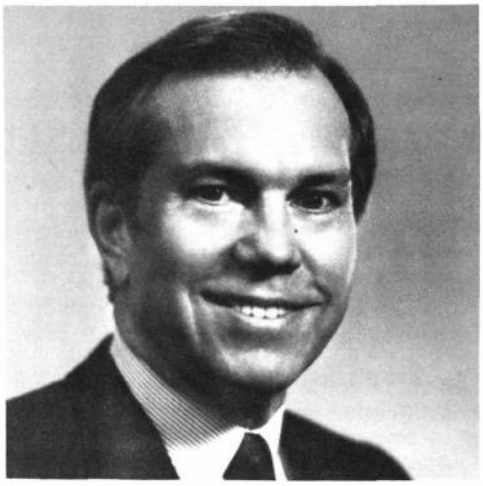
# The NIH Record

U.S. Department of Health and Human Services

May 25
1982
Vol. XXXIV
No. 11

National Institutes of Health

## A Message From The NIH Director



**It is a privilege and honor to be associated once again with the people of the National Institutes of Health—a talented and dedicated community.**

**To the many who have made me feel welcome and who have been exceedingly helpful to me in this learning period, I wish to express my special thanks.**

**I look forward to pleasant associations with many more of the NIH family as we work together in carrying out the truly vital purposes of this unusual agency.**

**Dr. James B. Wyngaarden**

**A monitoring device, small enough to wear on the wrist, has been developed to record body movements of ambulatory patients. See Page 4.**

## New Laser Treatment Study Results Announced by National Eye Institute

An estimated 70,000 Americans a year can now be spared severe visual impairment from senile macular degeneration (SMD), an eye disease that is a leading cause of blindness.

Results from a multicenter clinical trial, supported by the National Eye Institute, show that treatment with a laser can dramatically reduce the risk of visual loss from the neovascular type of SMD, which is characterized by the formation of abnormal new blood vessels in the eye.

Although people with the neovascular type represent only a small proportion of all those with SMD, they are the ones most likely to go blind.

In commenting on the study findings, NEI Director Dr. Carl Kupfer, was careful to note that it is not possible to draw any conclusions about the value of laser treatment in any type or stage of macular disease other than neovascular SMD.

Dr. Kupfer announced the results of the Senile Macular Degeneration Study at a May 6 news conference held in the Lister Hill Center Auditorium. Also participating in the conference were: NIH Director Dr. James B. Wyngaarden; SMDS chairman Dr. Stuart L. Fine, from the Wilmer Ophthalmological Institute at Johns Hopkins in Baltimore; and Dr. Argye Hillis, director of the SMDS Coordinating Center at Wilmer.

The 13 grants supporting the SMDS are administered by Dr. Israel Goldberg, chief of the Retinal and Choroidal Diseases Branch, NEI. As a member of the executive and data and safety monitoring committees of the study, he played an active role in the scientific administration of the clinical trial.

Centers in 12 cities participated in the clinical trial, which was designed to evaluate argon laser photocoagulation as a means of preventing loss of vision due to neovascular SMD.

Although some investigators had previously reported that photocoagulation

*(See LASER, Page 10)*

## 1982 Savings Bond Campaign To Be Held During June

The 1982 U.S. Savings Bond campaign was announced this week by NIH Director Dr. James B. Wyngaarden. The campaign will be conducted throughout the month of June. This year's goal is to enroll 50 percent of NIH employees for new or increased savings bond allotments.

As campaign chairman, Dr. Wyngaarden will be assisted by Dr. Betty H. Pickett, Acting Director of the National Institute of Child Health and Human Development, the 1982 NIH sponsor for the campaign.

Drs. Wyngaarden and Pickett will speak at a kick-off rally scheduled for June 3, from 10 to 11 a.m. in the Masur Auditorium of the Clinical Center.

The rally, open to all NIH employees, will feature the film, *Louie the Patriot,* starring the cast from the TV series *Taxi.* A drawing for door prizes of T-shirts, movie tickets and a pocket calculator will be held.

Celebrities who plan to be present to assist with the Bond Drive Kickoff include Len Elmore, presently of the New Jersey Nets NBA squad, former Maryland Terrapin teammate Howard White, and James Brown, WDCA-TV sports announcer and commentator for Washington Bullets basketball this season.

In an effort to make savings bonds more attractive to the individual saver, the U.S. Treasury Department is seeking legislation allowing a "market-based" variable interest rate to be paid on savings bonds. This proposed legislation would establish a new rate for bonds held 5 years or more.

The return would be 85 percent of the average return on outstanding Treasury securities that mature in 5 years. The interest rate on bonds would float as market rates fluctuate providing a fair return at all times. In addition, savings would be protected from drastic declines in market rates by a guaranteed minimum return.

With Series EE Savings Bonds, no state or local income taxes are paid on the interest earned, and Federal income tax can be deferred until the bonds are cashed or reach final maturity.

Purchasing savings bonds has traditionally been a way citizens can painlessly save money to help build a personal security and, at the same time, have a stake in the future of the country.□

# 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 by request to writers and to researchers in biomedical and related fields. The content is reprintable without permission. Pictures may be available on request.

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**Yogi Bear from King's Dominion paid a surprise visit recently to the play center on the 14th floor of the Clinical Center. Patient Kelly Moorlehen was particularly happy to see one of her favorite cartoon friends. Ida L. Bailey (l) and Martha J. Thomas, both of the CC Nutrition Department, were also glad to make his acquaintance.**

## *Training Tips*

The following courses, sponsored by the Division of Personnel Management, are given in Bldg. 31.

| *Office Skills* | *Course Starts* | *Deadline* |
|---|---|---|
| Telephone Techniques | 7/8 | 6/21 |
| Beginning Typing | 7/13 | 6/28 |
| *Supervisory and Management* | | |
| Planning for Prevention and Results | 6/23 | 6/4 |
| Writing and Classifying Position Descriptions in the F.E.S. Format | 7/8 | 6/25 |

To learn more about courses in office and communication skills, contact the Training Assistance Branch, DPM, 496-2146.

For further information on supervisory and management courses, contact the Executive and Management Development Branch, DPM, 496-6371.

### FAES Sponsors Lecture June 1

Dr. Birgit Zipser, senior investigator, Cold Spring Harbor Laboratory, and winner of the 1982 Mathilde Solowey Lecture award in the neurosciences, will present a lecture entitled Monoclonal Antibodies Specific for Identifiable Leech Neurons on Tuesday, June 1, at 3 p.m. in Wilson Hall.

A reception will be held afterwards from 6 to 7:30 p.m. at the Social and Academic Center, 9101 Old Georgetown Road, Bethesda, Md.□

### Let's All Have a Picnic

R&W's Old Fashioned Family Picnic is being held Sunday, June 6, at Pinecliff County Park, just over the Montgomery County line in Frederick, Md. The cost per ticket is 50 cents for R&W members and an additional 50 cents for each family member. Guests will be charged $4 each.

The day's events include apple bobbing, bubble gum blowing, egg toss, pie-eating contests, tug-of-war and more. R&W will offer hot dogs, pretzels, potato chips, beer and soft drinks.□

### R&W Holds Annual Meeting June 3

The annual meeting of the Recreation and Welfare Association will be held on Thursday, June 3, at noon, in Masur Auditorium. The agenda includes R&W's current business status and future plans. The meeting will begin with an aerobics demonstration. Door prizes are also being offered in addition to free gifts for the first 200 members entering.

All members are invited to attend.□

### Journals To Be Removed From NIH Library

A list of journal titles proposed for removal from the NIH Library located in the Clinical Center will be posted for the next 4 weeks at the circulation desk and on the easel at the library entrance.

On the recommendation of the library staff and the library advisory committee, these titles are to be withdrawn and the subscriptions discontinued.

Budgetary and space constraints necessitate this removal.

#### Back Issues May Be Requested

Any NIH staff member who wishes to keep issues of these journals, or arrange for an official transfer of title to a BID, may contact Carolyn Brown, NIH librarian, 496-2447.□

### USPHS Invites Applications For Epidemiology Fellowships

The U.S. Public Health Service invites applications for a proposed extension of a training program in medical epidemiology.

