographers, NMR spectroscopists, enzymologists, and molecular biologists. Participants will discuss the state of the art in the fields of membrane protein crystallography and NMR spectroscopy of membrane proteins, the feasibility of achieving atomic resolution structures of the respiratory enzymes within the next 5 to 10 years, and the obstacles and opportunities that may arise along the way. Special emphasis will be placed on stimulating further collaborative work in this area.

The keynote address, “On the Value of Structure in Elucidating Function: A Case Study—The Bacterial Photoreaction Center,” will be given on the morning of Aug. 16 by George Feher of the University of California, San Diego. This talk will be followed by five topic overview presentations: Nobel laureate Johann Deisenhofer of the University of Texas Southwestern Medical Center will discuss “Membrane Protein Crystallography—Work in Progress”; Shelagh Ferguson-Miller of Michigan State University will focus on “Protein Production Issues—Cloning/Expression/Purification”; Michael Garavito of the University of Chicago will cover the “Crystalization of Membrane Proteins”; Robert Glaeser of the University of California, Berkeley, and Elinor Adman of the University of Washington will discuss “Methods of Structure Solution for 2D and 3D Crystals”; and Robert Griffin of MIT will speak on the “Applications of Nuclear Magnetic Resonance Spectroscopy.”

For more information or to register, contact Peter Preusch, 47806.
SAILORS
(Continued from Page 1)

race June 18 at Marion, a seaport on Massachusetts’ southern shore. All but five vessels completed the 645-mile run to St. David’s Light on the island of Bermuda. The NIH’ers’ boat, named Brea, which is Gaelic for “fair weather,” finished 94th, even though it was rated the second slowest entrant in pre-race handicapping.

Preparation for the rather dangerous event was arduous: the boat had to be made fit to withstand a 360-degree roll, meaning all hatches and moveable parts had to be made secure; the crew had to practice man-overboard drills; the sailors had to chart the position of the Gulf Stream, enlisting the services of the National Oceanic and Atmospheric Administration’s chief Gulf Stream forecaster for data on the warm and shifty current whose waters frequently draw storms; Dionne had to pay the equivalent of a year’s worth of boat insurance solely for the event; he also needed to learn celestial navigation, a skill at which he received tutoring from NIDR colleague Dr. Richard Gracely of the Neurobiology and Anesthesiology Branch, who also helped sail Brea to Marion for the race’s start.

The two biggest challenges, aside from those posed by the weather and celestial navigation, were sleep-deprivation and seasickness, noted Jaquet. Two sailors had to man the cockpit at all times, taking 4-hour shifts. To combat nausea, some of the men applied scopolamine patches behind their ears 12 hours prior to racing.

“I had sailed on the Chesapeake Bay for 15 years and never had a problem with seasickness,” said Dionne. “When I made my first open-sea voyage, I was sick for 5 days.”

Only one crew member suffered this illness during the race, a distinction for which he earned an honorary plastic pail.

Wearing T-shirts of their own design bearing the marine-code symbol for “Maneuvering With Difficulty—Steer Clear,” the Brea crew entered a befogged Bermuda’s Bay on the morning of the 18th feeling both fearful about the challenge that lay ahead but confident of their seagoing skill.

Dionne and Jaquet had completed the Governor’s Cup race from Annapolis to St. Mary’s City, Md., in the summer of 1991 and had successfully finished a 365-mile circumnavigation of the Delmarva Peninsula last August. Fried is a retired commander in the U.S. Coast Guard. Pert has sailed extensively in New England and the Atlantic seaboard, and the other scientists had their sea legs as well.

Looked toward from Marion, the 13-mile-wide island of Bermuda occupies but a single degree on the sextant’s compass. Without resorting to GPS (global positioning satellite, a mariner’s aide), the Brea had to find this pinpoint on the horizon, a task made more difficult by the fact that a sailboat can only steer within 5 degrees of a given target, said Dionne.

Though no casualties have ever marred the race, storms and windlessness have taken their toll. “ Forty boats in the race once had to turn back because of a storm,” said Jaquet.

The fog that blurred the race’s start was to be virtually the only hazard the Brea faced during the race. “Two boats crashed in the fog and two midshipmen had to be hospitalized,” Jaquet reported. “Another boat was dismantled and one ran aground just off Martha’s Vineyard.”

