

# The NIH Record

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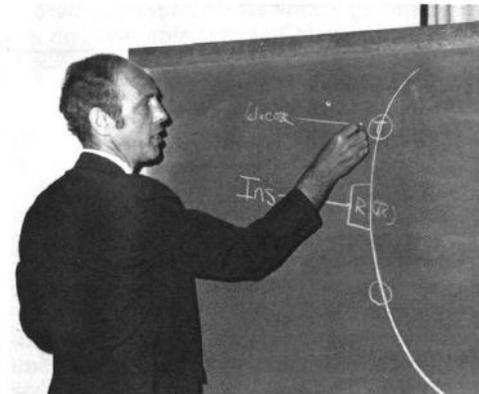
## Writers' Seminar Sums Up Diabetes Research Gains

The substantial progress that has been made in the last 5 years in diabetes research at both the basic and clinical levels was the subject of an NIH Science Writers' Seminar on July 20.

Dr. Lester B. Salans, NIADDK Director and seminar moderator, presented an overview of the advances which, he said, "have led to an unprecedented amount of optimism and enthusiasm in the diabetes community. . . ."

These include an increased understanding of the synthesis, secretion, and action of insulin; the production of human insulin by recombinant DNA technology; and the development of new insulin delivery systems or pumps.

Other advances also include the ability to transplant the pancreas's insulin-producing islet cells from one experimental animal species to another without immunologic rejection and the demonstration that strict control of the glucose level in pregnant diabetics can reduce fetal morbidity and mortality.



Dr. Lester B. Salans, Director, NIADDK, diagrams how insulin acts to regulate glucose metabolism.

Dr. Salans also described the progress made by his laboratory (Dr. Sam Cushman and associates) in understanding how insulin acts on cells to regulate glucose utilization. This research indicates a diminished ability of insulin to stimulate glucose entry into cells of animals with obesity or type II diabetes (also known as non-insulin-dependent diabetes or maturity-onset diabetes).

This abnormality is due to an alteration  
(See *DIABETES*, Page 10)

## Dr. Robert N. Butler Leaves Aging Institute To Head Mt. Sinai Geriatrics Department

Dr. Robert N. Butler, the first Director of the National Institute on Aging, will leave NIH to head a new department of geriatrics—the first in the country—at the Mount Sinai Medical Center in New York City. He has been the NIA Director since 1976.

Under his leadership, the Institute budget grew from \$19.3 million to \$81.9 million—a fourfold increase. The Institute now supports five times the number of investigator-initiated research projects that it funded 6 years ago.

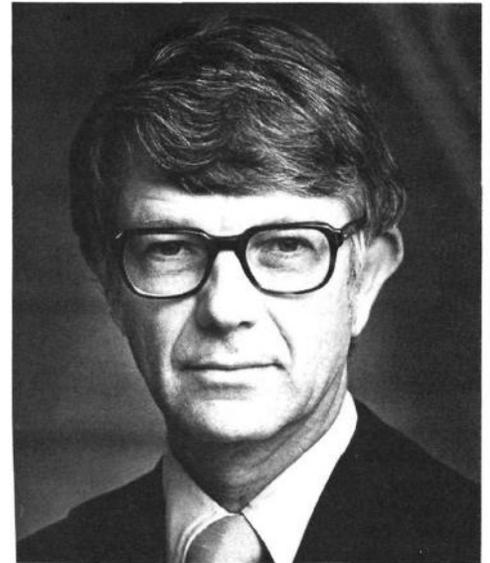
Born in New York City, Dr. Butler graduated from Columbia College and received his medical degree from Columbia University College of Physicians and Surgeons.

From 1955 to 1962, he served as a research psychiatrist with the National Institute of Mental Health. He worked primarily on human aging, behavioral methodology, cerebral physiology, psychopharmacology, and the biology of schizophrenia.

Dr. Butler left NIMH to continue his research, was active in teaching and consultation, and a practicing physician and gerontologist in Washington, D.C.

Simultaneously with his 1976 appointment at NIH, he was awarded the Pulitzer Prize for his book, *Why Survive? Being Old in America*.

Dr. Butler's broad professional and personal commitment to the aged has in-



"Old age is too often a tragedy," says Dr. Butler. "We have shaped a society which is extremely harsh to live in for the old."

cluded past service as a consultant to the U.S. Senate Special Committee on Aging, St. Elizabeths Hospital, the Langley Porter Neuropsychiatric Institute, and the Center for Law and Social Policy. He has served on the faculties of Howard and George

(See *DR. BUTLER*, Page 6)

## NIH Early Discovery of Cleavage Reaction Leads to DNA Origin Insulin Production

The early discovery of a chemical cleavage reaction some 20 years ago by NIH scientists Drs. Erhard Gross and Bernhard Witkop of the Laboratory of Chemistry, National Institute of Arthritis and Metabolic Diseases (now NIADDK) has eventually led the way to an important application today in the production of human insulin of DNA origin.

This reaction, known as the cyanogen bromide cleavage reaction, is widely used in biochemistry to sequence large proteins and has been an important research tool for two decades.

Sequencing is a process of "spelling out" the protein "message" which is composed of an alphabet of 20 amino acids.

Enzymatic fragmentation, another method used in sequencing, is not selective enough, and yields too many peptide fragments.

The method of choice is this nonenzymatic cleavage with a simple volatile chemical reagent, cyanogen bromide, that attacks only peptide bonds following the infrequent amino acid methionine.

It has now found an application in industry at Eli Lilly Company as a key step in the large-scale manufacture of human insulin of recombinant DNA origin.