Up to 12 persons per year, who already have an M.D., a doctorate in an allied health profession, or Ph.D. in a biomedical or behavioral science, or equivalent, may be accepted as service fellows of the USPHS (a nontenured, junior professional classification under civil service) for up to a 3-year period of duty.

Applications received by Sept. 10, 1982, may be considered for service to begin between July 1 and Sept. 1, 1983.

To obtain further program details and application forms, send a postcard only with printed name and home mailing address to Dr. Robert S. Gordon, Jr., NIH, Bldg. 1, Rm. 238, Bethesda, Md. 20205.□

### Male Volunteers Needed For Reproduction Study

Healthy male volunteers between 28 and 34 are needed to participate in an NICHD outpatient study on the control of male reproduction.

During an initial 2-hour screening, a physical examination will be performed and 30 ml (1 oz) of blood will be drawn. Hormone production rates will be measured during two further visits (each taking 2 hours) by the infusion of a small amount of radioactive material, and 180 ml (6 oz) of blood will be drawn intravenously. All three visits will be done within a 2-month time period.

Anyone interested in participating in this study should call Dr. John Booth, visiting associate, NICHD, at 496-4686 or 496-6417.□

Man is distinguished among the animals for his persistent and occasionally successful attempts to do what cannot be done.—*Harvard Alumni Bulletin*□

## Seven PHS Medals Presented to Cancer Experts

**NCI Director Dr. Vincent T. De Vita, Jr. (c) presented the medals to (l to r): Drs. Sylvan Green, John Boice, Mark Greene, Jane Henney, Mr. Paul Vilk, Drs. Marc Lippman, and Robert McIntire.**

Six NCI physicians and one pharmacist, all commissioned officers in the U.S. Public Health Service, were recipients of PHS Commendation Medals at a ceremony in April at the Fogarty International Center. These awards recognize sustained high quality performance by commissioned officers in scientific administration and other fields.

Dr. John Boice, acting chief of the radiation studies section, Environmental Epidemiology Branch, received the award for his landmark retrospective study of medical records of women who received high doses of radiation in the 1950's as part of their treatment for cancer of the uterine cervix.

Dr. Boice visited 30 clinics in nine countries, and searched over 200,000 medical records. He found no evidence of excess risk of leukemias or other radiation-induced cancers among these women.

Dr. Mark Greene, an epidemiologist in the Environmental Epidemiology Branch, received the medal for his work on familial melanoma. Dr. Greene identified a precancerous form of hereditary melanoma, called dysplastic nevus syndrome, during collaborative studies with physicians at the University of Pennsylvania and Harvard University.

He and coworkers demonstrated that a certain unusual type of mole signals the development of malignant melanoma when it undergoes changes in size, color, surface, shape, or outline.

Surgical removal of these dysplastic moles prevents the onset of melanoma. Scientists now believe that these dysplastic nevi may be precursors of malignant melanoma in some members of the general population.

Dr. Sylvan Green of the Clinical and Diagnostic Trials Section, Biometry Branch, was recognized for imaginative and creative work in the application of computers to statistical analysis of clinical trials data.

Dr. Green designed a conversational computer program that allows rapid analysis of complex sets of variables with possible prognostic significance.

Dr. Jane Henney received the medal for her work as acting deputy director of NCI in the 2 years before her official appointment in February. During this period, Dr. Henney worked with Institute and congressional staff on numerous hearings, including the NCI drug development program.

She was cited in addition for assistance with recent management initiatives, including the review of each of the Institute's 1,500 contracts, major space moves, and the review and assessment of the use of research resources by NCI staff and the scientific community.

Dr. Marc Lippman, chief of the medical breast cancer section, Medicine Branch, received the medal for his work on hormonal factors in breast cancer. He directs five chemotherapy trials on this cancer in the Clinical Center, and runs a laboratory that is investigating hormonally influenced cancer.

Dr. Lippman was the first to show the importance of an assay that determines whether steroids are useful to treat leukemia patients, and helped develop an assay for methotrexate, now used nationwide to monitor patients receiving this drug.

His laboratory program helped provide fundamental information about the relationship between estrogen and progesterone receptors and how they influence response to therapy in patients with metastatic breast cancer.

Dr. Robert McIntire, chief of the Diagnosis Branch, received the medal in recognition of his outstanding scientific achievements since joining NCI in 1961.

Dr. McIntire first worked on mouse plasma cell tumors in the Laboratory of Cell Biology. Later, with other coworkers, he developed a radioimmunoassay for alpha-fetoprotein, and then refined the assay to measure tumor markers in testicular cancer.

As branch chief, he has developed new research areas through management of contracts and grants. These include improved X-ray imaging methods and increased emphasis on multiple tumor marker studies for immunodiagnosis.

Paul Vilk, a pharmacist in the Cancer Therapy Evaluation Program, received the award for developing an automated accounting system for investigational drugs, which is now included in the master plan for drug development approved by the Food and Drug Administration.

The system permits staff to keep track of the more than 90 NCI investigational drugs, and greatly simplifies annual reporting of the results of clinical trials.□

## Diabetes Will Be Subject of Science Writers' Seminar

An NIH Science Writers' Seminar on Diabetes will be held on Tuesday, July 20, from 9:30 to 11:45 a.m. in Bldg. 31, Conf. Rm. 10.

Dr. Lester B. Salans, NIADDK Acting Director, will be the moderator and will present an overview of diabetes research advances. He will also discuss new information on the mechanism of insulin action.

Tracking Down the Cause of Diabetes: The Viral Link will be the subject of a presentation by Dr. Abner L. Notkins, chief, Laboratory of Oral Medicine, NIDR.

Dr. Jin H. Kinoshita, scientific director, NEI, will describe laboratory studies of an enzyme which triggers the formation of a type of cataract associated with diabetes.

Dr. Carl Kupfer, Director, NEI, will discuss the Institute's clinical studies on the use of photocoagulation and vitrectomy to treat patients with various degrees of severity of diabetic retinopathy.

Science Writers' Seminars, sponsored by the intramural scientists of NIH and the Division of Public Information, OD, are designed to provide members of the press with background information on the various areas of research at NIH.

For additional information, call Bobbi Bennett, 496-1766.□

## NLM Announces Summer Hours

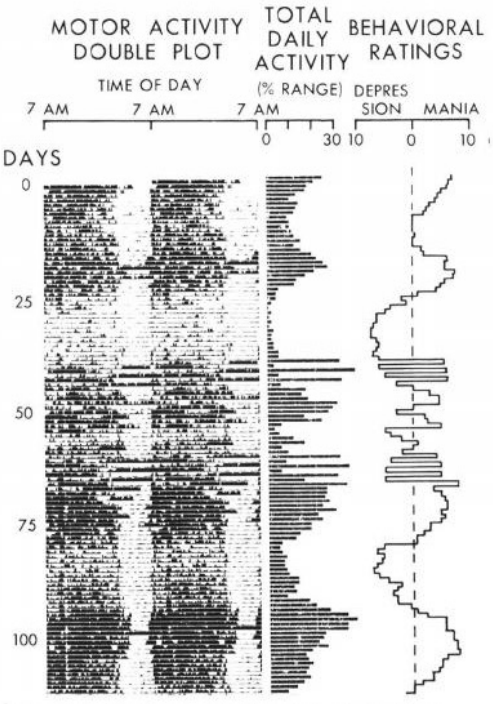
The National Library of Medicine will be closed Saturday, May 29 through Monday, May 31, for the Memorial Day holiday. The Library's summer schedule of public service hours for the main reading room begins Tuesday, June 1, and ends Saturday, Sept. 4. These hours will be from 8:30 a.m. to 5 p.m., Monday through Saturday. (Hours for the History of Medicine Division reading room remain unchanged: 8:30 a.m.-4:45 p.m., Monday through Friday.)□

# Patient Activity Monitor Measures Behavioral Activity Levels

A stainless steel, electronic wrist monitor, worn like a watch on the nondominant arm, has been developed for measuring activity levels in patients with manic-depressive illness, and in hyperactive children. The patient activity monitor provides an alternative to human behavioral observation, and avoids subjective interpretation during recordkeeping.

Researchers from the National Institute of Neurological and Communicative Disorders and Stroke and the National Institute of Mental Health are using the monitor to study abnormal cycles of behavior and activity in manic-depressive illness. It records the wearer's behavioral movements, over 64 hours in 15-minute segments, by a sensitive recording device that measures activity levels. The recorded data are later translated into movement patterns by computer.

