

"Still
The Second
Best Thing
About Payday"

The NIH Record

365 Students Participate This Year

Learning, Sharing Are Themes at Poster Day '95

By Ellen Orjala

What is all this?" one man asked as he walked through the lobby of the Clinical Center on Aug. 4. The normally quiet, serene hospital had been transformed into a vibrant hub of activity with hundreds of people walking through a maze of posterboards. The occasion was Poster Day for summer

interns, an event that has tripled in size since 1991, making the Clinical Center the place to see and be seen.

At Poster Day, high school, college, graduate, and medical students shared with the NIH community the results of their summer research projects. "Learning to communicate research findings is an essential part of the process of becoming a scientist," said Dr. Michael Fordis,

Okey Keke of Coolidge High School in the District explains his poster on stroke to Supriya Jagganath at Poster Day '95.

director of the NIH Office of Education, which sponsors Poster Day each year. "Poster Day was created to provide an opportunity for students to work with their mentors in presenting their summer's research to their new NIH colleagues."

Posters were as varied as the participants. Projects included fluorescent DNA
(See **POSTER DAY '95**, Page 6)

September's a Good Time To Start

Cholesterol Education, Screening Encouraged

Keeping your heart and blood vessels healthy means caring enough to learn what your blood cholesterol level is and doing something about it if it's high. A good time to start is in September, which is National Cholesterol Education Month. This is the 10th anniversary of the National Cholesterol Education Program (NCEP). At NIH, the Cholesterol Screening Program is sponsored by the Occupational Medical Service, in cooperation with R&W and NHLBI.

The OMS Cholesterol Screening Program gives you the opportunity to get the most information at once: With one simple blood test you can get your levels for total, LDL and HDL cholesterol. In addition, information about blood cholesterol, how blood cholesterol can affect your cardiovascular system, heart healthy foods and NIH Heart Walk maps will be available.

Because your blood cholesterol levels
(See **CHOLESTEROL**, Page 4)

The Place To Be at 3'

Weekly Lecture Series Resumes on Sept. 13

The NIH Wednesday Afternoon Lecture Series resumes on Sept. 13, and by all signs, the 1995-96 season should be a match for last year's series, which featured some of NIH's top lectures at a predictable time each week in Masur Auditorium, Bldg. 10.

"Last year's Wednesday Afternoon Lecture Series was a hit," says NIH director Dr. Harold Varmus. "We brought some of the most exciting research to campus each Wednesday at 3 p.m. This year's schedule looks just as good, if not better, and I am already worried about getting a seat."

The NIH Office of Education awards CME credit for attending the lectures, and—if tradition holds—informal receptions with light refreshments will follow the talks.

The 1995-96 season will open next month with a special event—the first Robert S. Gordon, Jr. Lecture in Epidemiology (see sidebar on p. 2 for details).

On Sept. 20, Lawrence Riggs, a leading
(See **WEDNESDAY**, Page 2)

Malaria's Immune Escape Genes Discovered

By Laurie K. Doepel

Scientists at NIAID and their colleagues in California and the United Kingdom have uncovered the key to how the most common and deadly species of human malaria parasite escapes immune detection and causes a lethal syndrome of coma and death.

Each year, between 300 million and 500 million people develop malaria and up to 1 million—mostly young children in tropical Africa—die, according to the World Health Organization.

In three back-to-back reports in the

July 14 *Cell* and one paper in the July 18 *Proceedings of the National Academy of Sciences*, the scientists describe a newly identified family of thousands, perhaps millions, of genes that encode proteins critical to the development and persistence of *Plasmodium falciparum* malaria. "The lack of specific information about these genes has been a major roadblock to research on malaria," said Dr. Louis H. Miller, chief of NIAID's Laboratory of Parasitic Diseases (LPD) and senior

(See **MALARIA**, Page 3)

Preregister To Address, Attend Public Hearing, Sept. 12

NIH will hold a public hearing on Tuesday, Sept. 12 at 7:30 p.m. in the Natcher Bldg. Auditorium. The purpose will be to consider the proposed 1995 Draft Master Plan and Draft Environmental Impact Statement Supplement. Persons who wish to speak at the hearing may register in advance by calling the NIH Office of Community Liaison at the number below. Attendees will also have the opportunity to register before or during the hearing. All comments will become part of the public record. The hearing facility is accessible to persons with disabilities. Sign language interpretation will be provided. Any individual with a disability who requires special assistance should call OCL. For more information, or to register to speak, call OCL, 6-3931, Bldg. 1, Rm. 257, fax: 4-2592.

WEDNESDAY LECTURE SERIES BEGINS NEW SEASON

(Continued from Page 1)

osteoporosis researcher from the Mayo Clinic in Rochester, Minn., will discuss the "Mechanism of Estrogen Action on Bone at the Tissue, Cellular, and Molecular Levels." The Wednesday series will then take a 2-week break so that everyone can rest up for a special double-header on Oct. 11. On that day only, the talks will start at 2:30 with James Darnell of Rockefeller University, hosted by the Cell Biology Interest Group. He will speak on "Signalling Genes from the Cell Surface."

From 3:30 to 4, there will be light refreshments and a reception for both speakers. At 4, the Immunology Interest Group will kick off its academic new year with Roger Perlmutter, a Howard Hughes scholar and chair of immunology at the University of Washington in Seattle.

On Oct. 18, Peter Kim of the Massachusetts Institute of Technology will present the NIGMS-Stetten Lecture, and on Oct. 25 the Structural Biology Interest Group will be hosting Carlos

Bustamente of the University of Oregon Howard Hughes Medical Institute, who will speak on "Studying DNA-Protein Interactions with Atomic Force Microscopy."

Speakers in November will include NIEHS researcher Thomas Kunkel (presenting the Mider Lecture), Christopher Walsh of Harvard Medical School and Dana-Farber Cancer Institute, Elaine Fuchs of the University of Chicago, Phil Sharp of MIT (presenting the George Khoury Lecture), John Robbins (presenting the Dyer Lecture) and Richard Anderson of the University of Texas.

December speakers include Marc Kirschner of Harvard and Keith Yamamoto of UCSF.

"After last year's stunning lineup of speakers in the Wednesday Afternoon Lecture Series, everyone on campus has jumped in to help put together an equally good program for this year," says Dr. Michael Gottesman, NIH deputy director for intramural research. "The special interest groups nominated and will be

hosting speakers. Many institutes and programs will be putting their top lectureships in the Wednesday series, and, again this year, we will hold the NIH Lectures, the Dyer, Mider, and Pittman lectures in the Wednesday slot. Masur is the place to be at 3."

The complete fall schedule of Wednesday speakers will be distributed at the NIH Research Festival and will be posted on tent cards in the NIH cafeterias.

For more information, contact Hilda Madine, 4-5595, fax 2-4296, or e-mail: Hilda_Madine@smtgateway.cc.nih.gov □

Comparison Subjects Needed

Healthy female subjects ages 18 to 45 are needed for a neuropsychiatric research project on personality disorders. Study involves screening evaluation, neuropsychological testing, and single-dose administration drug studies. There is limited risk and no radiation exposure. Intravenous access is needed for drug challenge. Ample payment will be provided for participation. Study is located on the campus of St. Elizabeths Hospital in Washington, D.C. Free parking is available on a monitored lot. Facility is also accessible by Metro. Interested persons should contact Dr. Eric Watsky, (202) 373-6112, email: watskye@dirpc.nimh.nih.gov □

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. The content is reprintable 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, 1995.