Lilly recently constructed a multimillion dollar plant in Indianapolis to produce human insulin.

(See *CLEAVAGE*, Page 6)

# The NIH Record

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NIH Director Dr. James B. Wyngaarden (c) hosted a recent Stone House luncheon for Anke Fuchs (second from r), Minister of Youth, Family, and Health of the Federal Republic of Germany. She was accompanied by two members of her ministry, the labor counselor, and the first secretary of the embassy of the FRG. They were here to meet with Dr. Claude Lenfant (l), Director, NHLBI and his staff, along with staffers from NIA. Mary Frances Lowe (second from l), executive secretary, HHS, also attended with representatives from the Social Security Administration and the Office of Human Development Services. The visit was arranged through the offices of Dr. Mark S. Beaubien (r), Acting FIC Director.

## Changes Announced For Area Parking

Visitor parking regulations at the HHS North Building, 330 Independence Avenue, S.W., are being changed, according to the Transportation and Safety Office, HHS.

Current regulations require all vehicles, including government vehicles, using any of the HHS controlled spaces to display parking permits and park in a predesignated space. To obtain a parking permit, call the Transportation and Safety Office, 245-6507, preferably at least 4 days in advance of the visit. There are only 12 visitor parking spaces available and these spaces are assigned on a first-requested, first-reserved basis.

The Department of Motor Vehicles, District of Columbia, has issued to NIH several official parking permits which are valid in designated spaces throughout the city and are controlled by the Metropolitan Police.

### Permits May Be Borrowed

These permits are for use by government employees using a privately owned vehicle when on official business in the District. An official parking permit may be borrowed by calling Cheryl Amatucci, 496-7644, Bldg. 13, Rm. 2W50.

Regulations for visitor parking at the Parklawn Bldg., 5600 Fishers Lane, Rockville, have not changed. Government vehicles may park, without a permit, on the second level of the Parklawn garage, in spaces numbered 2 through 35.

Visitors driving privately owned vehicles must park in the visitor lot located on Fishers Lane. The fee for visitor parking in this lot is \$1 for the first hour; \$.75 for each additional hour, not to exceed \$4 per day.

Additional information concerning visitor parking at any other government facility may be obtained by calling 496-7644. □

## Annual APA Convention To Explore Role of Psychology in Legal System

Symposia on the widening role of psychologists in American courtrooms and police agencies will be held Aug. 23-27 in Washington, D.C., during the 90th annual convention of the American Psychological Association.

The film, *Prince of the City*, will be shown Aug. 24 followed by a panel discussion exploring stress and burnout in police agencies. In addition, there will be a series of five 1982 master lectures discussing the legal system's growing use of psychological opinion.

Call Dan Mezibov at (202) 833-7881 for more information. □

## NIH Bowling Winners Announced

First place in the NIH Tenpin Bowling League's 1981-1982 season was captured by The Nads. Team members included Pat Cummings, Rita MacNeal, Tom McGettigan and Dave Traynor.

The league will begin its 22nd season on Sept. 1 at 6 p.m. at the Brunswick River Bowl Lanes on River Road, Bethesda, Md.

For further information call Rick Wiener at 496-7075 or 496-7110. □

## 'Body Works' Begins Sept. 13

"Body Works" exercise classes will begin a 7-week session on Sept. 13 in the 14th Fl. auditorium, Clinical Center.

Level 1 will meet from 5:15 to 6:15 p.m. on Mondays and Wednesdays. Level 2, an advanced class, will meet on Tuesdays and Thursdays from 5:15 to 6:15 p.m.

Cost for both levels will be: once per week \$20; twice per week \$35; three times per week \$40. Interested persons can sign up at the R&W Activities Desk, Bldg. 31, Rm. 1A18. □

## Medical Update on Injured NIH Employees Released

NIH officials, who have visited the Washington Hospital Center, released the following medical information regarding the conditions of the two NIH employees injured during an electrical fire in a transformer room in Bldg. 29, on July 27.

James R. Layman is listed in satisfactory condition. Lloyd F. Thompson, who received second- and third-degree burns to 60 percent of his body, remains in critical but stable condition, and has undergone several skin graft procedures. □

## Training Tips

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

Office Skills	Course Starts	Deadline
Refresher Typing	9/21	9/9
Beginning Shorthand	9/21	9/9
Proofreading	10/13	9/29
Effective English	10/18	9/29
Communications Skills		
Writing Workshop	9/13	8/16
Editing Technical Manuscripts	9/8	8/19
Supervisory and Management		
Effective Communications	9/21	8/31
Effective Supervision	10/4	9/13

To learn more about courses, contact the Training Assistance Branch, DPM, 496-2146.

## Theatre Group Announces Variety Show Auditions

The NIH/R&W Theatre Group has put out the call for auditions for a gala fall variety show on campus in mid-November.

The show will feature comedy skits, musical and dance numbers, and other specialty acts.

All types of performers are needed, says producer Sally Richardson, in addition to backstage assistants with varied skills.

Auditions will be held in Masur Auditorium from 7:30 to 8:30 p.m. on Sept. 13 and 16.

Anyone who would like to be part of this production is welcome at the auditions. Musicians, singers, dancers, actors, and comedians are invited to join the show, as well as makeup artists, seamstresses, lighting and sound technicians, and other backstage helpers.

For further information, call Alice Smythe on 496-3471 or Adele Weeks on 942-7117. Sally Richardson can be reached on 496-7716. □

## DRR Awards 23 Grants To Update Instrumentation

Twenty-three grants to colleges, universities, and research organizations totaling \$3.7 million for new, large, shared research instruments were announced by the Division of Research Resources.