Drs. Theodore Colburn and Bruce Smith of the mutual NIMH/NINCDS section on instrumentation and computers in Bldg. 36, together with electronic technicians Jerry Guarini, NICHD, and Norwood Simmons, NIMH, developed the PAM in 1974. Their purpose in designing the unit was to provide a continuous and objective method for measuring activity levels of ambulatory patients.




**This chart is the record of motor activity in a manic-depressive 20-year-old woman. In the left half of the figure, 24-hour segments of activity data beginning at 7 a.m. are shown consecutively beneath one another, and the entire display is double plotted (over 48 hours). Dark vertical bands reflect daytime activity. Light vertical bands reflect nighttime sleep. The graphs on the right show the close parallel between total 24-hour activity counts recorded by the monitor, and nurses' behavioral ratings of mania and depression. This figure was published by Dr. Wehr and his associates in the May 1982 issue of *Archives of General Psychiatry.***

For the last 8 years, the research group has been striving to perfect the device and have effected many changes. Their latest unit has increased memory capacity, longer battery life, and is more streamlined in appearance.

In the future, the group hopes to design a monitor as thin as the modern quartz watches, waterproof it, and have it manufactured so inexpensively that it could be thrown away after use.

In manic-depressives, according to Dr. Thomas Wehr, NIMH Clinical Psychobiology Branch, the PAM has been used to monitor two kinds of behavioral rhythms: the long-term cycle of the illness itself in which mania and depression alternate every few weeks or months, and the daily sleep-wake cycle. When patients are manic, they are more active. Thinking and talking are speeded up; thoughts and feelings are more readily expressed. Sleep is reduced to 4 to 5 hours per night.

In depression, emotions are blunted and thinking is slowed. Patients withdraw from social contact and have decreased drive and energy, and their need for sleep may increase.

In the past, measurements of these dramatic clinical changes were often done in a confined space with nurses observing a patient's mood and activities, writing down their results by hand. This method of recordkeeping was prone to human error, labor intensive and difficult to perform over a 24-hour period.

The ambulatory monitoring device has enabled the researcher to study the cycles of mania and depression in ambulatory outpatients. The monitor registers changes in levels of wrist movements, which may change as much as 500 percent as patients switch from the depressive to the manic phase of their illness. In this way, the monitor can be used to help diagnose the illness and assess its treatment.

The PAM has also been used to characterize abnormalities of the sleep-wake cycle in manic-depressives. For example, it was found that many patients with regular 1- to 4-month manic-depressive cycles experienced 1 to 10 48-hour sleep-wake cycles each time they switched out of the depressive into the manic phases of their illness.

Such double-length sleep-wake cycles have been previously reported to occur in normal persons when they are living in special experimental conditions where they are isolated from external time cues that ordinarily synchronize biological clocks. Thus, the 48-hour sleep-wake cycles in patients living in a normal environment may indicate that time-keeping by a biological clock is abnormal.

Since 1975, the wrist device has been worn by patients in hospital wards. Currently, there are approximately 100 patients (age 8 through 60) wearing the unit.

Inside the monitor, a piezoelectric accelerometer responds to movement caused by patient activity. Any time the monitor is moved so that it exceeds the sensitivity threshold set for that specific type of activity, an electrical pulse is generated. These pulses are counted over a 15-minute time segment, which is set by a crystal oscillator.

**Mr. Simmons (l) and Dr. Smith look at the internal parts of the PAM held by Mr. Guarini (r). The support hardware and software of the system was developed by their group efforts in the Section on Instrumentation and Computers, Research Services Branch, NIMH/NINCDS.**

A pair of random-access memory chips sequentially store the accumulated activity value for each 15-minute period. When the measurement period is over after 64 hours, the monitor contains 256 activity values which are then transferred into a minicomputer.

The information can then be run on a number of programs for interpretation and display. It is also stored on computer files located in Bldg. 10, with each separate patient's record displayed on a continuous graphed chart. This computer management system for the activity data was developed by William Vaughn, also in Dr. Colburn's branch.

In the future, biological motor activity rhythm monitoring promises to aid in the diagnosis and treatment evaluation of such conditions as hyperactivity, insomnia, and hormone and neurological disorders as well as in evaluating normal development and behavior. The research group in Bldg. 36 in the meantime, will continue in their efforts to design the most efficient low-cost monitor that modern technology can produce.□

## Goodloe E. Byron Lecture Series Presents Dr. Carbone June 15

The NCI Frederick Cancer Research Facility is sponsoring the fifth presentation of the Goodloe E. Byron lecture series on Tuesday, June 15, at 8 p.m., in the Rosenstock Auditorium, Hood College, Frederick, Md.

Dr. Paul P. Carbone, professor and chairman of the department of human oncology, Division of Clinical Oncology, Wisconsin Clinical Cancer Center, Madison, Wis., will speak on The Biology of Cancer Therapy.

Dr. Carbone is a former associate of NCI and obtained his medical degree from Albany Medical College.

The Goodloe E. Byron lecture series was established to encourage community awareness and discussion of scientific issues.

All NIH employees are invited to attend.□

# Career Education Institute Graduates Receive Degrees Friday, June 4

Mrs. Ono

Ms. Dabler

Mr. Pumphrey

Mrs. Harris

Ms. Yamaguchi

Ms. Brotman

Ms. Phelps

Mr. Hopkins

Nine NIH'ers will be among HHS employees receiving college degrees during the Career Education Institute's convocation ceremony to be held Friday, June 4, in the Masur Auditorium from 11 a.m. to 1 p.m.

The event will also recognize the academic achievement of students with honor roll status, and certificates of achievement will be presented to those with exceptional scholastic records. Students will be receiving degrees in business administration, social welfare and rehabilitation, nursing, biology, political science, and construction management.

NIH Director Dr. James B. Wyngaarden will greet the graduates, honorees, their families and guests. Paul Berry of WJLA-TV is the featured speaker and Richard O. Jackson, Career Education Institute project director, will be joined by HHS and University of the District of Columbia officials to present honors and certificates.

All of the graduates commented on the relevance of the program and its numerous ramifications. Virginia Ono, OD, graduates summa cum laude with a 4.0 average as a political science major. She feels that attending classes and studying in many disciplines "fostered new interests, increased curiosity, and provided a stimulus for achievement in the world of work." Mrs. Ono served as the first chairperson of the NIH Women's Advisory Committee and as the founder of the NIH/NIMH Office Support Staff Coordinating Committee.

Betty Dabler of the Clinical Center's Radiology Department, graduates summa cum laude with a bachelor's in Business Administration. She has received awards from UDC's College of Business for her outstanding record. Feeling that her career education experience has been valuable not only in terms of career potential but also for personal growth, Ms. Dabler is now interested in an administrative career.

Robert Pumphrey, chief, camera unit, Medical Arts and Photography Branch, said, "this was something that I always wanted to do and never before had the opportunity." He commented that he met some of the "finest people" while in classes, and was further helped by "outstanding teachers who made all of this possible."

In the future, Shirley J. Harris plans to seek employment in the NIH Social Work Department, doing volunteer work with incarcerated persons, and tutoring youth. She would also like to return to college for a master's degree in social welfare. Currently employed by the Procurement Branch in the administration operation unit, Mrs. Harris will receive her degree in social welfare and rehabilitation.

Maria Yamaguchi is amazed that more employees do not take advantage of the CEC program. A medical technician involved in electromicroscopic work, Ms. Yamaguchi hopes to continue her biology studies and work toward a master's degree, having just completed her undergraduate course work in biology.

Renee Brotman, who majored in business administration, will receive her bachelor's degree magna cum laude. Ceramics, needlepoint, dollhouse furnishings, candy making, and youth work all have occupied her attention during recent years. Working in the Division of Administrative Services' Materiel Management Branch, Ms. Brotman is planning to continue her studies at American University in a graduate management program. She "appreciated the small, cohesive classes; respected the high caliber of professional instruction, and really learned many things."

Also graduating magna cum laude with a bachelor of science in special education is Diane Phelps. Ms. Phelps, NINCDS Nursing Department, cites as her ultimate goal, "to become an advocate for handicapped individuals." Mental retardation, its causes, treatment, and education is her special interest, and she feels that this CEC program is exceptional because it helped her to get closer to these objectives.