Brea, on the other hand, picked up a stiff breeze outside Buzzard’s Bay and followed an almost single tack all the way to St. David’s Light.

“It was one of the fastest races ever,” said Jaquet. “The wind was brisk and consistent the whole way, averaging about 22 knots. We were heeled over in the same position for the whole trip.”

Only once did it get calm, when Brea breached the Gulf Stream. “We decided to go for a swim out in the middle of nowhere,” Jaquet said. “It was just crystal clear blue water.”

Seaman Pert ended up handling navigation chores, using the noonday sun as his guide. He also cooked many of the meals. So able did he prove at the former chore that, once within 50 miles of Bermuda, when the racers could use...
GPS to avoid the reefs that surround the island, Brea was only 12 miles off course.

“We didn’t see any of the boats in the race after the first night,” said Jaquet. “Once a freighter appeared on the horizon, then came up past us. All the crew on board waved at us.”

Porpoises came and went in the Gulf current, and at night, the sea’s photoluminescence answered the pinlight of the stars.

“It was really impressive at night,” said Jaquet. “You couldn’t see a thing. All there was was the low roar of the wind, which kept up constantly. It felt like you were strapped to the back of a locomotive. There was a sensation of remembrance of nowhere,” he continued, “with no help if you needed it.”

Once the Brea made port, celebrations and reunions claimed the next 4 days. The prime minister of Bermuda handed out trophies. The Bermuda Royal Gazette devoted a special supplement to the race. All that the Brea men have to show for Marion-Bermuda ’93 are bruises and sore muscles from 5 days of life at a 45-degree angle, some fine photographs and memories that will last a lifetime.

“Next year there’s going to be an Annapolis-Bermuda race,” beam ed Jaquet. “Ray’s a member of the sponsoring club so we’ll probably be there.”

NIDR’s Dr. Raymond Dionne (l) and Brent Jaquet, sailing partners for the past 7 years, discuss strategy for the Marion to Bermuda Cruising Race 1993 prior to disembarking.

The Brea crew crowds the cockpit as the 34-foot sloop glides through tropical waters off Bermuda. Rated second slowest in the contest, Brea finished a respectable 94th in a fleet of some 115 sailboats.

Relaxing in port at Bermuda after the race are (standing from l) Art Fried, Ray Dionne, Brent Jaquet and Geoff Sobering. Seated are (from l) Leon Sanchez and Agu Pert. Dionne had the pleasure of a leisurely sail back to the state after the post-race festivities ended.

NIAMS Committee Examines Osteoporosis, Surgery Rates

On Thursday, July 22, Marilyn Turtleman, statistician with the Office of Prevention, Epidemiology and Clinical Applications, NIAMS, will speak to the arthritis and musculoskeletal diseases interagency coordinating committee on the “National Osteoporosis Data Group.”

Also giving a presentation at the meeting will be Dr. Harold Davis, medical epidemiologist with the National Center for Health Statistics, Centers for Disease Control and Prevention. He will speak on “Increasing Rates of Cervical and Lumbar Spine Surgery in the United States, 1979-1990.”

The meeting will be in Bldg. 31, Conf. Rm. 7 from 1:30 to 4 p.m. For more information contact Sharon Nouzari-Louis, 60801.
DLA Examines 103rd Congress, Changes in Leadership

Changes in leadership within the 103rd Congress, changes in committee structure and membership, and possible changes in the legislative agenda were topics of discussion at a recent seminar "The New Congress" cosponsored by the legislative community and the Division of Legislative Analysis at NIH.

Dr. Janice C. Sadeghian and Dr. Philip E. Chartrand, senior faculty members from the Government Affairs Institute (GAI), were invited to examine the implications of the outcome of the election with regard to congressional organization and leadership, the legislative agenda, and prospects for key congressional-executive branch interaction. Kendra Dimond, acting director, Division of Legislative Analysis, Office of Science Policy and Legislation, welcomed an audience that included institute directors, executive officers, budget officers, planning officers, information officers, legislative contacts, as well as other program and scientific staff.