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First NIH Epidemiology Award Lecture Honors Gordon

The 1995-96 season of the NIH Wednesday Afternoon Lecture Series will open on Sept. 13 with the first NIH award lecture in epidemiology. The Robert S. Gordon, Jr. Lecture in Epidemiology will take place from 3 to 4 p.m. in Masur Auditorium, Bldg. 10. Sponsored by the NIH Office of Disease Prevention and the NIH Epidemiology Interest Group, the award has been established in recognition of Gordon's outstanding contributions to the field of epidemiology and for his distinguished service to NIH. The award will be made annually to a scientist who has contributed significantly to the field of epidemiology or research in clinical trials.

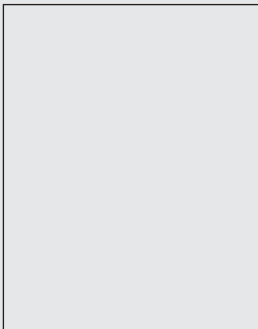
Epidemiology has a long, prominent history at NIH; many consider it and biometry to be the "basic sciences" of prevention and clinical trials research. Much of this tradition can be attributed to the determined efforts of Dr. Robert

S. Gordon, Jr. (1926-1985), who dedicated much of his professional career to the field of epidemiology.

For the last 10 years of his life as special assistant to the director of NIH, Gordon made significant contributions to interinstitute policy and management issues regarding epidemiology, clinical trials, and health effects of environmental hazards. His interest and commitment motivated him to originate and oversee the PHS Epidemiology Training Program, which continues today.

The first Gordon Lecture award recipient will be Dr. Charles H. Hennekens, John Snow professor of medicine and ambulatory care and prevention at Harvard Medical School. His research focuses on the epidemiology of acute and chronic diseases, particularly cardiovascular disease and cancer.

Hennekens will speak on "Aspirin in the Secondary and Primary Prevention of Cardiovascular Disease." He will emphasize the contributions of basic research, observational epidemiologic studies, and clinical trials in providing a basis for rational clinical decision-making and public policy.



Dr. Robert S. Gordon, Jr.

MALARIA

(Continued from Page 1)
author on one of the papers.

The proteins made by these genes allow the parasite to survive in red blood cells and enable the infected cells to attach to blood vessel walls in the brain, causing the most serious complications of malaria: coma and death.

Variability or *var* genes, as they have been named by the NIAID scientists, may lead to the identification of molecular targets for drugs or vaccines to prevent these potentially deadly complications. "New treatments are needed because in many areas where malaria once was controlled or eliminated it has reemerged, largely because the parasites have become resistant to chloroquine and other standard drug treatments," commented Dr. Anthony S. Fauci, NIAID director.

Senior author on two papers, Dr. Thomas E. Wellems, chief of the malaria genetics section in LPD, said, "Scientifically, it's exciting because we've explained observations made decades ago by the previous generation of scientists and with new tools uncovered what's going on at the molecular level."

In 1965, scientists reported observing that malaria infection in monkeys waxes and wanes regularly, gradually fading away months to years later. With every wave of parasites, they saw a different, specific immune response.

Wellems uses the analogy of the human immune system to describe what they have learned about how such a chronic *P. falciparum* infection becomes established in humans. The human immune system can produce millions of different antibodies, he explains. When the body combats infection, specific rearrangements in immune system genes give rise to specific B cells that produce specific antibodies. "The malaria parasite mirrors the immune system's ability to make novel protein forms," he said. "Every time the human immune system generates an antibody that can kill parasites expressing one form of the protein, some parasites have already switched to expressing a new form. It's a battle of the proteins, a thrust and parry between the host and the parasite."

This elaborate ploy allows the parasite to avoid a more certain destruction in the host's spleen. When the parasite infects a circulating red cell and matures, the parasite modifies the red cell, which the spleen can then detect and destroy.

To escape that destruction, the parasite produces large proteins that collect in

knobs that are on the surface of the infected red cell. The infected cell then attaches via contact at these knobs to receptors on the endothelial cells lining tiny blood vessels. Here the parasite matures and the red cell ruptures and releases more parasites to infect other cells, thus circumventing the spleen.

Scientists suspected that the cell's adhesiveness depends on specific surface proteins known collectively as PfEMP-1 (*P. falciparum* erythrocyte membrane protein-1). What was unknown is precisely what these proteins are and why they vary over time.

The new papers are the first to offer a molecular explanation for how red cells infected with *P. falciparum* adhere to endothelial cells and elude immune attack: the *var* genes produce PfEMP-1 and enable the parasite to change both the antigenic and adhesive character of the infected cells, thereby staying one step ahead of the immune system. □

Note from the Editor

Owing to circumstances beyond our control, the Aug. 1, 15 and 29 issues of the *NIH Record* were delivered late to NIH employees. A new printing contractor has been secured and this problem should not occur in the future. We beg our readers' pardon.

Manchester String Quartet Returns on Oct. 16

The Manchester String Quartet returns to NIH for a seventh season on Monday, Oct. 16. The concerts will be presented from 12:30 to 1 p.m. in Masur Auditorium, Bldg. 10. The quartet is composed of members of the National Symphony Orchestra. Concert dates are Oct. 16 and 30, Nov. 20, Jan. 8, Feb. 12, Mar. 11, and Apr. 15 and 29. For more information, call Sharon Greenwell, 6-1776. □

Michaela Richardson, information officer for the National Institute of Child Health and Human Development, has retired after nearly 25 years of government service. Seventeen of those years were spent at NICHD, which she joined in 1978. Richardson recently received the PHS Special Recognition Award for "outstanding and effective efforts in launching the 'Back to Sleep' media campaign in the public health battle against Sudden Infant Death Syndrome (SIDS)."

Intensity builds as 29 runners prepare for the start of the NIEHS 1995 annual Health and Fitness Day 5-Kilometer Road Race. Daniel Williams, a 23-year-old graduate student, won the overall title in 18 minutes 21 seconds. Pam Boteler, 26, not only defended her women's title, but also placed second overall in 20:33. The event also included an untimed mile-long Fun Walk. Thanks go to the AFGU Union for donating the race trophies inscribed with each year's winners.

CHOLESTEROL

(Continued from Page 1)

play an important part in determining your risk for coronary heart disease, it is important to know what your blood cholesterol levels are. The higher your blood cholesterol, the higher your risk is for coronary heart disease.

Cholesterol is a waxy substance needed to keep your body functioning properly. Your body makes all the cholesterol it can use and any excess circulates in the bloodstream. It is this excess that can stick to the walls of arteries. Arteries become narrowed, decreasing blood flow to vital organs, and eventually, a heart attack may occur. Prevention starts with a simple blood test to learn what your cholesterol levels are. Then, if necessary, you can take action to reduce your blood cholesterol levels.

Hints on Blood Cholesterol, Heart Disease Risk*

**For adults age 18 and older, according to the National Cholesterol Education Program*

HDL? LDL? What are they? What should they be?

Adults age 20 and older should have their total cholesterol level checked at least once every 5 years and more frequently if their blood cholesterol levels have been elevated. At the same time, it's best to have your high density lipoprotein (HDL) cholesterol level checked. HDL is often called the "good" cholesterol because it helps remove cholesterol from the body. Depending on your levels of total and HDL cholesterol, you also may need to have your low density lipoprotein (LDL) cholesterol level checked. LDL is often termed the "bad" cholesterol because it helps deposit cholesterol in arteries. The LDL cholesterol level is a better indicator of heart disease risk than total blood cholesterol alone.