Called the Biomedical Research Support Shared Instrumentation Grant, the award is designed to help NIH grantees cope with the rapid technological advances in instrumentation and the rapid obsolescence rate of existing research equipment.

The grants will aid grantee institutions in acquiring and updating expensive, shared-use instruments which generally are not available through other award mechanisms.

The new grant program is a subprogram of DRR's Biomedical Research Support Program. Grants are made to institutions only, and not individual scientists.

The application for the new grant requires that institutions identify a major user group with multiple NIH peer-reviewed support. This group has to demonstrate a clear need for the instrumentation.

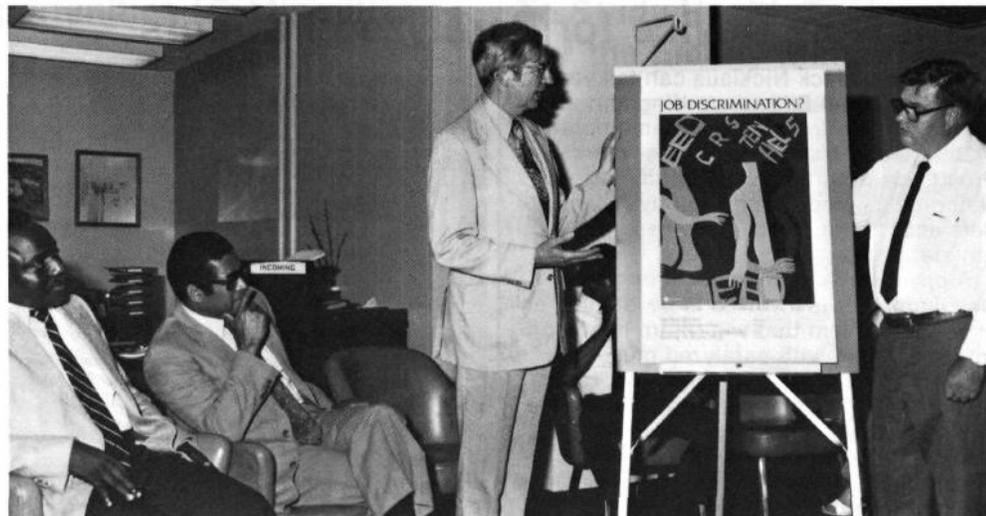
With the award, institutions will acquire different state of the art instrumentation used in biomedical research including cell sorters, electron microscopes, nuclear magnetic resonance spectrometers, and an automated peptide synthesizer system. □

## 'Early Bird' Aerobics at NIH

Classes in aerobic dancing will be held on Tuesday and Thursday mornings, beginning Sept. 14, from 7:30 to 8:30 a.m. in the 14th Fl. auditorium, Bldg. 10, for 12 weeks. Cost is \$60.

Interested persons can sign up at the R&W Activities Desk, Bldg. 31, Rm. 1A18 or call 942-4490 for further information. □

## EEO Awareness Campaign Launched



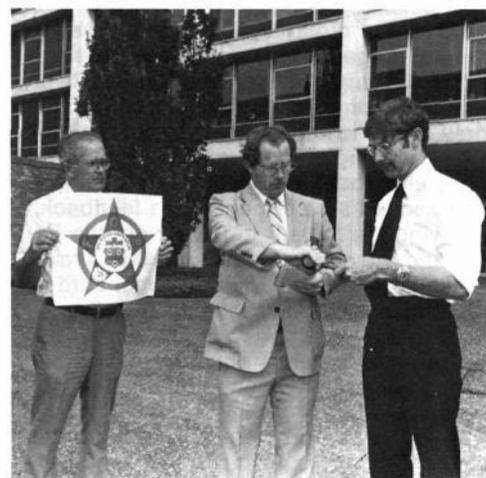
Dr. Becker (c) and Fred Stephens (r), DES-EEO executive board, stand between the campaign poster as Ted Blakeney (l), and Dr. Malone look on. These posters will be placed throughout NIH, particularly in the areas where DES employees work.

In recent weeks, the Division of Engineering Services EEO Advisory Committee has initiated an EEO awareness campaign.

The goal is to make employees, managers and supervisors cognizant that the EEO program exists to help employees confronted with job discrimination as it relates to race, color, sex, religion, national origin, age and handicap.

To sharpen their skills in this endeavor, Bernard Matthews, EEO officer, DES/DS, coordinated two extensive training courses. The first was a 3-day course for the DES and the Division of Safety conducted by Daniel Rondeau, acting assistant deputy director for EEO, PHS.

This training was followed by a 2-day EEO training course for supervisors conducted by McClure-Lundberg Associates. Eighty supervisors from both units participated.



Swearing-in ceremonies of the recently created Lodge 7 of the Fraternal Order of Police were held on the NIH campus this month. NIH police officer James Koerber (r), lodge president, along with other officials, had their oaths of office conferred by James W. Cooke, Jr. (c), F.O.P. Federal State president. Vincent McGolrick, an F.O.P. official, also assisted at the ceremony.

The committee formally launched its awareness campaign with a ceremony on July 27. Before an audience of DES managers, supervisors and committee members, Dr. Thomas E. Malone, NIH Deputy Director, and Dr. Edwin D. Becker, ORS associate director, and DES acting director, expressed their commitment to equal employment opportunity.

Theodore W. Blakeney, EEO Acting Director, said, "NIH-DEO is now leaner, but still viable and doing its job."

The committee presented Dr. Becker with a colorful, well-designed poster done by Betty Hebb, Medical Arts and Photography Branch, DRS.