Sadeghian discussed the results of the 1992 election and compared the composition of the 103rd Congress to the 102nd Congress. She reviewed the history and the unusual turnover rate of the 102nd Congress, which had 53 voluntary retirements, the highest number of retirements in recent years. She also pointed out that there are 126 new members in the 103rd Congress, including 14 new senators and 110 new representatives.

She focused on the significant increase in the number of women and minorities elected. Five new women were elected to the Senate, and 24 women were newly elected to the House, joining the 24 who were reelected. Sixteen newly elected African-American representatives and eight Hispanic representatives also were elected to the House.

Sadeghian emphasized that the diversity in the House and Senate should result in changes in the direction of Congress, specifically making a difference in the Women's Caucus, the Black Caucus, and the Hispanic Caucus. She indicated that with this increased diversity, such issues as women's health should receive serious consideration in this Congress.

Dr. Philip Chartrand discussed the national economic situation, focusing his discussion on the federal budget deficit and economic growth. He examined the fluctuations in the deficit during the 1980's and charted the deficit's course through the 1990's. He said that the economy had a healthy 3 to 4 percent growth rate during the period between World War II and the middle of the 1970's. Afterwards, the economy fluctuated through a series of peaks and valleys and ended in a recession in 1990.

To combat the recession and to stimulate economic growth, America must increase productivity through increased investment, according to Chartrand. He stressed that America's productivity growth rate is below that of its major competitors and that America does not invest enough capital in new plants, equipment, or into new research and technology. —Cheryl D. Fells

Kendra Dimond, acting director, Division of Legislative Analysis, OD, welcomes NIH participants at a special briefing on the 103rd Congress conducted by the Government Affairs Institute.

Fundraiser Seeks Cyclists
Corporate teams are needed for the fourth annual Deep Creek Lake Autumn Bike Tour on Sept. 25 and 26. Recruit your friends at NIH. A minimum of four people with an average of $250 each in pledges will stay at their own condo and receive a team photo, in addition to several meals and incentive prizes. The money raised will help support the American Lung Association of Maryland in its fight against lung disease. For more information, visit the NIH Fitness Center, Bldg. 31, Rm. B4C18 or call 1-800-642-1184.

More than 300 purchasing agents and ordering officials from throughout NIH attended the first small purchase symposium recently. The theme, "A New Beginning," was evident as attendees participated in the day's agenda of speakers, demonstrations and workshops. John Mahoney (rear, r), NIH deputy director for management, and Gary Barbarash, associate director for small purchase policy (rear, second from r), presented the 1992 Outstanding Service in Small Purchases Awards. Winners included (front, from l) Deitra Lunney, NIEHS; Diane Meeks, NICHD; Nadine Heath, OD; Donna Simon, NIMH; Dorothy Nickens, OD. At rear are (from l) Frances Wood, NIAID; Barbarash; Donald Coulter, OD; and Mahoney.
obvious reprisal or retaliation are an employee's receipt of a minimally satisfactory or unsatisfactory performance appraisal after participation in the EEO complaint process, despite a history of and current excellent or outstanding performance, or a supervisor's failure to promote an employee after his or her assertion of EEO rights even though the employee is performing satisfactorily at the next highest grade. Subtle reprisal or retaliation could be an arbitrary decrease in the level of productive or challenging work assigned to the employee, the employee's isolation from involvement in normal work activities, or a decrease in staff in a particular office or program, after participation in EEO activity.

The task force is interested in in-depth answers to the following questions:

1) Do you believe you have an accurate understanding of what actions constitute reprisal or retaliation?
2) Do you believe you fully understand what offices exist at NIH and procedures you need to follow to get assistance if you believe you are the victim of reprisal or retaliation?
3) Do you believe the existing system at NIH adequately protects employees from reprisal or retaliation? Do you know which corrective actions can be taken against managers or supervisors guilty of reprisal or retaliation? Do you believe these actions are sufficient?
4) Do you believe that the Office of Equal Opportunity (OEO) is the best mechanism to handle complaints of reprisal or retaliation? If not, how can OEO be structured to serve both employees and management better?
5) Based on your experience, what steps could be taken to improve or facilitate the process for resolving current cases and preventing acts of reprisal or retaliation from occurring in the future?
6) Did reprisal or retaliation dissuade you from bringing EEO complaints or otherwise participating in the EEO process?
7) Do you feel, as a member of the NIH community, you were adequately informed of issues related to reprisal or retaliation? What suggestions do you have to increase awareness?