For people without heart disease, the recommended levels are:

- ♥ Total cholesterol less than 200 mg/dL;
- ♥ LDL less than 130 mg/dL. In addition, any HDL level under 35 mg/dL is a major risk factor for heart disease. Consult the risk assessment guidelines

September 1995 Cholesterol Screening Schedule

Cholesterol screening is a blood test that requires fasting for 9 hours *before* the test. Do not eat or drink anything (except water) in the 9 hours before your test. The screening test is a full lipid profile that costs \$11.50. R&W will collect fee at test site.

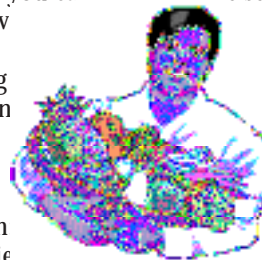
Bldg./Times	Day/Date
Bldg. 10, Rm. 6C306, OMS Health Unit 7:30-10:30 a.m.	Tuesdays: 5, 12, 19, 26
Bldg. 31 Rm. B2B57, 8-10:30 a.m.	Thursday, 14 Friday, 29
Bldg. 31, Fitness Center, B4C18 11 a.m.-1 p.m.	Wednesday, 27
Bldg. 13, Rm. G904 8-10:30 a.m.	Wednesday, 13 Friday, 22
Bldg. 38, Billings Auditorium 8-10:30 a.m.	Friday, 1 Monday, 25
EPN, Rm. 103 8:30-10:30 a.m.	Thursday, 7 Friday, 15
Federal Bldg., Rm. 1C05 8-10:30 a.m.	Thursday, 21
Bldg. 49, 1A50B 8-10:30 a.m.	Wednesday, 6
Natcher, LL, Rm. A 8-10:30 a.m.	Thursday, 28
Rockledge, Rm. 5054 8-10:30 a.m.	Friday, 8 Wednesday, 20
Solar Bldg., Rm. 1A05 8-10:30 a.m.	Wednesday, 27

Throughout the year OMS routinely offers cholesterol screening as follows:
Tuesdays: 8-11 a.m. in Bldg 10, 6C306; Fridays: 8-11 a.m., Bldg. 13, G904.
Call 6-4411 for more information.

below for desirable, borderline and high levels of cholesterol.

Also, there are several ways you can help yourself have healthy level blood cholesterol:

- ☛ Choose a healthy eating pattern. Choose foods low in saturated fats and cholesterol, which raise blood cholesterol. NCEP recommends an eating pattern with less than 10 percent of calories



coming from saturated fat (which raises blood cholesterol more than anything else in your diet); an average of 30 percent or less of calories coming from total fat; and less than 300 mg. per day of dietary cholesterol.

- ☛ Become more physically active. Physical activity lowers LDL, raises HDL and helps weight loss.
- ☛ Lose weight if you are overweight.

Use These Guides to Make Your Own Risk Assessment

	Desirable	Borderline/High	High
Total Blood Cholesterol Level	Less than 200 mg/dL	200 - 239 mg/dL	240 mg/dL & greater
LDL Cholesterol Level	Less than 130 mg/dL	130 - 159 mg/dL	160 mg/dL & greater
HDL Cholesterol Level			Less than 35 mg/dL

New Generation Flu Shot Is Promising, Says NIAID

By Greg Folkers

A preliminary study sponsored by NIAID suggests that a new genetically engineered influenza vaccine can protect people from the flu, with fewer of the minor side effects associated with the currently licensed flu vaccines. Results of the study, which included 127 adult volunteers, were reported in the June 1995 *Journal of Infectious Diseases*.

In the study, the experimental vaccine was as effective as a currently licensed vaccine in preventing influenza. Patients receiving either vaccine had lower rates of influenza infection and illness during a winter epidemic season than did placebo recipients, but those receiving the new vaccine had fewer local reactions such as arm pain or tenderness than those receiving the current vaccine.

"A more immunogenic and better-tolerated vaccine would be especially valuable in the elderly population, who bear the brunt of influenza mortality," said Dr. Anthony Fauci, NIAID director.

The new vaccine contains a purified, recombinant version of a protein called hemagglutinin, normally found on the surface of influenza A virus. The vaccine, manufactured by MicroGeneSys Inc., of Meriden, Conn., is produced in cells derived from moths, unlike the current flu vaccines, which are produced in chicken eggs.

"These preliminary findings, the first from a series of five NIAID-sponsored studies, suggest that a highly purified, recombinant influenza vaccine free of egg proteins may be better tolerated than the current vaccine, and could be administered at a higher dose than currently feasible," commented Dr. Dominick A. Iacuzio, the influenza program officer at NIAID.

"In addition, an influenza vaccine

manufactured using recombinant DNA technology might help to increase our preparedness for influenza outbreaks by allowing a more rapid response to shortages of vaccine or changes in the circulating strain of influenza virus," he added. "Currently, there is no alternative to egg-produced influenza vaccine."

The volunteers in the study were healthy adults ages 18 to 45, enrolled at NIAID-sponsored vaccine and treatment evaluation units at St. Louis University and the University of Rochester in the winter of 1993-1994. The patients were randomly assigned to receive intramuscular injections of one of three preparations of the new vaccine (15 micrograms, 15 micrograms plus alum or 90 micrograms), a licensed trivalent inactivated vaccine, or a saline placebo. Alum is frequently used in vaccines as an adjuvant to enhance the immune-stimulating properties of the vaccine.

The study was done in a double-blind fashion—neither the investigators nor the patients knew which vaccine a patient received until the study was over. Patients filled out a daily report card of adverse reactions during the first 6 days after vaccination, and were instructed to contact the clinic if they developed flu-like symptoms.

Blood samples were taken at the time of vaccination, 3 weeks after vaccination, and again in late March/April 1994 after influenza viruses were no longer circulating in local communities. The investigators found that patients receiving the lowest dose of the new vaccine had levels of hemagglutinin-specific neutralizing antibodies similar to those seen in patients who received the licensed vaccine. The production of these antibodies was not enhanced in patients who received the low-dose vaccine plus

alum, but were significantly increased in patients receiving the higher dose of the new vaccine. Even at the highest dose tested, the new vaccine caused no more side effects than a saline placebo. □

Dr. Philip Chen, NIH associate director for intramural affairs, was the keynote speaker at NIEHS' recent observance of Asian Cultural Day. He gave a talk titled "Intramural Revitalization and the Role of Equal Opportunity and Increased Diversity." There are more than 1,300 foreign scientists in visiting programs, he reported, one-quarter of whom are from Japan or China. Following his presentation, more than 100 Asian employees and their guests attended a potluck lunch in the private dining room of Bldg. 101. The lunch featured more than 60 ethnic dishes, and was accompanied by a CD-ROM presentation on the cultures of the Yangtze River. The afternoon session concluded with a showing of 20 scientific posters in the mall area of the main building.

'Wild Alaska' Lecture Kicks Off New Camera Club Season, Sept. 12

The new season of the NIH R&W Camera Club starts soon. The first meeting is scheduled for Tuesday, Sept. 12 at 7:30 p.m. in Bldg. 31, Rm. 6C07.

The guest speaker is John Boretos. Now retired from the NIH Biomedical Engineering Branch, he was a member of the club for 20 years. He taught photography at the FAES school, gave hundreds of lectures on photography, and judged at many competitions. His topic will be "Wild Alaska." Using slides of Alaska's scenery and wildlife, he will lead a tour

through Denali National Park, the Kenai and Katmai Peninsula.