The advisory committee members who volunteered their time were thanked for their efforts. Organizers say that they plan to continue the EEO campaign with further planned events and publications. □

## Appraisal Workshops Offered

The Women's Advisory Committee and Federal Women's Program of the NIH Division of Equal Opportunity are sponsoring two presentations of a workshop on Appraisal Without Distress conducted by Sharon Fountain, president of Performance Development Corporation.

The purpose is to assist employees in developing techniques for effective participation in the performance review and appraisal process.

Each presentation will include two sessions. One presentation will be offered on Tuesday, Aug. 24, from 9:30 to 11:30 a.m. with a followup session for the same participants on Tuesday, Aug. 31, from 9:30 to 11:30 a.m.

The second offering will take place from 12:30 to 2:30 p.m. on Aug. 24 with a followup for those participants from 12:30 to 2:30 p.m. on Aug. 31. All sessions will be held in Bldg. 31, Conf. Rm. 4.

Participants must be able to attend both sessions of either the morning or afternoon workshops. Advance registration is necessary, call the Federal Women's Program office on 496-2112. □

# Return of Hand Control Is Promising With New Device for Paralyzed Patients

Hand grip. Jack Nicklaus can tell you about it. So can Billie Jean King and Sandy Koufax and . . . Terry Hambrecht?

Dr. F. Terry Hambrecht of the Neural Prosthesis Program, National Institute of Neurological and Communicative Disorders and Stroke, is not a professional athlete.

A physician and biomedical engineer, Dr. Hambrecht is involved in developing an electrical system that will return hand control to patients with paralyzed muscles.

Many spinal cord injury patients, for instance, are unable to perform such simple tasks as answering a phone or drinking from a cup, and their inability to feel and grasp objects is a major obstacle to independent living.

## Hand Grasp Loss Most Devastating

"A person with a spinal cord injured at a high level has many disabilities, but one of the most devastating is the loss of hand grasp and sensation," said Dr. Hambrecht. "We are attempting to restore this lost function by electrically stimulating the paralyzed muscles."

The grasping ability that scientists have been trying to restore is lost when, through traumatic injury to the spinal cord, the flow of nerve-borne messages from the brain to the hand is interrupted.

But by direct electrical stimulation of the undamaged motor neurons attached to the hand muscles, the spinal cord can be partially bypassed and a modified grip restored.

Building on this concept, called functional neuromuscular stimulation (FNS), Dr. Hambrecht is working with teams of scientists from Case Western Reserve University in Ohio and the University of Utah Research Institute. He is directing development of a three-part prosthetic device that will permit limited hand movement.

The device features small electrodes implanted with a hypodermic needle into a paralyzed patient's thumb and forefinger muscles. These electrodes are then connected to a computer-controlled stimulator, which provides power to excite the muscles in a certain sequence and at a particular level of strength.

## Transducer Translates Movements

Patients wear an electrical device called a position transducer near the shoulders, one of the few parts of the body that usually remains mobile after severe spinal cord injury of the neck. This transducer translates the patient's deliberate shoulder movements into commands to the stimulator.

Dr. Hunter Peckham, working under an NINCDS contract at Case Western, has tested this application of FNS in patients, with promising results. Once the hand muscles have been electrically exercised for several weeks to reverse withering from disuse, stimulation of the implanted electrodes will allow the trained patient to



A spinal cord injury patient demonstrates the effectiveness of functional neuromuscular stimulation by grasping a cup.

Photo—Dr. Hunter Peckman, Case Western Reserve Univ.

grasp objects and perform other tasks.

Two types of grip are possible with the prosthetic system: lateral pinch grasp, which allows the patient, for example, to pick up a key, and palmar-prehension grasp, in which the thumb and fingers are used to pick up larger objects.

The computer controlled stimulator, says Dr. Hambrecht, "provides smooth, functional grasp with a minimum of muscle fatigue," and can "change the activity patterns of up to nine different muscles for positioning the fingers."

The system reacts quickly to commands and, most importantly, is under the patient's control, helping to restore the independence and self-esteem sometimes lost in a paralytic disability.

## Hand Prosthesis Still Experimental

The hand prosthesis is still in the experimental stage. Several problems remain, but according to the scientist, a totally implantable stimulator and electrode system now being designed should reduce electrode slipping and reduce time spent on daily electrode tie up with the stimulator.

A second area of concern is feedback: allowing the patient to feel where the fingers are placed and how hard they are grasping. Since the injured spinal cord can no longer relay messages back to the brain, a way must be found to send muscle strength and position information back to the stimulator, where adjustments can be made.

To solve this problem, NINCDS grantees at the University of Utah are developing sensors which, when worn as part of a transparent glove, will generate signals to be used by the stimulator or monitored directly by the patient.

More patient control over the hand prosthesis is another of Dr. Hambrecht's goals. Because of the limited range of motion in the shoulder area, the movement-activated transducer has only a small number of

possible commands which it can relay to the stimulator.

A voice-activated transducer has been proposed to solve this problem, but some paralyzed patients would be reluctant to call attention to their disability by using vocal commands. In addition, new computer programs will be needed to expand the number of muscle commands that the stimulator can pass on to the electrodes.

The future of the prosthetic system will move beyond hand rehabilitation, said Dr. Hambrecht, for the FNS principles involved can also be applied to the wrist, elbow, and legs. He hopes that as the techniques are perfected, they can also be used in the rehabilitation of the arms and hands of stroke patients.

For Dr. Hambrecht and others in neural prosthesis research, a success story like the cardiac pacemaker is well on its way to being repeated.