Willie Hopkins, who was on the UDC dean's list, received his bachelor of science degree in the summer of 1981. Previously employed with the Construction/Engineering Branch of Facilities and Services, OD, Mr. Hopkins is now chief of the Contracts and Inspection Branch, Walter Reed Medical Center. His immediate goal is to obtain professional engineering registration in the State of Maryland.

The first bachelor of science in nursing degree earned by an NIH'er through the CEC was Laura Naimi (no photo) in the fall of 1981. Ms. Naimi previously worked in the Clinical Center Nursing Department.

The graduates voiced strong appreciation of their supervisors, NIH, their coworkers for their cooperation, and family members for their support and encouragement in making this opportunity possible.

The NIH Career Education Center, located in Bldg. 31, Rm. 4B-03, offers college course on site. The summer session began May 24 and the fall term starts Aug. 30. Interested students should inquire in the CEC office, or telephone 496-5025.□

## NLM Computerized Catalogs Replace Old Card System

Computerized catalogs allowing faster and better access to information on books is now provided by the National Library of Medicine, replacing the old card catalog system.

"The transition from card to computer is both a challenge and an opportunity," said Dr. Elliot Siegel of NLM's Lister Hill Center. "We need to learn how patrons are using the computer catalog, what problems they are having, and what new or improved features users would like to have," he added.

Dr. Siegel is currently directing a study at NLM comparing two prototype online catalog systems, CITE and ILS. Both of the prototype systems were designed and developed by NLM research staff and experts in the field of library automation.

CITE (Current Information Transfer in English), is a "user friendly" interface to the Library's existing computerized catalog CATLINE, which has been used primarily by staff in medical libraries with online access to NLM. The ILS (Integrated Library System), specifically the public catalog access module, also utilizes the CATLINE data base, but operates on a minicomputer at the host institution.

The Online Catalog Study is scheduled to run at NLM throughout the summer. For additional information, contact Dr. Siegel, Health Professions Application Branch, Lister Hill Center, NLM, Bethesda, Md. 20209; 496-9300.□

# Carbohydrate Change in Bacteria Speeds Dissolution by Macrophages

Bacteria that can cause typhoid in mice, and food poisoning in man become less lethal if a carbohydrate on their surface is slightly changed in structure.

Dr. Loretta Leive and coworkers in the Laboratory of Biochemical Pharmacology, National Institute of Arthritis, Diabetes, and Digestive and Kidney Diseases, have shown for the first time that this reduction in lethalness is associated with the rate at which these bacteria are eaten by macrophages (white blood cells). These investigations explain an important, previously unrecognized mechanism of disease causation.

*Salmonella typhimurim* bacteria were used in the experiments. Like other bacterial strains, their virulence is affected by cell surface components, such as lipopolysaccharides (LPS). Lipopolysaccharides are composed of a lipid linked to a carbohydrate.

Scientists had known that genetic changes in the carbohydrate of LPS could make these bacteria up to 100 times less virulent. For instance, if 1,000 *Salmonella* could kill a mouse, with a change in the carbohydrate, 100,000 *Salmonella* might be required to kill the same mouse. The reason remained unknown.

Dr. Leive, in conjunction with Yoshiko Takasaki of Japan and in collaboration with Dr. P. Helena Makela of Finland, has now shown that the change in carbohydrate of LPS changes the rate at which bacteria are eaten by white blood cells called macrophages.

Macrophages eat bacteria and other things by a process called phagocytosis. Phagocytosis of these bacteria changes because the different carbohydrates interact differently with certain blood proteins called complement proteins. The carbohydrates change or "activate" these proteins, with the result that one protein, C3b, "coats" the activating bacteria.

The macrophages recognize C3b on the surface of the bacteria as a signal to eat the bacteria. Therefore, macrophages will eat bacteria whose carbohydrate activates complement well, but do not eat bacteria whose carbohydrate activates complement poorly.

This process was shown by allowing macrophages to eat strains of *Salmonella* that differed slightly in LPS carbohydrate. The rate at which they were eaten was slow for the virulent strain, faster for the less virulent strain, and fastest for the least virulent.

The least virulent bacteria were eaten most rapidly because they become most firmly attached to the macrophage surface. They were also best in activating complement, presumably becoming densely coated with C3b which is recognized and bound by the macrophages. Binding to the macrophage is a necessary step to allow the macrophage to eat the bacteria.

This mechanism also explains what happens during infection. When the least virulent organism was injected into mice, it was removed from the blood by macrophages much more rapidly than the most virulent organism.

**Dr. Leive and coworkers have successfully found the links between bacteria, carbohydrates and macrophages previously unidentified in their roles in disease causation.**

When the mice were treated with a cobra venom poison that destroys complement so the bacteria do not bind to the macrophage, the rapid removal of the least virulent organism was slowed, while the already slow removal of the most virulent organism was unaffected.

These results show that very slight differences in the carbohydrate structure of the LPS drastically affect the ability to activate complement. Bacteria that activate complement poorly escape being eaten by macrophages and therefore can cause disease.

This newly identified mechanism can now be used in attempting to explain the virulence of certain bacteria and viruses, and in designing ways to enhance the ingestion, and thus reduce the virulence of disease-causing organisms.□

## WHO Malarial Drug Research Symposium To Be Held June 1

A 1-day symposium on malarial drug research sponsored by the World Health Organization and chaired by Dr. Arnold Brossi, chief, medicinal chemistry section, Laboratory of Chemistry, NIADDK, and Dr. Craig Canfield, director, Walter Reed Experimental Station, will be held at Lister Hill Center on June 1.

This is the first time that the symposium has been held in the United States. It will be a state-of-the-art meeting on malarial drug research.

This symposium is part of the 17th meeting of the Scientific Working Group on the Chemotherapy of Malaria held in conjunction with Walter Reed Medical Hospital, which will run from May 31-June 2.

"People are becoming resistant to some of the present antimalarials and a great need has arisen for new drugs that work by different mechanisms," said Dr. Brossi.□

## Aging Council Expands; Increased to 18 Members

HHS Secretary Richard S. Schweiker announced recently the appointment of 10 new members to the National Advisory Council on Aging, which was recently expanded from 12 to 18 members to meet its increased responsibilities.

The members include leaders in the basic and medical sciences, education and public affairs.

The NACA reviews applications from scientists seeking financial support from NIA for research and training relating to the aging process. It also consults with and makes program recommendations to the HHS Secretary, and the directors of NIA and NIH.

Due to the growth of the NIA since it was established in 1974 (from a $15.9 million budget in 1974 to $75 million in fiscal year 1981), the NACA's functions and responsibilities have increased, requiring a broader range of scientific expertise than the size of the original council allowed.

The 10 new council members are:

Dr. Carroll M. Brodsky
Professor of Psychiatry
University of California
Medical Center
San Francisco

Alice Fenwick-Collier
Deputy Mayor
Akron, Ohio

Dr. Robert Katzman
Professor and Chairman
Department of Neurology
Albert Einstein College of
Medicine

Dr. Dorothy T. Krieger
Professor
Division of Endocrinology
Mount Sinai Medical Center

Dr. Ronald M. Lawrence
Assistant Professor of
Psychiatry
U.C.L.A. School of Medicine

William K. McClelland
President
Grand Peoples Company
Los Angeles, Calif.

Dr. Adrian M. Ostfeld
Lauder Professor
Laboratory of Epidemiology
and Public Health
Yale University School of
Medicine

Mildred L. Silver
President and Administrator of
Renal Hygienics
Tarzana, Calif.

Dr. Lewis Thomas
Chancellor
Memorial-Sloan Kettering
Cancer Center

Dr. Robert E. Windom
Internal Medicine, Cardiology
Sarasota, Fla.□

### Sail On!

The NIH Sailing Association will meet on Thursday, May 27, at 8 p.m., in Bldg. 30, Rm. 117.

Included on the agenda will be a discussion on the Memorial Day weekend cruise, followed by a movie on a recent OSTAR meet (transatlantic single-handed race).