The subject for the competition of the evening is open. Formats include B&W prints—novice and advanced levels, color prints, and color slides—novice and advanced levels.

The NIH Camera Club is open to anybody who is interested in photography. There is a \$15 annual fee for individual or \$20 for family memberships, plus \$5 R&W dues. Members range from beginners to advanced

amateurs and many have won regional and national awards. The club meets every second Tuesday from September to June. Professional photographers are invited for lectures and demonstrations. A dark room is also available to members for \$5 annually. If you are interested in photography and wish to join, come to the next meeting. For more information, call Dr. Yuan Liu (vice president), 4-6382. □

POSTER DAY '95 HIGHLIGHTS RESEARCH BY SUMMER STUDENTS

(Continued from Page 1)

sequencing, an analysis of human lens proteins, an ultrasound study of swallowing disorders and tongue strength, and the online scientific writer's workshop.

Summer intern Okey Keke, a senior at Calvin Coolidge High School, presented his data on the NIH stroke scale and depression scores in acute stroke patients.

"It was really great talking to fellows, doctors, and other students," he said. "They give you insights into how your research can further other research."

Fabian Sandoval, a senior at Marymount University, also expressed enthusiasm about sharing the results of his research. "I loved the poster session today because I had so much information to share," he said. Sandoval was studying mutations on chromosome 14 in early onset Alzheimer's disease, and said that, with the help of his preceptor, Dr. Lev Goldfarb of NINDS, they found evidence of a new mutation.

"All kinds of people have talked to me today," Sandoval said. "I talked with doctors, scientists, students, and a couple, who were probably in their seventies, who didn't know much about science but were concerned about Alzheimer's." He added, "I've also done some networking."

Deborah Cohen, coordinator of student programs for OE, said the students look forward to having a forum where they can show what they did during the summer. "They want to show that they are doing real research too," she said.

A total of 365 students participated this year. Participants included 86 high school students, 220 college students, 16 graduate students, 38 medical students, 3 veterinary students, and 2 dental students. Students represented 33 states, the District of Columbia, Puerto Rico, the Virgin Islands, Canada, and Japan.

"The students are very enthusiastic," Cohen said. "I think more and more students feel NIH is the place to get their training. And the earlier in their careers they get it, the better."

Emily Pronin, a senior at Yale University, said, "Great research goes on here and it's exciting to be part of that." Her research focused on the role of conflict resolution in the prevention of problem behavior among sixth-graders. Pronin has worked with middle school students in New Haven, trying different techniques with problem behavior. She says now that she has helped develop a theory for what might work to prevent problem behavior, she is anxious to try it out when she gets back to school.

Sharing and learning were common themes expressed by the participants. "I have met a lot of people with similar research interests as

mine, and we have traded addresses," Pronin concluded. "That's what it's all about. The whole point of research is sharing it with other people." □

Transcription Factors, Signal Transduction Symposium Set

There will be a mini-symposium on "Transcription Factors and Signal Transduction: Mechanisms and Pathways," on Friday, Oct. 13 at Hood College in Frederick, Md., sponsored by the Foundation for Advanced Cancer Studies, Inc. Speakers include Tom Maniatis, Harvard University; Marc Montminy, Salk Institute; Anjana Rao, Harvard University; David Levy, New York University; James Woodgett, Ontario Cancer Institute; Richard Treisman, ICRF London. For information call Patti Hall, (410) 658-2882, or send fax to (410) 658-3799. □

Normal Volunteers Wanted

Right-handed volunteers ages 18-45, with no abnormal neurological history, are needed for a study involving positron emission tomography (PET) and magnetic resonance imaging. Subjects will be paid for their participation. Call Elizabeth Hoffman, 2-1315. □

NIAMS Group Offers Arthritis Projections for Baby Boomers

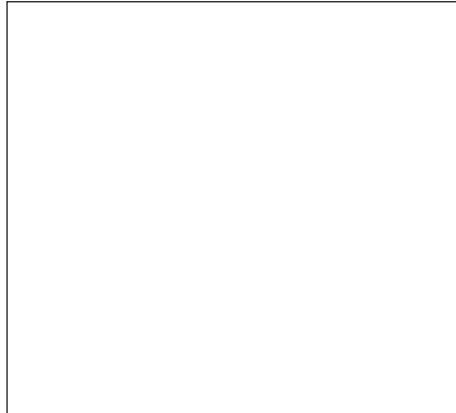
Reva Lawrence, epidemiology/data systems program officer at NIAMS, presented projections of the prevalence of arthritis in the aging United States population at a recent news conference at the National Press Club in Washington, D.C. Her presentation focused on the profound effect that changes in the makeup of the population will have on the frequency and impact of arthritis in the U.S. This information was prepared by Lawrence and her colleagues in the NIAMS-organized National Arthritis Data Workgroup.

Arthritis means joint inflammation, but is often used to indicate a group of more than 100 rheumatic diseases. These diseases affect not only the joints, but also other connective tissues of the body. People with arthritis often have decreased range of motion because of pain and inflammation. Arthritis can also limit or prevent people from performing their usual daily activities.

Lawrence presented data predicting that the prevalence of arthritis in the U.S. population will increase from 15 percent in 1990 to over 18 percent, or 60 million people, by the year 2020. "This increase will occur primarily because of the aging of the baby boomers [those born in 1946 to 1964], who will begin to reach age 65 in 2011," she said. "There are now more elderly people in the U.S. than ever before, and they are becoming an ever-increasing portion of the population." As a result, she said, the proportion of the U.S. population with activity limitation due to arthritis is projected to increase from 2.8 percent of the 1990 population, or about 7 million people, to 3.6 percent of the 2020 population, or about 11.6 million people.

"As the population ages, women increasingly outnumber men. So we anticipate that the U.S. population will be increasingly female," Lawrence said. Because women at all ages report a higher prevalence of arthritis, she explained, this will contribute to the growing number of Americans affected by these disorders.

"If there are major breakthroughs in the prevention of arthritis, the picture could dramatically change," she offered. "If arthritis... can be delayed, there could be great gains in the quality of life for the individual, and economic savings to the nation."



View from Above: Poster Day '95 draws attendees of all ages to the Visitor Information Center, where 365 student researchers shared the results of their work in laboratories at NIH.



Reports from the annual meeting of the International Association for Dental Research held recently in Singapore

Synthetic 'GenesisChips' Repair Bone, Other Tissues

Scientists have produced a novel material capable of regenerating a wide range of tissues. The technology has broad potential for repairing cleft lip and palate, bone defects, wounds, and damaged organs.

The research, part of the growing field of tissue engineering, is based on the use of an inorganic polymer material made primarily from glass and ceramic. The material was developed by Dr. Mark Lyles of the University of Texas Health Science Center in San Antonio and Materials Evolution and Development (MED) USA, Inc., also in San Antonio.

He and his colleagues fused fibers of silica (glass) and alumina (ceramic) into a three-dimensional mesh, which they shaped into small squares, called GenesisChips. The synthetic chips supported the growth of every cell type examined in both laboratory and animal testing. The porous framework completely filled with growing cells and took on the appearance of normal tissue.

In the initial laboratory testing, GenesisChips were placed into culture dishes containing growing cells. The cells readily colonized the squares by growing inward along the fibers and reproducing to fill in the open spaces. The process worked equally well for immortalized cell lines and fresh cells taken directly from animal tissues.