—Ray Fleming □

## Dr. Leon Yarrow Dies; Child Development Authority

Dr. Leon J. Yarrow, 60, chief of the Child and Family Research Branch, NICHD, died July 28.

An authority on child development, Dr. Yarrow came to Washington, D.C. in 1951 to work as assistant chief of the Child Development Research Branch in HEW. For 11 years he was the director of Child Research, Family and Child Services of Washington, D.C.

In 1965, he joined NICHD as a research psychologist in the Intramural Growth and Development Program. From 1967 to 1971, he was acting chief of NICHD's Social and Behavioral Sciences Branch.

He became chief of the Child and Family Research Branch in 1971. While there, he directed intramural research on cognitive, social and personality development.

A native of Shenandoah, Pa., Dr. Yarrow earned a B.A. degree in psychology from the University of Pennsylvania, and an M.A. in psychology and a Ph.D. in child development from the University of Iowa.

The author of numerous publications, he served on the editorial boards of several professional journals, including the *Merrill-Palmer Quarterly of Behavior and Development* and *Infant Behavior and Development*.

Dr. Yarrow had been a member of the board of trustees of the National Easter Seal Research Foundation since 1975 and served on the board of directors of the National Center for Clinical Infant Programs since 1976. He was a past president of the Society for Research in Child Development.

Survivors include his wife, Dr. Marian Yarrow, of Bethesda, chief of the Laboratory for Developmental Psychology in NIMH; a son Andrew, of New York City; and his mother, Lillian, of Frackville, Pa.

The family requests that memorial contributions be made to the Children's Hospital General Fund in Washington, D.C.

## Extramural Associates Program Holds First Workshop To Discuss NIH Research Opportunities for Minorities

The Extramural Associates Program recently held its first workshop bringing together all associates who have completed the NIH residency program since it began in 1978.

Forty associates attended the 3-day meeting entitled More Research by EA Institutions. The conferees focused on four major areas: the role of EA institutions in health research; the evaluation of institution plans and progress; the future direction and content of the EA program; and communications and information exchange.

The EA program "promotes the entry and participation of ethnic minorities and



NIH Director Dr. Wyngaarden (c) and Dr. Raub, Associate Director for Extramural Research and Training (background), welcome extramural associates Dr. Mary McKelvey (r), Fisk University, and Dr. Wilbert Johnson (l), St. Augustine's College, to the first workshop.

women in NIH-supported research," said Jean Oliver, EA program director.

To enter, high-level administrators in science and biomedical research are nominated by their respective presidents, screened and recommended by the NIH Extramural Associates Review Panel, and then selected by the NIH Deputy Director to spend 5 months in residence at NIH.

Working assignments are designed for each associate in consultation with individual senior NIH health science administrators who serve as advisors for the length of the program.

The advisors guide the associates and monitor their assignments, including a ma-

job one specifically tailored to the interests and growth of the sponsoring institution.

Upon returning to their home institutions, the associates' newly gained expertise is used to promote the advancement of minorities and women into health-related sciences.

NIH Director Dr. James B. Wyngaarden opened the workshop and spoke about the importance of smaller institutions engaged in biomedical research to understand the types and wide range of research projects being funded.

### Broaden Friendships

He said NIH is seeking to broaden and strengthen its partnership with academic and other scientific institutions, and that the associates program contributes to improved understanding and communication between the partners.

Dr. William F. Raub, Associate Director for Extramural Research and Training, OD, described NIH as "being like an amoeba, because the movement is not predictable even though it's moving all the time."

Dr. Raub urged the associates to exploit the special programs now existing at NIH that aid in funding minority biomedical research. These include the Minority Access to Research Careers, the EA program, and the Minority Biomedical Research Support Program.

### Importance of Good Communication

Storm Whaley, Associate Director for Communications, OD, spoke about the importance of good communication among themselves individually and as a group advising NIH administrators. He likened the EA program with a radio station because "the two are networks of communication. Both have availability of information and materials that can be shared with others."

Barbara S. Bynum, director, Division of Extramural Activities, NCI, summarized the workshop, saying it "touched on matters that will . . . remind you of, and leave with you . . . a thread of continuing ideas." Dr. Zora Griffio, special programs officer, OD, described the EA program in her talk as "a living organism capable of growth." □

## MARC Scholar Conference To Be Held September 8-10

The Second Minority Access to Research Careers Honors Undergraduate Scholars Conference will be held Sept. 8-10 at the National 4-H Center in Chevy Chase, Md.

Sponsored by the National Institute of General Medical Sciences, the meeting will bring together MARC students who will be applying to graduate schools in 1983.

The conference will provide a forum for MARC scholars to discuss their research experiences, and will offer an opportunity for them to attend an NIH research seminar and a tour of intramural laboratories.

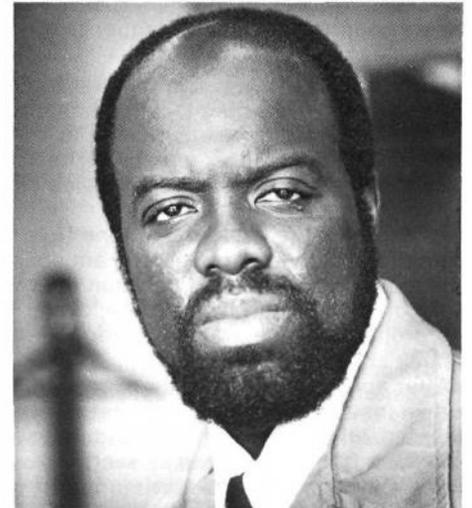
Included in the conference will be a workshop about the graduate record examination and a poster session, which will give one student from each of the 42 colleges an opportunity to present a research paper.