All sailing enthusiasts are invited.□

**Get watertight security with U.S. Savings Bonds.**

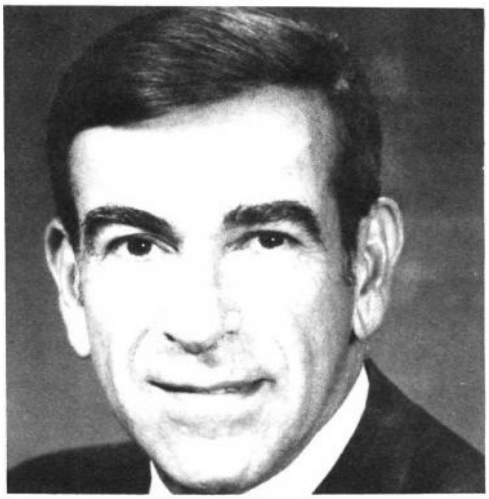
## Pan-Am Arthritis Meeting To Be Held June 7-12

For the first time in 23 years, the VIII Pan-American Congress of Rheumatology, a major international conference on arthritis research, will be held in Washington, D.C., June 7 to 12.

The congress will be under the auspices of both the Pan American League Against Rheumatism and the Arthritis Foundation. It is being held in conjunction with the annual scientific meetings of the American Rheumatism Association and the Arthritis Health Professions Association of the Arthritis Foundation.

More than 4,000 participants are expected to attend the congress. These include rheumatologists and other health professionals from the 19 countries of the Western Hemisphere in PANLAR, and many others from countries overseas.

More than 900 scientific abstracts have been selected for presentation. In addition, the program includes: 4 scientific workshops on inflammation, orthopedic research, immunoregulation and connective tissue biology; 8 clinical seminars; 7 general sessions on health services research and patient care; and 13 scientific symposia sponsored by pharmaceutical companies.



**Dr. Lawrence E. Shulman, Director of the Division of Arthritis, Musculoskeletal and Skin Diseases, NIADDK, is president of the organizing committee for the congress, and president-elect of the Pan American League.**

Since PANLAR was founded in 1943, the privilege of hosting the congress has been given to the United States only once previously. That was in 1959 when the meeting was conducted in Washington under the leadership of Dr. Joseph J. Bunim, clinical director of the National Institute of Arthritis and Metabolic Diseases.

A highlight of the congress will be the delivery of the Joseph J. Bunim Memorial Lecture on the pathogenesis of rheumatoid arthritis by Dr. Morris Ziff, professor of medicine, Southwestern Medical School, Dallas, Tex.

The opening ceremonies for the 1982 session will be held on Monday, June 7, at 7 p.m. at the Sheraton Washington Hotel.□

## 'Mr. Library' Retires After 30 Years

At the end of May, Warren Conklin, NIH Library technician in charge of the circulation desk during the day, will retire after 30 years of service in the library.

To most users of the library, Mr. Conklin's work at the front desk has made him a familiar figure and a ready source of information and assistance. He had thorough knowledge of all facets of circulation and units of the readers services section.

"To many people, Warren was the library," commented Anna Dougherty, deputy chief. "He liked people, remembered everyone, and was uniquely suited for dealing with library users at the circulation desk. He met each person individually with authority, zest, and goodwill."

Mr. Conklin's helpfulness to users brought him a cash award and several letters of commendation during his career.

"In the old library in Bldg. 1 everybody did every job," he recalled. "We started the day with everyone shelving for about a half hour. That took care of the small workload of those days." He also operated the first photocopying service at the NIH library. It involved telephone line transmissions from a photocopying machine at the Library of Congress.

Specialization came with the move to the Clinical Center and the rapid increase in demand for library services. Mr. Conklin has been with the readers services section ever since, except for 1 year in nongovernmental employment. He had previously worked at Riggs National Bank, as a teller and then in the trust department.

Two changes in library operations had the greatest effect on the circulation unit during his many years there, Mr. Conklin said. The introduction of computerized bibliographic searches vastly increased users' requests for materials, but it was followed in 1978 by computerized circulation procedures, which greatly speeded up the process of meeting those requests.

**Starting his NIH career in 1951 at the original library in Bldg. 1, Mr. Conklin is the last working staffer of the 16 people who made the move to Bldg. 10 in 1953.**

Another change, the electronic security system, has practically eliminated theft. "Almost everyone who takes unchecked material past the barrier now is doing it inadvertently," Mr. Conklin said.

His retirement plans are not firm yet, "except to do almost nothing for about a year." One thing he will do during the first year is to continue his favorite kind of exercise—working on his family's farm just outside of Rockville. The farm, where he lived for 10 years, is rented now, but he often goes there on weekends to do unpaid work for the exercise.

Mr. Conklin is also hoping to spend more time on his hobby of collecting daguerreotypes, tintypes, and photographs.□

## NIGMS Grantee Receives Annual Ricketts Award

Dr. George Streisinger, a grantee of the National Institute of General Medical Sciences at the University of Oregon, has received the annual Howard Taylor Ricketts award of the University of Chicago.

The award commemorates Dr. Ricketts, a University of Chicago pathologist who discovered, at the cost of his life, rickettsia, a type of organism that causes Rocky Mountain spotted fever and typhus.

The award honors Dr. Streisinger for "outstanding accomplishment in the field of the medical sciences." In the past decade, his research has focused on how genetic mutations affect the development of the nervous system in lower vertebrates.

A major advance occurred last year when he and Institute of Molecular Biology colleagues cloned their experimental animal, the zebra fish, in homozygous form.

His work with cloning may enable him to recognize newly arisen recessive mutation and further understand how development occurs in vertebrate animals. Because homozygous fish will reproduce on a large scale, researchers can pinpoint and study mutations that would otherwise occur only rarely in nature.□

## Dr. Hsing-Tung Chang Returns as FIC Scholar

Dr. Hsing-Tung Chang, organizer and currently first director of the Brain Research Institute, Chinese Academy of Sciences in Shanghai, China, arrived this month to begin his second term as a Fogarty scholar-in-residence.

Educated in China and the United States, he is well-known for his work in neurophysiology. His research has ranged from the study of mechanisms of perception to neurophysiology of pain pathways.

During this visit, Dr. Chang will again collaborate with scientists in NINCDS and NIMH in investigation of pain mechanisms. He and other FIC scholars and interested NIH staff will plan a conference on mechanisms of brain perception and control.

His office is in Bldg. 16, Rm. 208, where he can be reached at 496-2091 until the end of August.□

## CC Owl Mural Aids Patients and Families

**The completed *Nobody's Perfect* mural will last until remodeling is completed.**

**Bill Lance and Jean Pendleton put some finishing touches on their mural. Daughter Judy Morgan was not available at the time the photograph was taken.**

Many people visiting the second floor solarium in the Clinical Center have come to wonder how the painted wall mural—*Nobody's Perfect*—came into being.

The blank wooden partition that blocks from view the construction going on behind it, now has been transformed into a 2-day art project that helped to relieve the anxiety of family members awaiting the outcome of coronary surgery, and eased the stay of a patient undergoing testing.

It was no Renaissance Doge who suggested the idea of the mural; it was Otis L. Crutchfield, Jr., supervisory therapeutic recreation specialist in the CC Patient Activities Department.

The idea germinated after Mr. Crutchfield had talked with Jim Pendleton, a patient about to undergo heart surgery. Mr. Pendleton told him that his wife, Jean and daughter, Judy L. Morgan, were nervous about his upcoming operation.

After the project idea was proposed to all the patients and family members who might want to participate, Mrs. Pendleton and her daughter (an owl person) drew a preliminary sketch of two owls upright on a limb and one hanging upside down.

The *Nobody's Perfect* theme came about through the rationale that not everyone's heart functions normally, according to Mr. Crutchfield.

The Pendletons were joined by patient William D. Lance, a former commercial artist, who refined the sketch and did the outline for the mural. The Pendletons completed it with paints purchased by the Patient Activities Office.

"This was a very successful form of group therapy for Bill and Jean. What I tried to do was encourage them to use their energies in a positive way. It worked out beautifully," said Mr. Crutchfield.

Later, Mr. Pendleton, while recuperating from surgery, said, "It is very important for a hospital patient to have support from his or her family. You want your family near you in troubled times, but you don't want them spending every waking minute worrying about you. Spending all of your time dwelling on your problems doesn't get them solved. Knowing my wife was putting her time to good use while I was in surgery was a great consolation to me. She thoroughly enjoyed painting the mural."