To gather input from the NIH community on these issues, the task force will hold an open session on Tuesday, Aug. 10, from 8 a.m. to 5 p.m. (with an hour lunch break), at Masur Auditorium. Employees wishing to make presentations regarding reprisal and retaliation at the open session should send their request in writing by close of business on July 30 with their name and NIH telephone number to the task force on fairness in employment practices at Bldg. 1, Rm. 103 or by fax to 15759. (This request may include a summary of the employee's proposed comments, if he or she wishes.) Indicate a preference for a morning or afternoon time slot. You will be contacted and given a scheduled time to make your presentation.

The task force will also schedule a closed session (just the employee and the task force members) on reprisal and retaliation issues for employees who prefer to speak in a closed setting. Employees wishing to speak at such a session should submit their request as indicated above in writing by July 30 to Sandy Chamblee, Bldg. 1, Rm. 103, fax 21759. Individuals who prefer not to participate in either the open or closed sessions may submit to the task force a written statement answering the above questions at the same address by July 30. The task force will provide in the future additional opportunities for the NIH community to discuss with it other issues related to the task force's mandate. The task force encourages involvement by the NIH community in this effort to bring about a more harmonious work place.
The NIH Life Sciences Education Connection

Do you find science exciting? How about sharing your enthusiasm? Be a Science Alliance volunteer. In the Science Alliance program, NIH scientists work with elementary school students and their teachers. Everyone benefits. Science Alliance pairs scientists with classroom teachers. Scientists help teachers understand the scientific process, develop hands-on classroom activities, and provide support and information to teachers. This year’s program will begin with a planning workshop for scientists on Aug. 13. The workshop will include training on working with teachers and elementary students as well as planning time for the 1993-94 school year. If you are interested in being a Science Alliance scientist, call Dr. Irene Eckstrand, 47762, or Dr. Jim Anderson, 47754. A little help goes a long way.

Students and teachers conducting research at NIH this summer are once again reminded of the NIH Summer Seminar Series, developed by the Office of Education. The series provides an overview of biomedical research to complement the work of the students and teachers in their host laboratory. The lectures begin at noon in Masur Auditorium, Bldg. 10.

July 27 “The Role of DNA Repair in Human Disease and Senescence,” by Dr. Michele Evans, Laboratory of Molecular Genetics, NIA.

Aug. 10 “What Can We Learn from Investigating Violent Offenders” by Dr. Markku Linnoila, scientific director, NIAAA.

David Merriman Retires from NIH’s Police Force

After traveling 100 round trip miles a day to his job, David Merriman in the Division of Security Operations called it quits recently after 32 years of federal service, 27 of those at NIH. Born and raised in Brunswick, Md., Merriman continues to reside there.

He joined NIH’s police force 27 years ago when it was known as a guard force. “I only worked on campus for 3 months before going to the animal facility in Poolesville,” he said. “I stayed there for 14 years. I just loved it.”

But in June 1980, the guard positions were contracted out and Merriman came back to NIH as a police officer. “It was the saddest and yet the best day of my life as far as my career advancement.”

Upon returning to campus, he continued working as a police officer until 1987, when he became a crime prevention specialist. In the past year, he has served as a management analyst working in DSO’s administrative office.

“Basically, I’ve done just about everything in DSO,” he says. “I have issued parking permits, served as communications officer, administrative sergeant and shift commander. I have also worked on the traffic squad.”

Looking back on his days in Poolesville, Merriman said that on the shift he worked, 3-11:30 p.m., there were only two engineers on duty plus himself. “When there was an emergency, we all chipped in to help. Sometimes we helped feed the animals and once I even helped to deliver a horse. I learned an awful lot about animals while working there.”

Merriman recalled a funny story from his days at Poolesville when the farm pond was open to NIH employees and their families for fishing. “One Saturday, Dr. Robert Marston, then the director of NIH, came to go fishing. He was wearing old shorts, a hat, and had no identification on him. I did not recognize him, so I refused him entry.” Instead of a reprimand, Merriman received a letter of commendation from the director for performing his duty.