The MARC scholars will also have a chance to meet and talk with faculty members of many graduate institutions.

Because of limited space at the conference, it is recommended that registrations be made by Aug. 25.

For registration or additional information, contact Colette Hurley, MARC Program, NIGMS, (301) 496-7941. □

## Visiting Anthropologist To Study Health Topics For the Elderly Minorities



Dr. Gibbs intends to produce a special report which will be used to generate more research on health promotion in minority elderly populations.

Dr. Tyson Gibbs, medical anthropologist and faculty member in the department of preventive medicine and community health at the University of South Carolina, arrived recently to study current activities in health promotion and disease prevention at the National Institute on Aging.

He is scheduled to be at NIA for 2 months and will be working with Drs. Robert L. Ringler, deputy director, and Daniel Cowell, assistant director for health promotion.

During his stay, Dr. Gibbs will visit staff at other NIH Institutes as well as the NIA's Gerontology Research Center in Baltimore. He will review the various techniques and strategies employed in the dissemination of health information to the elderly, particularly minority aged populations.

According to Dr. Gibbs, there is a tremendous need to improve health awareness on the part of older minority persons. Currently, he reported, only 5 percent of older minority persons receive the various types of health information that are distributed on a nationwide basis.

Educated at the University of Florida, he has been interested in gerontology for the past 6 years. He has participated in two major health promotion activities held in South Carolina and has conducted research on the diets and health-seeking behavior of the rural and poor elderly.

Dr. Gibbs has published several articles on gerontology and is currently working on a bibliography on the cultural aspects of health in black populations and an article on the mortality rates of black elderly persons in South Carolina. □

Nature has given to men and women one tongue, but two ears, that we may hear twice as much as we speak.—*Epictetus* □

## CLEAVAGE

(Continued from Page 1)

Over 100,000 amino acids have been properly positioned in sequence in the last 20 years by this method which the NIH scientists used to "audit" the sequence of ribonuclease.

The procedure involved is the grafting of a synthetic gene, coding for the hormones proinsulin or insulin A or B chains, to a bacterial gene of *Escherichia coli*. The bacterium then produces many copies of the hormones.

To separate the desired hormone from the native bacterial proteins, the amino acid methionine is placed between the two molecules. By chemical cleavage, cyanogen bromide then liberates the hormone cleanly and selectively.

After appropriate purification, crystalline human insulin is obtained for treatment of diabetes. Lilly's use of this procedure in producing human insulin may avert a predicted shortage of the lifesaving hormone.

Drs. Witkop and Gross first collaborated in 1958 when Dr. Gross came to NIH as a visiting scientist assigned to the Laboratory of Chemistry. Their discovery of the cleavage, invariably applied in conjunction with the stepwise Edman degradation, has helped to unravel the structure of thousands of complex proteins.

Their collaboration continued for 10 years. After that period, Dr. Gross left NIAMD to become chief of the section of molecular structure, NICHD, a position he held until his death in 1981. □

## Chronic Pain Pamphlet Published

Do you have headache, low backache, or arthritic pain that won't go away? NINCDS has published *Chronic Pain, Hope Through Research*, a 28-page booklet discussing new research on the treatment and causes of chronic pain.

The pamphlet reviews advances in drug therapy, brain and local electrical stimulation, and surgery, and describes how psychological techniques like psychoanalysis, meditation, behavior modification, and biofeedback are used to help relieve persistent symptoms.

A synopsis of the major types of chronic pain is included, as is a section on where to get help.

Single free copies of *Chronic Pain*, (stock no. 017 049 00127-1) can be obtained from NINCDS, Office of Scientific and Health Reports, Bldg. 31, Rm. 8A06, Bethesda, Md. 20205. □

## All NIH Golfers Will Swing Away

The two NIH golf leagues will stage a gala get-together on Monday, Aug. 23, at the Montgomery Country Club starting at 1 p.m.

League members may invite guests. Those interested may contact Dave Vistica, 496-2786, or Lynn Mueller at 496-4817 for information. □

## DR. BUTLER

(Continued from Page 1)

Washington University Schools of Medicine.

He has written extensively for professional journals and lay publications, and is the coauthor of *Human Aging, Aging and Mental Health*, and *Sex After Sixty*. He wrote the latter two books with his colleague and wife, Myrna I. Lewis.

Dr. Butler, who has appeared on many national network TV and radio shows and been the subject of innumerable newspaper and magazine feature stories, summarized his efforts as the leader of the National Institute on Aging in stating:

"In addition to raising general awareness about aging in the United States, the NIA has provided scientific data to support our assertion that diseases and disability, not aging, take the greatest toll on health in later life.

"Twenty-five years ago, it was widely believed that aging and disease were one and the same, but as we learn more about the mechanisms, not just the manifestations, of aging, these views are being revised and the many possibilities for intervention become evident."

He further asserted "the Institute has stressed the importance of disease prevention as well as the special considerations in caring for the elderly, including the management of multiple health and socioeconomic problems."

Dr. Butler is especially proud of the success the Institute has had in "galvanizing public and private sector support for research and health education on Alzheimer's disease, senile dementia, and related disorders."

Among other factors mentioned in his summary, he pointed up the work done in introducing women into the Baltimore



Marianne Wagner, personnel officer of the National Cancer Institute, was elected recently as regional director of the International Association of Personnel Women. The IAPW is an organization devoted to the professional development of individuals in human resources management. Membership totals about 2,300 individuals located in 27 affiliates throughout the country. Ms. Wagner also serves on the board of the Federation of Organizations of Professional Women.