In preliminary animal studies, the investigators placed cell-free GenesisChips into various tissues of rats and dogs. The tissues and organs tested included liver, fat, breast, connective tissue, cartilage, and bone. Within 1 to 3 months, the chips were completely incorporated, achieving cell densities similar to that of normal tissue, with no evidence of inflammation.

According to Lyles, it is a combination of factors that makes the technology behind GenesisChips look so promising for tissue repair. The component materials could be used to create grafts in the laboratory using a recipient's own cells, or could be implanted directly into tissues as an open framework that would be filled in by surrounding cells. The glass/ceramic composition is compatible with animal tissues and also provides a

high degree of mechanical strength and porosity. The large pore size permits blood vessels and nerves to infiltrate the growing cell mass, an essential requirement for generating functional tissue.

The investigators emphasize that the exciting applications of this novel material are still in the early testing stages and long-term studies must be carried out. The next step is to engineer complex grafts that mimic tissue in shape and function, and use these grafts to repair oral soft tissues and bone.

Investigators on this study were Lyles and Drs. Jerald Martell, David Carnes, Edward Boland, and Ivan Cameron from the University of Texas Health Science Center in San Antonio and MED USA, Inc. Lyles is an appointee to the Dentist Scientist Award program at the University of Texas. The work was supported by an NIDR grant and funding from MED USA, Inc.—Wayne Little



Financial Stress Linked To Gum Disease

Financial strain may hurt more than just your pocketbook. Dental scientists say that financial woes can also increase your risk for severe gum (periodontal) disease. The good news is that people who cope with their financial situation in a positive way can lower this risk.

Periodontal disease is an infection of the gum and bone that hold the teeth in place. Poor brushing and flossing habits, smoking, and certain diseases like

diabetes can trigger gum disease. If not treated, serious gum infection may cause teeth to loosen and fall out.

Dr. Robert Genco and colleagues at the State University of New York at Buffalo, University of North Carolina, and University of Michigan studied more than 1,400 people ages 25 to 74 to find out if stress, distress, and poor coping behaviors are risk factors for gum disease.

In studies supported by NIDR, dental scientists evaluated the study participants and matched them by age, gender, smoking and oral hygiene habits, and periodontal health. Psychological tests identified and weighted the causes of stress (children, spouse, financial strain, single life, work stress) in each person's daily life and measured the individual's ability to cope with stressful situations. This research team is the first to apply these standard tests in studies to assess the roll of stress in periodontal disease.

The investigators compared the participants' psychological profile with their oral health status and found that people with financial strain had more severe periodontal disease than did others in the study. Because most of the participants had received little or no treatment for their gum problems regardless of their financial situation, researchers ruled out inability to pay as the reason for more severe gum disease in the financial strain group.

The investigators further found that how these individuals coped with their financial stress affected their risk of serious periodontal disease. Persons who dealt with their financial strain in an active and practical way had no more risk of severe gum disease than did those without money problems. In contrast, people who were highly emotional in dealing with their financial strain had the greatest risk for severe periodontal disease.

Although the role of stress is clear in some medical conditions such as heart disease, this is the first time that scientists have shown a link between daily stress and coping behaviors, and severity of gum disease.

The findings suggest that the increased stress may weaken natural defense mechanisms, making individuals more prone to gum infection. The research team is continuing efforts to identify and understand the full range of risk factors in gum disease. This will help dentists tailor treatment to each patient's specific needs.—Patricia Sheridan □

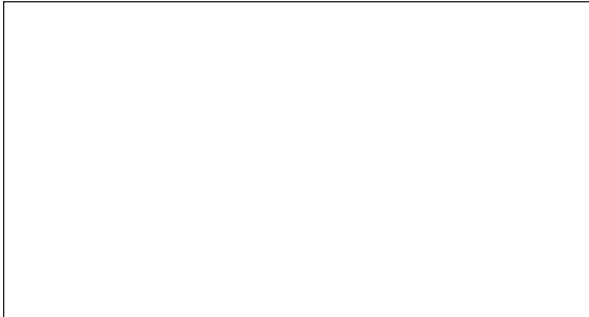
Record Numbers for 1995 Hispanic Youth Initiative

Recently, 146 outstanding young Hispanic scholars from around the country visited NIH and were given an overview of training opportunities available for students.

Since its inception in 1988 with 25 students, the National Hispanic Youth Initiative in Health, Biomedical Research, and Policy Development (NHYI) has grown because of NIH's increasing financial participation. A total of

\$156,300 was contributed to the 1995 NHYI by the following NIH entities: ORMH, ORWH, NIA, NIAID, NIAMS, NCI, CC, DCRT, NIDA, NIDCD, NIDDK, NIGMS, NCHGR, NINDS, DRG, and FIC.

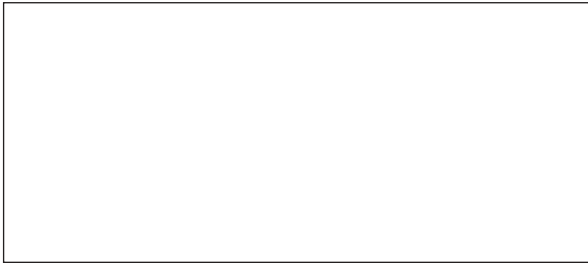
Students spent 9 days lodged at George Washington University and took in area sites. The program, sponsored by the InterAmerican College of Physicians and Surgeons (ICPS), a national organization representing Hispanic physicians, was developed to enhance Hispanic youth awareness of national health and scientific research, public policy, and the role and impact of the federal government on health policy development. The program's purpose is to prepare, motivate, and encourage young Hispanics to pursue careers in the health professions. A cadre of NHYI students is currently working at NIH as interns and research-



Group 1 of the NHYI, which has grown to 146 students since 1988, gathers recently in the Clinical Center.

ers, an indication that the program works as planned.

This year's program began with greetings by Naomi Churchill, director, Office of Equal Opportunity, and John Medina III, NIH Hispanic Employment Program manager, who gave an overview of NIH and OEO's Hispanic Employment Program. Levon Parker, NINDS EEO officer and director of NINDS' Summer Program in the Neurological Sciences, discussed NIH-supported



NHYI's group 2 meets outside NLM.

research training opportunities for students. He also had current NIH Hispanic students discuss hands-on research training and experiences.

Hispanic scientists such as Dr. Milton Hernandez, NIAID; Dr. Mary Custer, NIDA; and Dr. Francisco Calvo, NIDDK, gave their perspectives on becoming scientists, and serving as role models for students. During lunchtime, NIH deputy director Dr. Ruth Kirschstein and the Hispanic scientists and students engaged in informal one-on-one discussions.

Clinical Center EEO Officer Ogden Lacey gave an overview of the CC and the programs and training opportunities available to students. Bernice Williams provided information on the NIH loan repayment and undergraduate scholarship programs. The day concluded with a tour of the National Library of Medicine, where the scholars were greeted by NLM EEO Officer David L. Nash. NLM's Robert Mehnert and Roger Gilkeson discussed accessing the library's information. At the closing ceremonies, the keynote speakers were Dr. Clay

Simpson, deputy assistant secretary for minority health, OASH, and Patricia Montoya, HHS region VI director. ICPS Executive Director Maria Lourdes Garcia presented a plaque to Medina for serving as the NIH project officer and securing program funds. □

DRG's Bill Stancliff Retires After 38 Years

Bill Stancliff, visual information specialist for DRG's Grants Information Office, recently retired after 38 years of government service.