Mr. Crutchfield said that Mrs. Pendleton confided in him, summing up her feelings about being involved in painting the mural. "I'd rather paint a wall than climb one," she said.□

### New Employee Phone Numbers Assigned at Frederick Facility

The NCI-Frederick Cancer Research Facility has had a new telephone system installed. All NCI-FCRF employees have been assigned new numbers which can be secured by calling the main number, (301) 695-8100. NIH employees can continue to use the FTS by dialing 8-935 and the last four digits.□

The time to be happy is now. The place to be happy is here. The way to be happy is to make other people happy.—*Robert G. Ingersoll*□

## Baker Wardell Ross Rolls Up CC Career

The world of upside down cakes, cookies, breads and éclairs have filled the life of Wardell Ross for the last 30 years; or since the first patient or employee sat down to a meal at the Clinical Center.

Mr. Ross, now a retired baker from CC's Nutrition Department's main kitchen, has risen early every day to fill the normal and special dietary needs of patients. "When the CC first opened, the department was so busy I hardly had a chance to get a complete uniform."

Donning his distinctive chef's hat and white uniform, Mr. Ross has juggled racks of eggs, kneaded dough, and delighted many patients' taste buds with favorite icings.

**Mr. Ross has specialized in preparing low sodium bakery items for CC patients.**

Most of Mr. Ross' bakery training has come from "the experienced bakers here." He arrived at the CC after working as assistant baker at the Bethesda Naval Medical Center. "I know I would have a better opportunity for advancement here because it was such a new place," he says. Later, after 2 1/2 years, he was promoted from baker's helper to baker.

#### Previously Prepared Employee Meals

The biggest change that Mr. Ross has seen over the years has been in the kitchen itself. When he first came, both the patients and employees had meals prepared by the kitchen staff. "Now we work only for the patients. I've learned a lot here, but it's time to relax a little and try something different," observed Mr. Ross, shortly before his Apr. 30 retirement.

Originally from Shelby, N.C., Mr. Ross plans to travel with his bowling club (a sport he took up 10 years ago and one in which he still hopes to roll a perfect game). He also plans to do some gardening.

"I don't know what we'll do without Mr. Ross," says Edith A. Jones, chief, CC Nutrition Department. "He has been a tremendous strength in our department since the day he came."□

## 5-Year Study on Aspirin and Beta-Carotene May Involve 22,000 Physicians as Subjects

The National Heart, Lung, and Blood Institute and the National Cancer Institute are jointly supporting a 5-year clinical trial to learn whether aspirin and beta-carotene are useful in the primary prevention of cardiovascular disease and cancer among healthy men age 40-75 years.

Approximately 22,000 subjects, all of them physicians, are being invited by mail to participate. Each participant will take one pill daily. On even days, it will be either 325 mg. of aspirin or a placebo; on odd days, it will be either 30 mg. of beta-carotene or a placebo. For convenience, the pills will be supplied in calendar packs.

Every 6 months, each participant will be sent a new supply of pills together with a followup questionnaire on which to report compliance with the regimen and current health status.

At that time participants will also provide signed permission for investigators to examine medical and hospital records relating to any illness reported. The investigators will obtain death certificates on all subjects dying during the study as well as any medical and autopsy reports on each decedent.

Aspirin inhibits the aggregation, or "clumping" of blood platelets, an early and perhaps essential step in the development of blood clots. Clots and emboli are often involved in or directly responsible for many of the disabling or lethal manifestations of heart and blood vessel diseases—including a high proportion of heart attacks and strokes.

Thus, aspirin and other "antiplatelet" drugs have been considered a promising approach to primary and secondary prevention of such thromboembolic complications among persons at high risk due to arteriosclerosis or other cardiovascular conditions.

As a measure for stroke prevention, aspirin has performed well in several clinical trials, significantly reducing the incidence of transient ischemic attacks, completed strokes, and cerebrovascular-disease deaths among high-risk males (but, surprisingly, not among high-risk women).

As a means of secondary prevention among men who had previously sustained one or more heart attacks, aspirin has been generally disappointing. The NHLBI-supported Aspirin-Myocardial Infarction Study, completed in 1979, disclosed no significant benefits from aspirin therapy. The drug did slightly reduce the threat of recurrent heart attacks, but had no effect on total or cardiovascular disease mortality rates.

Currently, the results of clinical trials to date slightly favor the use of aspirin during the early months after a heart attack, though the evidence for its benefits remains inconclusive. As to aspirin's value in the primary prevention of thromboembolic episodes, clinical evidence is still relatively meager and the demonstration of benefit still more tenuous.

The present study will be the first large scale clinical test of low-dose aspirin in the primary prevention of thromboembolism to be conducted in the United States. A smaller trial is already under way in Great Britain.

The addition of beta-carotene to the study regimen will provide, at little added cost, a clinical test of the effectiveness of this substance in the prevention of tumors.

Beta-carotene is a precursor of vitamin A, which has been shown in animal studies to protect against the induction of tumors by various techniques. But, the doses of vitamin A needed for significant antitumor activity could pose serious toxicity problems in humans.

However, some dietary studies in humans have indicated that a diminished cancer risk was more strongly associated with the beta-carotene content of the subjects' diets than with their vitamin A content.

Moreover, there is no evidence that the high physiological levels of beta-carotene to be used in this study are associated with any serious side effects, though some slight yellowing of the skin may occasionally occur.

The study will be carried out by Dr. Charles H. Hennekens and colleagues at Harvard Medical School.□

## *Visiting Scientist Program Participants*

*Sponsored by Fogarty International Center*

4/26 **Dr. Sei-ichi Tanuma**, Japan, Laboratory of Molecular Biology. Sponsor: Dr. George Johnson, NCI, Bg. 37, Rm. 2E26.

4/27 **Dr. Zhang Shu-ren**, China, Division of Cancer Biology and Diagnosis. Sponsor: Dr. Chou-Chik Ting, NCI, Bg. 8, Rm. 219.

4/28 **Dr. Remy Cahn**, France, Laboratory of Neuropathology and Neuroanatomical Sciences. Sponsor: Dr. Igor Klatzo, NINCDS, Bg. 36, Rm. 4D04.

4/29 **Dr. Mitsuru Mori**, Japan, Laboratory of Epidemiology. Sponsor: Dr. Charles Kaelber, NIAAA, Parklawn Bg., Rm. 16C-16.

4/30 **Dr. Friedrich Propst**, Austria, Tumor Biochemistry Section. Sponsor: Dr. George Van de Woude, NCI, Bg. 41, Rm. 100.

5/1 **Dr. Klaas Krijgsheld**, The Netherlands, Laboratory of Medicinal Chemistry and Biology. Sponsor: Dr. Theodore Gram, NCI, Bg. 37, Rm. 5B22.

5/1 **Dr. P. Uma Maheswara Reddy**, India, Developmental and Metabolic Neurology Branch. Sponsor: Dr. John Barranger, NINCDS, Bg. 10, Rm. 4N248.

5/1 **Dr. Paolo Spirito**, Italy, Cardiology Branch. Sponsor: Dr. Stephen Epstein, NHLBI, Bg. 10, Rm. 7B15.

5/2 **Dr. Takayoshi Tokiwa**, Japan, Laboratory of Human Carcinogenesis. Sponsor: Dr. Curtis Harris, NCI, Bg. 37, Rm. 3A17.

5/7 **Dr. Sadayo Iijima**, Japan, Cell Genetics Section. Sponsor: Dr. Takeo Kakunaga, NCI, Bg. 37, Rm. 3E08.

## Dr. Lewis Appointed CC Clinical Data Director

**Dr. Lewis is working with DCRT computer systems analysts, William D. Vincent and Brian R. Cole, to make MIS data available to researchers doing statistical analysis and graphics.**

The process of making clinical information easily accessible to people involved in patient care and research at the Clinical Center is now the responsibility of Dr. Thomas L. Lewis, chief of the Office of Clinical and Management Systems. He has been recently appointed CC associate director for information systems.

Dr. Lewis' responsibilities also include coordination of the management of all clinical information systems and operations in the hospital.

One system, the computer-based Medical Information System (MIS), installed in 1978 to support the patient care, research and administrative activities of the CC, has been improved steadily since its inception.