Longitudinal Study of Aging and creating a Laboratory of Neurosciences to study central nervous system changes with age.

"We have created some of the critically needed animal and cellular resources; developed national plans for aging research; and held conferences to review the state of knowledge in such areas as the biological mechanisms of aging and biological markets of physiological aging. The NIA has also fostered coordination and collaboration among units of the NIH and other Federal agencies in developing new knowledge about the aging process and the special needs and problems of the elderly," he said.

Looking to the future, Dr. Butler remarked, "I expect to see efforts to understand senile dementia of the Alzheimer's type proceed, not only under the auspices of the NIA but also by other relevant Institutes. The area of neurosciences is simply blooming, so it's hard to believe that this will not become a high priority for research."

In commenting upon his new appointment, Dr. Butler declared, "I am looking forward to putting many of my theories into practice. Although it will be several years before we can evaluate the success of the programs in geriatrics at Mount Sinai, one thing is clear: it will be an example for other medical schools to follow, and one that will complement the continuing efforts of the NIA to improve the quality of care given the growing older population."

Dr. Robert L. Ringler, NIA deputy director, has been appointed as Acting Institute Director effective July 26. □

## WHO Interferon Center Started at NIAID Branch

The Development and Applications Branch, NIAID, was recently designated as the World Health Organization Collaborating Center for Interferon Reference and Research.

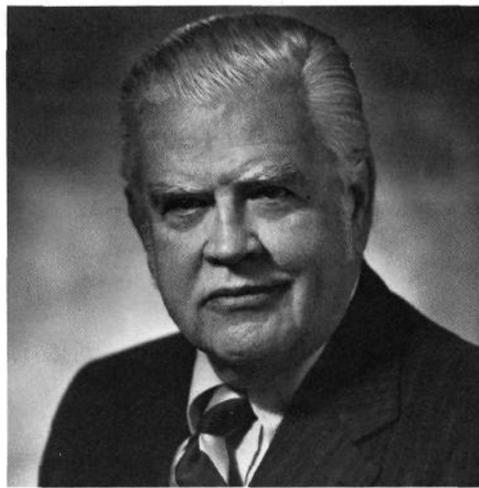
Dr. George J. Galasso, chief of the branch, was named center director. WHO chose Dr. Galasso and the NIAID in recognition for their long-term support of interferon research.

The WHO collaborating center will provide a focal point for worldwide interferon research activities. By creating additional international standards of measurements, methods, terminology and potency, the center will help scientists more accurately compare research results.

It will also provide consultant expertise to WHO on matters relating to interferon and will encourage the development of new research methods and techniques as well as new basic and clinical research.

The center will be responsible for storing and distributing standard preparations, coordinating and monitoring clinical trials and collecting and analyzing data.

Prior to the establishment of the collaborating center, Dr. Galasso served as the national coordinator of interferon research for WHO. □



Huly Bray, special projects officer, Office of the Director, NIH, was recently appointed to the additional post as assistant to the Director for protocol. He will officially act as protocol officer and ombudsman, assisting the NIH Director in greeting and briefing visitors and continue to manage community and cultural affairs.

### CC Hosts Nursing Conference

More than 600 nurses and hospital personnel attended the Second National Conference on Computer Technology and Nursing held July 2 in the Masur Auditorium.

The day-long conference was jointly sponsored by the Clinical Center Nursing Department, the Division of Nursing of the Health Resources Administration, and the U.S. Army's Tri-Service Medical Information Systems.

Lectures ranged from how to develop hospital computer systems to educating nurses for the computer age. A panel discussion was held on Computers and Nursing: Looking Ahead. □



Lynanne Grzech, 1982 Girl's Nation representative, met recently with NIH Director Dr. James B. Wyngaarden in his office. The Louisville, Ky., high school student, who is participating in this citizenship program sponsored by the American Legion Auxiliary, was here to learn firsthand how and what issues are involved in managing a large government agency. Ms. Grzech is one of 100 young women selected from around the country. Each year their annual meeting is held in Washington, D.C.

### Training Positions Available In Apprenticeship Program

"This program is designed to compensate you as you learn," explains Stanley Allen, chief, Shops Branch, and chairman of the NIH Apprenticeship Committee.

He is talking about the NIH Apprenticeship Training Program, a 4-year career development opportunity established to develop highly skilled mechanics to be thoroughly qualified in their trades.

It is designed to give employees the chance to acquire firsthand on-the-job experience, and attend formal classes 1 day a week during the school year at the Montgomery College Facility in Takoma Park, Md. The program started in 1978.

The first group of five apprentices will graduate in November 1982. There are currently 27 apprentices enrolled which include boiler plant operators, electricians, painters, carpenters, air condition equipment mechanics, sheet metal mechanics, plumbers, and utility systems repairer operators.

Two women are presently enrolled in the program—one as a carpenter and one as a



A typical apprenticeship training class (circa 1980) poses with Shops Branch chief Stanley Allen (second from r) and former director, Division of Engineering Services, Ross Holliday (far r).

painter. Women are encouraged to apply.

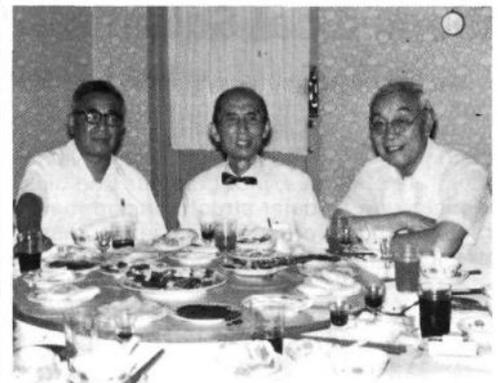
The apprentice pay scale is based on the targeted full mechanic level. Persons currently paid above this rate will be eligible for pay retention. The program is divided into eight training periods of 26 weeks each.