Born in Washington, D.C., Stancliff began his federal service with the National Bureau of Standards in 1959 as an engineering draftsman. While there, he worked with scientists on inventions, and designed exhibits and slides.

In 1969, he left the National Bureau of Standards to join the Division of Research Grants' Statistics and Analysis Branch. While there, he served a detail at the White House, working on the production of a variety of publications.

Shortly after the White House detail, he joined the Grants Information Office

as a visual information specialist. His duties included development of slides, graphic arts, desktop publishing and photography. In addition, he served as a knowledgeable resource and contact on many computer-related problems.

Stancliff noted that he has "enjoyed working alongside some of the most brilliant minds in the field of science." He said he would miss the friendships that he had made.

Dr. Howard Berman, scientific review administrator for the allergy and immunology study section, noted, "I will miss the personal friend and fellow computernik, and the hours spent discussing software/hardware issues, troubleshooting hardware/software and their bugs, and criticizing programmers and manufactur-

ers. I always ended a conversation with Bill feeling that I had received some astute advice and had learned something."

For more than 10 years, Stancliff has been an active volunteer in the Clinical Center. Through its patient activities department, he conducted bingo games with patients every Wednesday evening, and he coordinated voluntary donations for "Cookie Day," periodically bringing goodies to the children. He has enjoyed working with the children at the Clinical Center, Camp Fantastic and the Children's Inn. Stancliff is also an active participant in NIH R&W activities.

In retirement, he plans to continue doing his volunteer work with the Clinical Center and the R&W and spend time fishing.



Bill Stancliff

NIH, Microsoft Agree to SELECT Discount Program

By Josh Greenberg

Computers were supposed to make life simpler, right? Then why does it sometimes seem they make it harder to get your work done?

Here's a common situation: A colleague needs a copy of your latest report as soon as possible, so you send him the file as an e-mail attachment. You both use Word for Windows, so he should be able to open up your file on his computer and print himself a copy, right? Wrong. Turns out you use version 6.0, he uses

version 5.0, and the two aren't entirely compatible. When he opens your transmitted file, its formatting isn't compatible with his software, leaving data and text strewn haphazardly across the page.

Another scenario: You've been looking for a program that will let you perform a certain type of simulation. One day, you're talking with a coworker who says she's found a utility that does exactly what you need. You rush to get a copy, only to find your version of Windows is too old and the program won't run on your machine.

These are just two examples of a major problem with computer use—staying up to date. Every few months a new version of something comes out, making the software you're currently running obsolete. With technology racing forward at blazing speed, it's difficult for the average user to keep up with the flood of software upgrades, not to mention the fact that individual upgrades aren't cheap. Staying current involves a lot of money and effort.

But now, thanks to an agreement, called Microsoft SELECT, between NIH and software giant Microsoft, NIH

computer users will find it much easier to stay current.

At the core of the program is "software maintenance," a new way to upgrade software. Under software maintenance, whenever an upgrade comes out for your currently licensed software, you are automatically entitled to run the new version. Instead of ordering and waiting weeks for your new software to arrive, it's immediately available via the NIH

Campus Network Distribution System

(CandyLAN).

James Del Priore of DCRT, who set up the program, has already arranged for the universal purchase of software maintenance for several software packages widely used at NIH. Every computer at NIH is automatically covered. The three software packages covered are Windows (the graphical user interface for PC computers), Windows NT Server Client (required on any networked computer, PC or Mac, that accesses a Windows NT server) and both

and Server (the software that allows you to send e-mail). Software maintenance on these three programs is universally available at NIH; DCRT has already taken care of it. The SELECT program also allows you to purchase software maintenance for any other existing Microsoft licenses you own.

By enrolling in the SELECT program, NIH also qualified for a large discount on other new Microsoft software purchases. Savings of up to 70 percent off the retail price of new Microsoft software are available simply by calling one of the authorized Microsoft SELECT resellers (see sidebar above). While you're

'SELECT'ed Microsoft Resellers

James Del Priore has enrolled the following Microsoft SELECT resellers that are recognized by the government as small businesses. To take advantage of the benefits of SELECT, simply identify yourself as an NIH'er and request SELECT pricing from the DHHS SELECT agreement.

ASAP Software Express, Inc.
1-800-883-1153
Darin Lewis
Contract # 01-00966

SoftMart, Inc.
(610) 524-7440 extension 352
Gene Mulligan
Contract # 01-00960

SoftSource, Inc
1-800-955-7675
Marilyn Mack
Contract #01-00964

Software House International
1-800-527-6389
Steve Alt
Contract #01-00965

ordering, you should request software maintenance on your new purchases to protect them from becoming prematurely obsolete.

New software purchases bought under SELECT also have other benefits. Your new licenses will allow you to install the software not only on your work PC, but also on a home machine and a laptop. This means that you can now get work done at the office, at home, and when stopped at traffic lights in between. Also, you will be able to convert your license from a Windows version to a Macintosh version free of charge, should you find it necessary.

SELECT makes it much easier to keep your PC at the current standard of software technology. When it's easier for everyone in an ICD to upgrade to the same (and latest) version of software, their ability to transfer files is enhanced, with the result being better communication among users. Microsoft SELECT is a big step in this direction, and one that will save NIH money in the process.

For more information, contact Del Priore, 2-2660, or call DCRT's Technical Assistance and Support Center, 4-DCRT. □

The Clinical Center diagnostic radiology department recently added a new, state-of-the-art magnetic resonance scanner system. The 20,000-pound unit had to be lifted from truck bed by crane and slowly moved to its new home in what used to be the courtyard outside the department of transfusion medicine. The unit's hardware and electronics were assembled in Milwaukee. The magnet was made in North Carolina.

NIDR'S Ronald Dubner Retires After 36 Years in the Corps

Dr. Ronald Dubner, chief of NIDR's Neurobiology and Anesthesiology Branch and head of the NIH/NIDR Pain Research Clinic, retired in June, ending a 36-year career in the PHS Commissioned Corps that included 33 years at NIDR. He has joined the University of Maryland School of Dentistry as head of oral and craniofacial biological sciences.

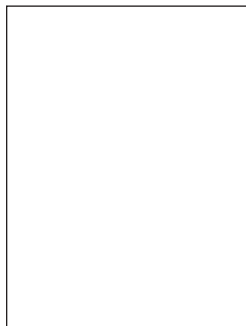
Internationally recognized as a pioneer and leader in the field of pain research, Dubner is acclaimed for building a world-renowned pain program at NIH and for his many contributions to the understanding of the neurobiological mechanisms of pain.

A dentist by training, he first began his research career with studies of cortical function while a doctoral student at the University of Michigan in the early 1960's. At NIDR, he examined the properties of specialized receptors on nerves that respond to painful stimulation. He was the first to show that certain nociceptors, or nerve endings, exhibit increased responsiveness after tissue injury. These studies led to his interest in how pain messages are transmitted, and his eventual demonstration of the specialization of function within nociceptive pathways. These findings had important clinical implications, because they suggested that there is a physiological basis for the hyperalgesia, or exaggerated pain, reported by some patients following nerve or tissue injury.

In 1965, Dubner was given the opportunity to develop a program in pain research at NIDR. He became chief of the neural mechanisms section in 1968, and in 1973 was named chief of the new NIDR Neurobiology and Anesthesiology Branch. He continued his studies of pain mechanisms and control in the early 1970's, increasing knowledge of how pain messages are relayed and encoded in the brain. Later, he demonstrated how these messages can be modulated at different levels of the nervous system by the release of chemicals such as morphine-like substances produced by nerve cells. Dubner's studies made use of molecular, pharmacological, physiological, anatomical, and behavioral approaches. Interested in exploring all avenues of pain control, he visited China as a member of the acupuncture-anesthesia study group in 1974, a visit sponsored by the committee on scholarly communication with the

People's Republic of China.