"I would like to increase the amount of patient data stored on MIS. I want to see an outpatient's laboratory and X-ray data available from one clinic visit to another. This will facilitate outpatient care in the ACRF," he says. "I would also like to add to MIS the capability to generate graphs and patient flow sheets as needed."

Dr. Lewis and Dr. David Rodbard, head of the biophysical endocrinology section, NICHD, are working together on a prototype graphics project that will benefit clinical investigators. "We want to tailor the system to meet their needs. We would like the physician to be able to go to a terminal and obtain sets of laboratory values for treating patients, such as 'plots' of white blood cell counts or liver function tests," says Dr. Lewis.

The CC has actually been involved in medical information systems since 1953, then under the direction of Dr. George Z. Williams, the first chief of the Clinical Pathology Department. At that time, there was a computer system in the laboratories, but the units had no access to the data. The system concept has gone through many evolutionary steps since.

"This technology is becoming more widely used in hospitals everywhere," says Dr. Lewis.□

# LASER

*(Continued from Page 1)*

slows down the rate of degeneration in SMD, others thought that this costly treatment might be ineffective or even make the disease worse. Until now, there was no conclusive proof either way.

The national collaborative study was initiated to make a scientific determination of whether laser treatment is effective in preventing blindness from this disease.

To be eligible for the study, patients had to have new blood vessels growing into the macular portion of the retina, but not too close to its vital center, which is called the fovea.

If unchecked, these abnormal vessels leak fluid and blood into the macula, causing destruction of the retinal nerve tissue which is responsible for the sharp, detailed vision needed when reading or driving a car.

The goal of treatment is to preserve vision by burning and sealing off the vessels with an argon laser, thereby preventing further leakage and tissue destruction. Usually, this can be accomplished on an outpatient basis in a single visit.

**NEI Director Dr. Kupfer participated in the laser treatment news conference. A reprint of the report was sent in advance to every ophthalmologist in the country.**

When entering the study, participants agreed to be assigned at random to either the treatment group or the non treatment group. Patients in both groups were examined carefully at regularly scheduled followup visits.

Information collected during these visits was sent to the coordinating center in Baltimore for computer processing and analysis. Statisticians there compiled reports and sent them to an independent group of scientists serving as the SMDS data and safety monitoring committee.

After only 3 years of the 5-year study, committee members learned that 60 percent of the untreated eyes lost most of their vision, while only 25 percent of the treated eyes had such a serious outcome.

When this dramatic difference between treated and untreated eyes was observed, the DSMC made several recommendations: 1) that no additional SMD patients be recruited into the study, 2) that all participants be informed of the new findings, and 3) that the study protocol be changed to allow for photocoagulation of every eye eligible for treatment. These recommendations have already been implemented.

**Members of the Senile Macular Degeneration Study team confer with NEI Director Dr. Kupfer (l) after the news conference. They are (second from l to r): Drs. Stuart Fine, study chairman; Israel Goldberg, NEI grants administrator; and Argye Hillis, study coordinating center director.**

In addition, the investigators will continue to follow all patients to find out whether the beneficial effects observed 1 to 2 years after treatment still hold true after 5 years.

"There can be no doubt that studies such as this one have provided us with immensely valuable information that could not have been obtained in any other way," said Dr. Kupfer during the news conference.

"An earlier trial proved that laser treatment can save the vision of many people with advanced diabetic retinal disease," he also observed. "Results such as these have taught clinicians and researchers an important lesson: The clinical trial, like the laser, is a powerful tool for casting light where it is needed."

A report of the study findings has been accepted for publication in the June issue of the *Archives of Ophthalmology*. □

## Ken Hargreaves Receives Dental Research Award

Kenneth Hargreaves, associated with NIDR's Clinical Pain Section, was honored at the American Association for Dental Research meeting held recently in New Orleans.

A predoctoral dental student at Georgetown University and a PHS COSTEP (Commissioned Officer Student Training and Extern Program), Mr. Hargreaves received one of six AADR student fellowship research awards for his outstanding project in oral health research.

Guided by Dr. Raymond A. Dionne, Mr. Hargreaves is conducting a pilot study to evaluate the relationship between the perception of pain and apprehension in patients undergoing removal of impacted teeth, and circulating levels of beta-endorphin. Beta-endorphin is a hormone-like substance in the blood thought to be involved in an endogenous pain-suppressing system.

The proposed project will evaluate the response of conscious patients as well as of those pretreated with pharmacological agents that may help or attenuate the endorphin response. This project may identify drugs therapeutically useful for aiding the body's endogenous pain-suppressing system.

The awards, funded by Johnson and Johnson and the Block Drug Company, were established to stimulate dental students in the United States to consider a career in oral health research. This year, 32 such students submitted protocols describing objectives, research methods, and the potential significance of their clinical and research projects. □

**Wade Ledbetter, Jr., along with other NIA Gerontology Research Center employees Dnitra Thomas and Kenneth Hale, performed at the first musical celebration of Black History Month in Baltimore. Levon Parker, NIH Black Culture Committee program director, introduced the program along with Vivian Betton, NIA, EEO Officer. Dr. Richard Greulich, NIA Scientific Director, expressed appreciation to the GRC staff and said that he looked forward to future lively events.**

## Four Members Appointed To DRR Advisory Council

Four new members have been appointed to 4-year terms on the National Advisory Research Resources Council. The new members are Drs. Gabriel F. de Freitas, Joseph Lindner, Jr., Marigold L. Linton, and Frederick Vosburgh.

Dr. de Freitas, a surgeon specializing in oncology at several Phoenix-area hospitals, is a liaison fellow of the American College of Surgeons' Commission on Cancer, and a member of the Society of Surgical Oncology, the Society of Head and Neck Surgeons, and the American Radium Society.

Dr. Lindner is president and chief executive officer of the Saint Barnabas Medical Center, Livingston, N.J. While serving as professor of medicine at the University of Cincinnati College of Medicine, he organized the first emergency room physicians residency training program to be approved by the AMA Council on Medical Education.

A professor of psychology at the University of Utah, Dr. Linton's research specialty is long-term memory and cognition. Active in the Native American community of scholars, she was a founder of the National Indian Education Association and has consulted on Native American affairs to the U.S. Office of Education and the National Institute of Education.

Dr. Vosburgh is assistant professor of biochemistry at Rockefeller University and adjunct assistant research scientist at the Hospital for Special Surgery of Cornell University Medical College. He has published on the mechanics of coral reefs and of vertebrate connective tissues.□

## Nursing History Found in Large NLM Collection

The National Library of Medicine has for years acquired books and journals related to nursing and the nursing profession. Perhaps the single most interesting item is the first edition, first issue, of Florence Nightingale's *Notes on Nursing, 1859.* Other major works by her can be found in the collection.

The first series of the Index-Catalogue of the Library, vol. 9, 1888, contains over 100 references to "nurses and nursing" published and acquired before that date. Many early items are also available by pursuing the suggested cross references. Hundreds of current books and journal articles on the history of nursing can be found in the Library's annual *Bibliography of the History of Medicine.*

The NLM manuscript collection includes materials such as the archives of the American College of Nurse Midwives, 1946 to 1976, consisting of 36 boxes of correspondence and documents on the founding, membership, meetings, publications, and business of the organization, as well as unpublished material pertaining to individuals who had distinguished careers in midwifery.

The National League for Nursing has also deposited its archives from 1894 to 1952 in the Library. Proceedings of annual conventions, minutes of meetings, biographical data of early leaders, correspondence, and photos are included.

There are several other interesting collections as well as an original 1890 audio recording of an interview with Florence Nightingale which was re-recorded in 1939 with an introduction by Adelaide Nutting.