“Recently I went back to the Poolesville facility to do an inventory of property and saw a few people I had worked with originally. It’s like everything else, ‘You can’t go back home.’ The new people were cordial and friendly, but it was not the same to me. It seemed more congested. Not as I remembered it.”

“Although I feel that I know Dave very well, I am constantly amazed at his knowledge of NIH as a whole,” says Thomas Rufty, chief of the Crime Prevention Branch. “His knowledge is not confined to security-related matters but encompasses a wide spectrum.

“Of Dave’s 27-plus years at NIH, I believe he enjoyed the 21 years spent as police officer and police manager the most,” Rufty continued. “Maybe that’s because he came from a police family. His dad was chief of the Brunswick police department for many years. A plaque containing his late father’s gun and badge still hangs in Dave’s home.”

Summing up the feelings of Merriman’s coworkers in DSO, Rufty says, “We’ll certainly miss him.” —Anne Barber

DIRLINE’s NIH Resources File Updated

The NIH Research Resources (NIHRES) subfile of the National Library of Medicine’s DIRLINE (Directory of Information Resources Online) database has been recently revised and updated. NIHRES includes biomedical resources supported by NIH funds that are available to researchers throughout the country.

Investigators conducting biomedical research frequently develop unique resources such as specialized laboratories, materials, substances, organisms, databases, and equipment—any of which may be valuable to other scientists in the course of their work. NIH provides support, through both grants and contracts, to many of these resources, including electron microscopy facilities, primate colonies, specialized laboratories, and cell culture collections.

These resources are often difficult to identify and locate, and NIHRES was established to communicate information about the availability of these unique or novel research resources to the scientific community. The institutes, centers, and divisions of NIH, including the National Center for Research Resources, have contributed the information about these resources to the DIRLINE database.

DIRLINE, and its NIHRES component, may be accessed in a variety of ways (including via Grateful Med) through NLM’s computer facility. For more information about DIRLINE access, contact the NIH Library, 61080.

Info Resource Management Class

Participants in the GSA IRM 1000 by 2000 Program invite NIH’ers to join IRMTRAIN, a listserv at NIH for those interested in information resource management (IRM) issues and graduate-level training. Learn about the current fall semester class offering on the NIH campus by sending e-mail to LISTSERVER@NIHLIST and put the following statement in the body of your message: SUBSCRIBE IRMTRAIN (your name). Deadline for the NIH fall class is July 27. Contact Anne Robertson, 66693, if you need help or want more information.
**TRAINING TIPS**

The NIH Training Center, Division of Personnel Management, offers the following hands-on courses:

**Personal Computing Training**

<table>
<thead>
<tr>
<th>Course Titles</th>
<th>Starting Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Welcome to Macintosh</td>
<td>8/11, 8/26</td>
</tr>
<tr>
<td>Advanced Macintosh Techniques</td>
<td>8/18</td>
</tr>
<tr>
<td>MacWrite</td>
<td>7/29</td>
</tr>
<tr>
<td>Intro to WordPerfect 2.0 (Mac)</td>
<td>8/10</td>
</tr>
<tr>
<td>Advanced WordPerfect 2.0 (Mac)</td>
<td>8/17</td>
</tr>
<tr>
<td>Intro to Microsoft Word 5.0</td>
<td>8/25</td>
</tr>
<tr>
<td>Excel - 4.0 Level 2</td>
<td>8/9</td>
</tr>
<tr>
<td>Excel - 4.0 Level 4</td>
<td>8/23</td>
</tr>
<tr>
<td>Lotus for Mac - Levels 1 and 2</td>
<td>Upon Request</td>
</tr>
<tr>
<td>ForBASE 2.01 Levels 1 and 2</td>
<td>Upon Request</td>
</tr>
<tr>
<td>QuarkXpress - Level 2</td>
<td>8/30</td>
</tr>
<tr>
<td>MORE III</td>
<td>Upon Request</td>
</tr>
<tr>
<td>HyperCard Authoring &amp; Scripting - 2</td>
<td>8/5</td>
</tr>
<tr>
<td>3Com PC Network-Level 1</td>
<td>9/1</td>
</tr>
<tr>
<td>3Com PC Network-Level 2</td>
<td>8/23</td>
</tr>
<tr>
<td>3Com PC Network Management</td>
<td>Upon Request</td>
</tr>
<tr>
<td>Microsoft Mail</td>
<td>8/11</td>
</tr>
<tr>
<td>Intro to Personal Computing</td>
<td>For new Users</td>
</tr>
<tr>
<td>for the PC</td>
<td>8/20</td>
</tr>
<tr>
<td>Disaster Recovery and Data Security for the PC</td>
<td>8/26</td>
</tr>
<tr>
<td>Intro to DOS</td>
<td>8/13, 8/30</td>
</tr>
<tr>
<td>WordPerfect for Windows</td>
<td>8/12</td>
</tr>
<tr>
<td>Lotus for Windows (NEW)</td>
<td>8/24</td>
</tr>
<tr>
<td>PageMaker for Windows (NEW)</td>
<td>8/10</td>
</tr>
<tr>
<td>Excel for Windows (NEW)</td>
<td>8/2</td>
</tr>
<tr>
<td>Project for Windows (NEW)</td>
<td>8/17</td>
</tr>
<tr>
<td>Project Leadership Workshop (NEW)</td>
<td>8/3, 8/31</td>
</tr>
<tr>
<td>WordPerfect 5.1 - Advanced Topics</td>
<td>8/9</td>
</tr>
<tr>
<td>Printing With WP 5.1 and Laser Printers</td>
<td>8/13</td>
</tr>
<tr>
<td>Desktop Publishing w/WP 5.1</td>
<td>8/27</td>
</tr>
<tr>
<td>Intro to Harvard Graphics, Rel. 3.0</td>
<td>8/30</td>
</tr>
<tr>
<td>Intro to Paradox</td>
<td>8/10</td>
</tr>
<tr>
<td>Advanced Paradox</td>
<td>8/27</td>
</tr>
<tr>
<td>Paradox PAL</td>
<td>7/28</td>
</tr>
<tr>
<td>Intro to dBASE IV</td>
<td>8/23</td>
</tr>
<tr>
<td>Intro to dBASE III</td>
<td>Upon Request</td>
</tr>
<tr>
<td>Intermediate dBASE III+</td>
<td>Upon Request</td>
</tr>
<tr>
<td>Intro to Lotus 1-2-3, Rel. 2.4</td>
<td>8/2</td>
</tr>
<tr>
<td>Lotus 1-2-3, Rel. 2.4 - Adv. Taps</td>
<td>7/27, 8/23</td>
</tr>
<tr>
<td>Intermediate Symphony</td>
<td>Upon Request</td>
</tr>
<tr>
<td>Advanced Symphony</td>
<td>Upon Request</td>
</tr>
</tbody>
</table>

---

**NIMH's Steven Paul Leaves for Lilly**

NIMH scientific director Dr. Steven M. Paul recently ended a 17-year career with the institute to become vice president of the Lilly Research Laboratories of Eli Lilly and Co. in Indianapolis. He will oversee the worldwide central nervous system discovery research activities at Lilly and will continue his own research program in neuropharmacology.

Paul's first position at NIMH was in 1972 as a summer medical student in Julius Axelrod's group, then in the Laboratory of Clinical Science. After completing his medical studies at Tulane, and residency in psychiatry at the University of Chicago, he was awarded a pharmacology research associate training (PRAT) fellowship to work in Axelrod's laboratory. He later served as a medical staff fellow under the mentorship of Dr. Frederick K. Goodwin (now NIMH director) in the Clinical Psychobiology Branch, NIMH, prior to embarking on his own independent research career.

Paul was named chief of the Clinical Neuroscience Branch in 1982 and acting scientific director of NIMH in 1988. In 1990, he was appointed scientific director.

Paul's research at NIMH helped to unravel the pharmacological actions of a number of important psychotropic drugs. He and his colleagues showed that many commonly used sedative/hypnotic drugs, including the benzodiazepines, barbiturates and alcohol, produce many of their important pharmacological actions by interacting with a family of receptors for the major inhibitory neurotransmitter, gamma aminobutyric acid (GABA) and ultimately enhancing GABA's inhibitory actions. In related studies, Paul and colleagues showed that other "arousal-producing" and convulsant drugs block GABA receptors via an allosteric mechanism. These studies led to a number of novel hypotheses in the neurobiology of anxiety and stress and to the possible role that GABAergic neurotransmission may play in diverse behavioral states.