By the early 1980's, the NIDR pain program was recognized as a showcase of basic and clinical research in the mechanisms, treatment, and measurement of acute and chronic pain. In 1983, the NIH/NIDR Pain Research Clinic, the first multidisciplinary pain clinic in the United States devoted exclusively to research, was opened under Dubner's leadership. In collaboration with other NIH scientists, NIDR researchers at the clinic



Dr. Ronald Dubner

conduct studies of acute and chronic pain. Over the past 12 years, the researchers have studied chronic pain conditions such as diabetic neuropathy, shingles, and reflex sympathetic dystrophy, looking for causes and better treatment. They have developed animal models of persistent tissue and nerve injury. They have generated new ways to measure pain that standardize this subjective experience. The acute pain program has focused on the extraction of third molars, which serves as a model for the study of temporary pain, the body's response to stress, and better ways to manage the pain and anxiety that accompany surgery.

Dubner's most recent studies examined changes in the peripheral and central nervous system following tissue damage or nerve injury and the role these changes play in persistent pain. He has found that hyperalgesia following tissue inflammation or nerve injury is accompanied by molecular changes in the dorsal root ganglia and in the dorsal horn of the spinal cord. An increase in neural barrage, originating from the site of tissue or nerve injury, leads to the amplification of pain.

A member of numerous professional organizations, Dubner is a past president of the American Pain Society and has served on the society's board of directors and as chair of the scientific program committee, research committee, and professional ethics committee. He is active in the International Association for the Study of Pain and has been vice president, treasurer, council member, and chair of their scientific program committee. In 1990, his leadership in pain

research was recognized by his selection to be cochief editor of *Pain*, the leading international journal in the field. He also served on the editorial boards of *Pain* and *Somatosensory Research*, and was associate editor of the *Journal of Neuroscience* for 7 years. Currently he is on the editorial boards of *Brain Research* and the *Journal of Dental Research*, while continuing to serve as cochief editor of *Pain*.

Dubner's scientific contributions also have been recognized through several awards he has received. In 1981, he was presented with the Frederick Bimberg Research Award for excellence in dental research from Columbia University School of Dental and Oral Surgery, the school from which he received his D.D.S. He was the recipient of the 1985 Carl S. Schlack Award from the Association of Military Surgeons of the United States, for building a world-renowned research program on pain and pain control through imaginative research and dynamic leadership. In 1989, he received the Second Annual Bristol-Myers Award for Distinguished Achievement in Pain Research, an honor given to a scientist who has made major contributions to progress in pain research. The Public Health Service conferred its Distinguished Service Medal on Dubner in 1990, and in 1992 he received the F.W.L. Kerr Memorial Award from the American Pain Society. Most recently, the 1994 scientific meeting of the American Academy of Orofacial Pain was dedicated to Dubner.—Jody Dove □

PC Topic Session, Sept. 7

DCRT's Distributed Systems Branch holds regular PC Topic Sessions designed to keep NIH'ers up to date on rapidly advancing technology. Featured Thursday, Sept. 7 from 9:30 to 11 a.m. in Bldg. 10's Lipsett Amphitheater, will be a Windows double-header: a look at the final, shipping version of Windows 95 together with a demo of the prealpha Windows 95 interface on Windows NT. It's hard to pick up a computer publication these days without reading about Windows 95, Microsoft's next generation version of Windows just released on Aug. 24. At this meeting, DSB staff will show Win95's main features and relate first impressions—to what extent it lives up to its advanced billing, what you will need to run it, and to whom it can be recommended. Following the Win95 discussion, Win95's advanced user interface will be demonstrated. □

The NIH Life Sciences Education Connection



Elementary school kids need you! The Science Alliance program is seeking volunteers as it begins its fifth year at NIH. Science Alliance is an educational partnership between NIH and 12 elementary schools in the District of Columbia and Montgomery County. It enables scientists to go into local schools to teach science through hands-on projects, serve as role models for kids, and work with teachers in developing ideas for classroom discussion and activities. Volunteers choose a grade level (kindergarten through sixth) and can visit their class as often as they have time.

An introductory meeting for volunteers will be held at the end of September, followed by a training session in October to help scientists learn techniques for teaching science in the classroom. Science Alliance is an excellent opportunity to get experience in science education, have fun working with young kids, and learn about the science curricula in local schools.

This year, Science Alliance has a new program manager, Anne Baur, who works at NICHD as an information specialist and as coordinator for that institute's Adopt-a-School program. NICHD has generously made Baur's talents available on a part-time basis to the Science Alliance program. She will be taking over for Dr. Irene Eckstrand, who has been named acting director of the NIH Office of Science Education. If you are interested in volunteering, or in coming to the information meeting to see what it's all about, please contact Baur, 2-2828 or e-mail: baura@hd03.nichd.nih.gov □

Vacation in Cancun, Mexico

Start planning now for an escape to Cancun, Mexico. Choose from a three-night (Sept. 14-17, Oct. 12-15, or Dec. 14-17) or seven-night (Sept. 16-23, Oct. 21-28, or Dec. 9-16) stay. The package includes accommodations at the beachfront Blue Bay Village, roundtrip air, all meals, entertainment, water sports, and more. Price is \$509 per person/double occupancy for three nights and \$779 pp/dbl for seven nights. Add \$50 per person for October dates. Call 6-4600 for more information. □

NCI's Matthew Suffness Mourned

Dr. Matthew Suffness, program director in NCI's Developmental Therapeutics Program (DTP) in the Division of Cancer Treatment, died on June 14 at Holy Cross Hospital in Silver Spring at age 52. He had received a bone marrow transplant in November as a treatment for leukemia.

After a stint in teaching and research, first as an assistant professor and later as an associate professor of pharmacognosy at Ohio Northern University, Suffness joined NCI in 1976 as head of the plant and animal products section in the

Natural Products Branch, DTP. In 1981, he became chief of the branch where he was responsible for a major contract effort for the identification, isolation and development of promising anticancer agents from plants and microbial and marine organisms.

He was an outstanding extramural science administrator with many international connections. In order to be more effective in acquiring natural product collections from Japan for the NCI drug development program, he studied Japanese. He was best known for his role in the early development of taxol, a drug isolated from the Pacific yew tree that is now marketed for use in the treatment of breast and ovarian cancers.

In 1991, he received an NCI "Employee of the Month" Award for his instrumental efforts in advancing taxol to the clinic. He was the editor of and contributed to the 1995 textbook *Taxol—Science and Applications*, a major work that was published just before his death. He was also the author of more than 60 articles on the discovery and development of anticancer agents.

Suffness joined the Grants and Contracts Operations Branch in 1988 as a natural products grants program coordinator. He monitored the branch's portfolio of grants in chemistry and natural products and served as the first coordinator for the National Cooperative Natural Products Drug Discovery Group Program. He was tireless in his efforts to facilitate the research of these multidisciplinary research groups and was involved in the recompetition of this successful endeavor at the time of his death.