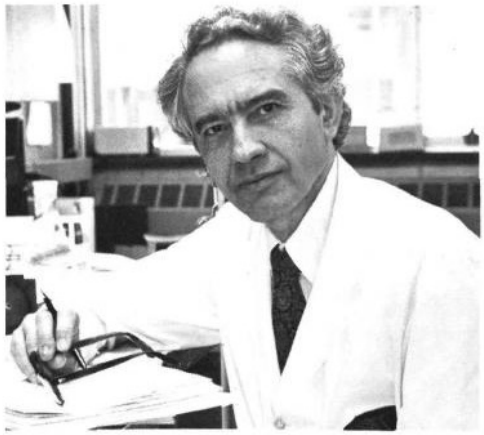
**Anna Rochester of the Smith College Unit in the American Red Cross, feeds a soldier through a tube in Sauilly, France, during World War I. (Photo from the NLM Prints and Photographs Collection, History of Medicine Division).**

The Prints and Photographs Collection offers pictorial documentation on the history of nursing from the Middle Ages to the 1960's. Illustrated nursing activities range from the medieval Hotel Dieu and "Sairy Camp" caricatures to instructional photos from the late 19th century, and wartime nursing during the two World Wars. Also included are portraits of leaders in the development of nursing as a profession. For more information, write or visit the History of Medicine Division, NLM, Bethesda, Md. 20209.□

## Top VA Research Award Given to NHLBI Grantee

Dr. Sami I. Said, chief of the pulmonary diseases section at the Oklahoma City Veterans Administration Medical Center, recently received the VA's highest award for medical research, much of which has been supported by NHLBI's Division of Lung Diseases.

The William S. Middleton Award, named for the researcher, clinician and educator who headed the VA's Department of Medicine and Surgery from 1955 to 1963, was given to Dr. Said for his research on the metabolic processes of the lung.



**Dr. Said is one of the first researchers to regard the lung as an organ of major metabolic activity, and not merely as an animated bellows.**

Dr. Said's work has demonstrated that the lung is the site of synthesis, metabolism and release of such biologically active substances as the prostaglandins and vasoactive peptides which he isolated from lung extracts. With his colleagues he purified the extracts and described their biological characteristics.

His interest in the biologically active compounds found in the lungs has focused on their possible roles as mediators in serious pulmonary diseases such as pulmonary edema, pulmonary embolism, respiratory alkalosis, anaphylaxis and endotoxin shock.

Dr. Said's work in the field of endocrinology led to his discovery of vasoactive intestinal polypeptide (VIP), now acknowledged as one of the new peptide neurotransmitters-neuroregulators of the central and peripheral nervous systems.

He and his colleagues described the sequence and structure of the peptide, synthesized it and developed a radioimmunoassay for its measurement in plasma and tissue. Investigation now centers on the possible association of VIP with bronchial asthma or cystic fibrosis.□

There is nothing wrong with America that the faith, love of freedom, intelligence and energy of her citizens cannot cure.
*—Dwight D. Eisenhower*□

**Dr. Richard W. Lymn, health science administrator for Arthritis, Musculoskeletal, and Skin Diseases, NIADDK, has been elected treasurer of the Biophysical Society. The Biophysical Society, with a membership of 3,800, is one of the largest scientific societies in the United States. The society attracts a broad spectrum of scientists since it involves a cross discipline of biology and physics.**

## Public Speaking Apprehensions Can Be Overcome, Says Psychologist

Stress Management in Public Speaking was the subject of a recent NIH Toastmasters Club open lecture in Wilson Hall by Dr. Harry Olson of Maximum Potential, Inc. Dr. Olson, a clinical psychologist, explained in detail several techniques used to reduce anxiety during public speaking and how to be successful in making effective presentations.

He indicated that the fear of public speaking for three-quarters of Americans exceeds their fear of death. In other words, they "would rather die than take the lectern," he said. Apparently everyone has past images of public speaking which are tinged with negativity that can influence their present attitudes and ideas and tend to be restrictive. This negativity has to be changed to productiveness; and apprehensive expectations of what could happen must be changed in order to reduce that fear, according to Dr. Olson.

Some negative expectations of public speaking include fear of nonimportant subject matter, that the mind would go blank, and that the point of the talk would not be understood. Many times negative expectations can make that event happen and become a self-fulfilling prophecy. This could occur because a limit has been preset in the mind of the speaker who may behave in ways to make that expectation come true.

Dr. Olson told the audience to remember that speakers would not be invited to talk if the audience were not interested in the topic. The speaker must also be aware of his/her purposes for being there—which are to expound, demonstrate, entertain and communicate. The speaker is to touch lives.

A speaker must focus on strengths, and these include knowing the audience, the subject and one's self. To understand the audience and gain familiarity, a speaker must know why they are attending, and what their interest is. A speaker needs to find commonalities, such as the audience's needs, and the knowledge that he/she can supply the solutions. There must be "a cooperative effort of mutual communication back and forth," Dr. Olson said.

The first couple of moments of public speaking are the worst, and a speaker must make the decision to either talk or leave; when that decision is made, worry ends. When a speaker thinks of the audience's need to hear what he/she has to say, it makes for equal footing. As the speaker, one is an expert in the special subject to be presented, and that thought also equalizes fear.

Another solution to overcoming fear is to allow the body to relax. A way to accomplish this is to take one large breath to fill the lungs completely while at the same time thinking of positive messages and affirmations that the speech will be effective. A speaker must calm down before stepping up to the lectern.

To illustrate his point on relaxation, Dr. Olson had the audience relax using a cue, verbal suggestions, and the mental creation of visual imagery. This is a relaxation technique that can be used for public speaking or for any other occasion.

The method is to roll the eyes upward and then close them; take deep breaths, imagine a feeling of floating, and then count backward slowly from 10 to 1. At the same time, use positive messages and deep breathing "to realize the power of one's own life and ideas," he said. "A speaker must remember that he/she is entrusted with the audience's time, and that is the mission," Dr. Olson concluded.

The NIH Toastmasters Club promotes opportunities to explore these and other techniques to become an accomplished public speaker. For further information, call Nancy Cherry, president, at 496-9737.□

## Grants Associates Series Nominations Are Invited

The Office of Grants Associates is accepting applications for its 1982-83 grants associates seminar series, scheduled to begin on Sept. 13. The weekly seminars will run for 10 months and are usually held on Mondays in Bldg. 31.

The seminar series is designed to address a broad spectrum of philosophical, political, and policy issues relevant to the administration of Federal programs in the support of biomedical research.

The topics to be covered will include the roles and interactions of HHS, NIH, other PHS and non-PHS agencies; policy and ethical considerations in biomedical and behavioral research; factors affecting extramural programs and their administration; program planning and evaluation; and the legislative/budget process.

Individuals wishing to be considered for the series should forward a current curriculum vitae and a statement of interest through their immediate supervisor to their BID Director.

Each BID Director is being asked to forward no more than three nominations with the above noted documents to OGA no later than Friday, June 18.

Final selections will be made by Dr. William F. Raub, NIH Associate Director for Extramural Research and Training. All nominees whose documents reach OGA by June 18 will be notified of final action in late August.

Participants will receive a minimum of 150 hours of training credit in their official personnel file after completing the series.

For further information, contact A. Robert Polcari, executive secretary, Office of Grants Associates, 496-1736.□

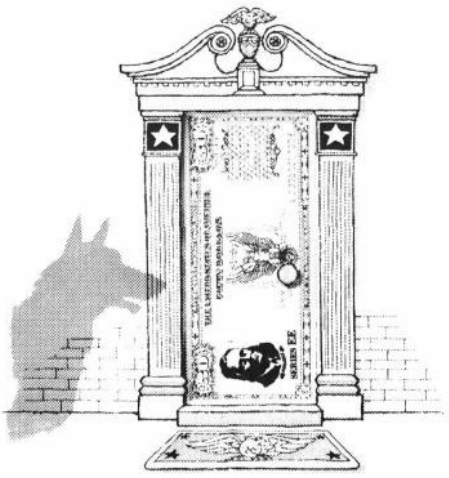
## Dr. David Rall Elected To Academy Board of Directors

Dr. David P. Rall, Director of the National Institute of Environmental Health Sciences and of the National Toxicology Program, has been elected to the board of directors of the North Carolina Academy of Science, Inc.

**Dr. Rall will serve a 3-year term as a member of the board of directors for the North Carolina Academy of Sciences.**

The academy is a nonprofit corporation for the development of science in North Carolina, including a senior academy composed of science professionals and others interested in science, and collegiate and student academies of science for students engaged in course work in the sciences. It is affiliated with the American Association for the Advancement of Science and a member of the National Association of Academies of Science.

Dr. Rall, while simultaneously serving as NIEHS and NTP Director, is also an Assistant Surgeon General in the U.S. Public Health Service. He was elected to the National Academy of Sciences' Institute of Medicine in 1979, and in 1975 received the PHS Distinguished Service Medal.□



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