Most recently Paul's laboratory discovered a novel transcriptionally mediated neuroprotective mechanism induced by excitatory amino acids in cultured neurons, which may provide clues to protecting neurons from death due to toxins as well as following stroke or ischemia. His group has also been engaged in a large collaborative study to find a gene responsible for transmitting a predisposition to manic depressive illness among the Old Order Amish.

During his tenure at NIMH, Paul authored or coauthored more than 350 papers and book chapters. He is the recipient of many honors and awards, including the A.E. Benetl Award of the Society of Biological Psychiatry and the Allan C. Davis Medal (Outstanding Young Scientist Award) of the Maryland Academy of Sciences.

In addition to his employment at Lilly, Paul will hold faculty appointments at Indiana University School of Medicine and continue to serve as a guest researcher at NIMH in the Clinical Neuroscience Branch.

---

**Kids, Parents Needed**

Georgetown University Medical Center's division of children's health promotion seeks children recently completing third, fifth or seventh grade and their parents to complete a brief telephone interview on health and illness. Participating children receive a Georgetown t-shirt. Contact Mary, (202) 687-7830.

---

**Women Volunteers Needed**

NIDR is seeking female volunteers over age 30 for a study of normal salivary glands. Volunteers must be healthy and must not be taking any medication. The study involves a minimum of four weekdays with two Clinical Center overnight stays. Procedures include nuclear medicine tests, blood drawing, and urine collection. Volunteers will be paid. To learn more, contact Alice, 64377.

---

**Computer Training Classes**

**Classes**

<table>
<thead>
<tr>
<th>Classes</th>
<th>Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relational Database Overview</td>
<td>7/27</td>
</tr>
<tr>
<td>Distributed Database Using Client-Server</td>
<td>7/27</td>
</tr>
<tr>
<td>Advanced DOS Topics</td>
<td>7/28-7/29</td>
</tr>
<tr>
<td>Gopher</td>
<td>7/28</td>
</tr>
<tr>
<td>Cluster Computing</td>
<td>7/29</td>
</tr>
<tr>
<td>C: Language: Pointers and Structure</td>
<td>8/2, 8/4</td>
</tr>
<tr>
<td>Macromedia/PC Data Exchange</td>
<td>8/2</td>
</tr>
<tr>
<td>Using the Internet</td>
<td>8/3, 8/5</td>
</tr>
<tr>
<td>Moving from C to C++</td>
<td>8/3</td>
</tr>
<tr>
<td>Neutron Scattering from Biological Macromolecules</td>
<td>8/4</td>
</tr>
<tr>
<td>The Dark Side of the Simple t-test</td>
<td>8/5</td>
</tr>
</tbody>
</table>

Classes are offered by the DCRT Training Program without charge. Call 62339 for more information.

---

Saunders, Former NCI Deputy Associate Director, Dies

Dr. Joseph F. Saunders, 66, a biochemist who served for 15 years as NCI's deputy associate director before leaving NIH in 1983, died June 11 after a heart attack. A resident of the Washington area since 1950, he lived in Springfield, Va. He retired last year as executive director of the American Association of Immunologists.

Born in Mount Pleasant, Pa., Saunders was a graduate of Duquesne University and received a master's degree and a doctorate, both in biochemistry, from Georgetown University. He began his federal career as assistant to the head of the medicine and dentistry branch of the Office of Naval Research and later headed the branch. Before joining NCI's Office of International Affairs, he was a program scientist for biosatellite flights and chief of environmental biology at NASA's office of space science application and manned space flight.

Saunders edited a number of journals including Yearbook of Cancer, Journal of Soviet Oncology and Journal of Immunology. He received the Arthur S. Flemming Award in Science in 1962, the NIH Director's Award in 1979, and the DHHS Special Achievement Award in 1982.

Survivors include his wife of 43 years, Pauline Claire Saunders of Springfield; two sons and two granddaughters.