He was widely respected for his

accessibility and sound advice, his friendly and open demeanor, and his total commitment to natural products research. He organized two international workshops on taxol and authored a

request for applications to stimulate grant work in essential but underrepresented areas of taxol research, including improved methods of production. He also served as an advisor for the International Cooperative Biodiversity Group Program, a joint venture among three federal agencies—NIH, the National Science Foundation, and the U.S. Agency for

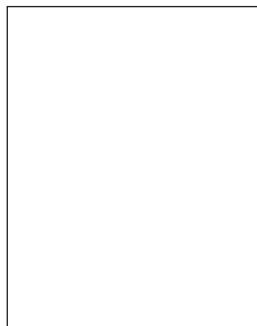
International Development—with the goal of promoting studies in biodiversity, conservation, drug discovery, training scientists in developing countries, and economic development.

Born in Staten Island, N.Y., Suffness received his B.S. degree in pharmacy from Howard University and a Ph.D. in pharmaceutical chemistry from the University of Wisconsin under the mentorship of the late natural products authority, Dr. Morris Kupchen. In 1970-71, he did postdoctoral work at Stanford University with Prof. E.E. van Tamelen.

Suffness was a past president of the American Society of Pharmacognosy (ASP) and a member of the American Chemical Society, the American Association for the Advancement of Science, the American Association for Cancer Research and the Society of Economic Botany. He was especially committed to young scientists and while president of ASP he initiated the "Young Investigators Symposium," which provides support for young investigators and graduate students to present their research results at scientific meetings.

Suffness will be fondly remembered by many former colleagues for his winning smile; a sparkling wit; a no-nonsense love and commitment to work, including official duties conducted via his beloved computer during an extended convalescence at home; but most of all for his courage and fortitude in the face of severe illness.

Survivors include his wife, Rita; a brother, Lawrence, of Silver Spring; and a sister, Frances, of Pine Bush, N.Y. A memorial service will be held on Oct. 7 at 1 p.m. in the National Naval Medical Center chapel.—Tony Mead



Dr. Matthew Suffness

Women's Health Series Examines Hormone Replacement Therapy

Hormone replacement therapy will be the focus of the Women's Health Seminar Series at 1:30 p.m. on Monday, Sept. 11 in Lipsett Amphitheater, Bldg. 10. Menopause has become a 20th century phenomenon with far-reaching socioeconomic and medical consequences. In the United States, there are an estimated 28.7 million women over age 55. This number is expected to increase to 45.9 million women in 2020. To make the 30 postmenopausal years quality ones, women need to review the management versus the treatment of menopause and the option of hormone replacement therapy (HRT).

The seminar will open with a look at the changes a woman goes through at menopause. Dr. Morris Notelovitz, president and medical director of the Women's Medical & Diagnostic Center, will explain the various stages of menopause and how menopause is unique for each woman. A woman's lifestyle, socioeconomic status, and educational background affects her behavioral response to this transitional period.

When a woman approaches menopause, she and her doctor must carefully assess the risks and benefits of HRT for her personally. While estrogen reduces some risk factors of coronary artery

disease and has a mitigating effect on postmenopausal bone loss, studies show an increased risk for endometrial cancer and breast cancer. Dr. Marianne Legato, associate professor of clinical medicine at Columbia University College of Physicians & Surgeons, will discuss what we know and don't know about the influences of HRT on the body and how studies are designed to fill the gaps in our knowledge.

HRT may include estrogen alone or estrogen and progestin. Some studies suggest that progestin in combination with estrogen reduces the increased risk of endometrial cancer caused by estrogen therapy. However, the impact of either hormone, alone or in combination, on the risk of postmenopausal breast cancer remains controversial. Dr. JoAnn Manson, codirector of women's health at Brigham and Women's Hospital, will discuss her recent research, which investigates the relationship between postmenopausal hormone use and the risk of breast cancer.

After reviewing options with their physicians, some women choose not to take HRT. Dr. Florence Comite, founder and director of Women's Health at Yale, will discuss complementary approaches that some women choose to combat the symptoms of menopause.

Dr. Lynnette Nieman, clinical director and senior investigator at NICHD, will discuss how a woman should weigh the risks and benefits of each option with her physician. She will close the seminar by highlighting what a woman should discuss with her doctor when making this important decision. A question-and-answer period will follow.

The Women's Health Seminar Series is sponsored by the women's health seminar committee of the Office of Research on Women's Health. The series includes current research findings by nationally recognized experts. The next seminar will focus on "Depression" at 2 p.m. on Nov. 30. Admission is free and open to the public. For more information, call 2-1770. □

Meeting Planner's Seminar

"Connect '95," the third annual R&W-sponsored meeting planner's seminar, is scheduled for Tuesday, Oct. 3 in the Visitor Information Center, Bldg. 10. Three classes will be offered this year. Topics include "Negotiation Skills," "Test Your Ethics IQ II," and "What Does NIH Offer to the Meeting Planner?" Classes are free of charge. For an invitation to this year's event, or for more information, call Jodi DeOms at R&W, 6-6061. □

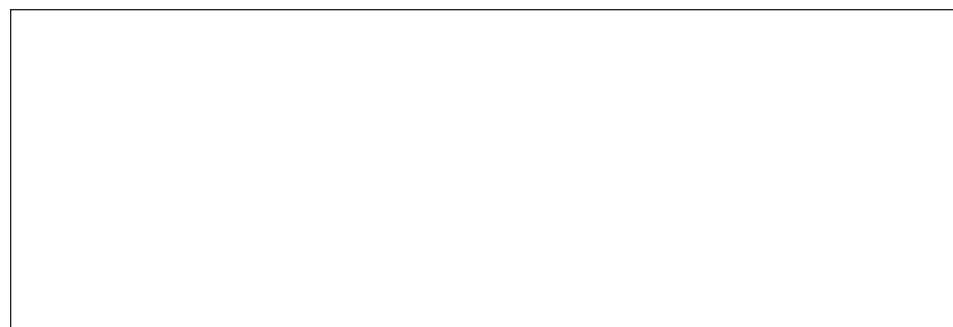
NINDS Builds Pool of Scientists for Future

Each year for 11 years, NINDS has offered hands-on experience to hundreds of high school, undergraduate, graduate and medical school students through its Summer Program in the Neurological Sciences.

"The Summer Student Program has proven to be a very successful effort for students of diverse backgrounds to pursue careers in neuroscience research," said John H. Jones, NINDS deputy executive officer.

The students, representing many of the country's leading academic institutions, including NINDS grantee institutions, participate in research that seeks to understand all aspects of the brain and nervous system.

This summer the class of 1995, which consisted of 162 students, conducted research projects such as studying the chemotropic effects of neurotrophins on rat embryonic cortical cells, determining the genomic sequence of simian foamy virus types 6 and 7, evaluating the role of cytokines in the development of chronic central nervous system disease



The NINDS Summer Program in the Neurological Sciences' class of 1995 consisted of 162 members. The program marked its 11th year of providing hands-on experience to students.

associated with human retroviruses, and isolating and characterizing unique proteins found in the cerebrospinal fluid of patients with Creutzfeldt-Jakob disease.

"These students are our future scientists," said Levon O. Parker, NINDS minority and special concerns program officer and director of the NINDS Summer Program.

On Aug. 2, at the 11th annual NINDS summer student awards ceremony, 28 students received the Exceptional

Summer Student Award and 31 received a Letter of Commendation. At the Aug. 4 NIH Poster Day, 83 students from the NINDS program presented posters on their research projects to the NIH community. NINDS has had the largest number of students participating in Poster Day since its inception.

"This was our goal when we started this program—to build a cadre of neuroscientists for the future," Parker said. "And we at the NINDS feel we are doing just that."—Shannon E. Garnett