---

**The Record**

July 20, 1993
NIAID, NHLBI Cosponsor Asthma Awareness Day at Howard University

By James Hadley

Right on the edges of their seats, the children sit transfixed. Between magic tricks, jokes and balloon sculpturing, three clowns—Sparkles, Precious and Yogi—drop tips on how a child could cope with asthma. Puppets from Kids on the Block, Inc., explain—from what appears to be first-hand experience—what it’s like to be a child with asthma. Representatives from voluntary health organizations and pharmaceutical companies show videos, answer questions and distribute literature, including coloring books.

These are typical scenes from Asthma Awareness Day for Family and Friends held recently on the campus of Howard University in Washington, D.C., for 500 third-through sixth-grade children from D.C. public schools.

"Asthma Awareness Day for Family and Friends is an innovative way to disseminate serious medical information to children, their parents and teachers," said Dr. Charles H. Epps, dean of Howard's College of Medicine. "We want our children with asthma and allergies to feel special."

The students, accompanied by a number of parents and teachers, were treated to lunch, t-shirts, balloons and buttons, in addition to information and fun. Asthma makes it difficult to breathe and asthmatic episodes may range from mild to life-threatening. Asthma is caused by a temporary blockage of the lung's bronchial airways, the tubes that make breathing possible. The obstructions are caused by inflammation, swelling and mucus in the airways and contractions of the muscles surrounding the airways. Illness and deaths from asthma have been increasing in the United States, and children who live in the inner city are particularly affected. Because of the urgency of this problem, HU's College of Medicine, D.C. public schools, NIAID and NHLBI sponsored the 1-day health fair.

Susan Kidd of WRC-TV moderated the program and expressed her personal interest in the subject. Kidd said she, her husband and their two sons all have asthma. She introduced Dr. Anthony S. Fauci, NIAID director, who spoke briefly about the role of research.

"Regular medical care and appropriate medicines can help control asthma," he said. "Research scientists are looking for even more effective medicines to help you."

Dr. Claude Lenfant, NHLBI director, reminded the students about their role in asthma management. "You do not have to be limited by your asthma. You are just as strong as your classmates who do not have asthma." He told the children that they did not have to miss school, avoid sports or refrain from physical activity. "Your doctor or school nurse can teach you more about how to control your asthma," he continued. "I am sure many of you participate in basketball, football and play other games. We want to help you continue to do all these things through our research and programs to help your parents, teachers and doctors better understand asthma."

Dr. Audrey F. Manley, then acting DHHS assistant secretary for health, took the opportunity to pique the interest of students about careers in science and the Public Health Service. "The importance of learning more about asthma and science can scarcely be overstated," she said. "A basic understanding will help you commit to healthier behavior choices and live a healthier life. And who knows, maybe someday, someone in this room will discover a cure for asthma. Give science a try.

"You are only limited by how you limit yourself," she advised. "Ask Dominique Wilkins, a forward for the Atlanta Hawks. Ask Jackie Joyner Kersey, an Olympic marathon runner. Ask Tanya Harding, an Olympic skier. Or ask Congressman Steny Hoyer of Maryland. These four people all have asthma."

Asthma Awareness Day was sponsored in cooperation with the American Lung Association of D.C., the Asthma and Allergy Foundation of America, Mothers of Asthmatics, in Allergy and Asthma Network, NHLBI's National Asthma Education Program and the Hasbro Children's Foundation.

NIAID cosponsored the first Asthma Awareness Day with HU's College of Medicine and Hospital in 1990. Fauci told the audience at the most recent event that the first event had been highly successful. He said, "NIAID views Asthma Awareness Day as a model educational component for asthma and allergy management.

"I was impressed with the attentiveness and superb behavior of the students in the D.C. schools," he continued. "Many people who do not live in the District of Columbia—as I do—may be unaware of the rich history of high schools in the District. It is clear to me that the roots of that tradition begin in the elementary schools. These are the kinds of things we would like to read about in the newspapers and see on television."

One of the most common chronic diseases in the U.S., asthma affects between 10 and 15 million Americans. The disease is the most frequent cause of hospital admissions for children, and also leads the list of childhood diseases that cause a significant loss of time from school. Each year asthma causes 5,000 deaths.