There are very few eligibility requirements. The applicants must have worked at NIH or IRP/NIMH for 1 year immediately prior to Aug. 23, 1982; have career or career-conditional status; be in a permanent full-time position; and in a nonprofessional job series (1 grade interval).

Applicants must demonstrate the ability to read and comprehend at the sixth grade level.

The apprentice positions available this year are one electrician, one air condition equipment mechanic, two boiler plant operators, and three utility systems repairer operators.

Applications are available from the OD Personnel Office, Bldg. 31, Rm. 1C15, 496-6521, and will be accepted until c.o.b. Aug. 23. □



Dr. John K. Koo (c), a long-time colleague of NIH, was conferred as an honorary professor during a ceremony in July by Zhejiang Medical University in Hangzhou, where he graduated. This was the first time that an American biomedical scientist has been so honored by the People's Republic of China. While there, Dr. Koo presented two lectures on his research into new classes of psychotropic and cardiovascular agents. In Beijing, Dr. Koo was jointly hosted by Drs. Lu Jiayi (l), president of the Chinese Academy of Sciences, and Huang Jiasi, president of the Chinese Academy of Medical Sciences. Dr. Koo was impressed by the friendly treatment he received from these top academic leaders.

### Visiting Scientist Program Participants

Sponsored by Fogarty International Center

- 7/6 Dr. **Elizabetta Blasi**, Italy, Biological Development Branch. Sponsor: Dr. Luigi Varesio, NCI, FCRF, Bg. 450, Rm. 31-71.
- 7/6 Dr. **Eva Buiatti**, Italy, Environmental Epidemiology Branch. Sponsor: Dr. William Blot, NCI, Landow Bg., Rm. C307.
- 7/6 Dr. **Masakatsu Fukuda**, Japan, Laboratory of Vision Research. Sponsor: Dr. Toichiro Kuwabara, NEI, Bg. 6, Rm. 211.
- 7/7 Dr. **Hana Golding**, Israel, Immunology Branch. Sponsor: Dr. Alfred Singer, NCI, Bg. 10, Rm. 3N109.
- 7/9 Dr. **Kazunori Kon**, Japan, Laboratory of Chemical Physics. Sponsor: Dr. Hideo Kon, NIADDK, Bg. 2, Rm. B1-14.
- 7/11 Dr. **Alan G. Fincham**, Jamaica, Laboratory of Biological Structure. Sponsor: Dr. John Termine, NIDR, Bg. 30, Rm. 216.
- 7/11 Dr. **Tomoteru Kamimura**, Japan, Laboratory of Infectious Diseases. Sponsor: Dr. Robert Purcell, NIAID, Bg. 7, Rm. 202.
- 7/11 Dr. **Toshio Ozaki**, Japan, Pulmonary Branch. Sponsor: Dr. Ronald Crystal, Bg. 10, Rm. 3N109.
- 7/11 Dr. **George A. Roy**, Canada, Biological Psychiatry Branch. Sponsor: Dr. Daniel van Kammen, NIMH, Bg. 10, Rm. 4N214.
- 7/11 Dr. **Monique S. Roy**, Canada, Clinical Branch. Sponsor: Dr. Elmer Ballantine, NEI, Bg. 10, Rm. 10N313.
- 7/12 Dr. **Xu Nai-Zheng**, China, Laboratory of Molecular Biology. Sponsor: Dr. Bruce Howard, NCI, Bg. 37, Rm. 2E10.
- 7/13 Dr. **Shigeru Okamoto**, Japan, Laboratory of Biochemistry and Metabolism. Sponsor: Dr. Takami Oka, NIADDK, Bg. 10, Rm. 9B17.
- 7/14 Dr. **Yeheskel Halpern**, Israel, Laboratory of Molecular Biology. Sponsor: Dr. Ernst Freese, NINCDS, Bg. 36, Rm. 3D02.
- 7/14 Dr. **Gil Navon**, Israel, Developmental Pharmacology Branch. Sponsor: Dr. Jack Cohen, NICHD, Bg. 2, Rm. B208.

# Biomedical Scientists 'PROPHET' From Unique System

Suppose a computer system existed that was simple enough for a computer-naive investigator to use, yet sophisticated enough to make indefinitely large tables, integrate statistics, plot graphics and 3-dimensional molecular structures and then transmit this information to users across the country?

Add cost-effectiveness, the option of programming at many levels in a variety of



Dr. Bernard Ransil of Harvard University's Beth Israel Hospital feeds research data into the PROPHET computer system. He has directed the PROPHET system at Beth Israel since it was initiated by DRR in 1972.

languages, ability to produce high-quality hardcopy . . . and one comes up with the computer network system—PROPHET.

Developed and supported by the Division of Research Resources, PROPHET celebrated its 10th anniversary this year. It now serves over 700 scientists at 40 sites in academic, commercial and governmental areas of biomedical research.

Many important discoveries have been made with the PROPHET system. For example, digitalis, one of the most frequently prescribed heart drugs in the world, has widely different effects, depending on the form of the drug.

The determining factor is the position of a single oxygen atom in the drug molecule, a discovery made with the computer program FITMOL, which allows chemists to correlate molecular structure with clinical activity.

Since PROPHET responds to simple English commands, a user can learn the rudiments of the system in a few minutes. This allows the scientist to concentrate on his research instead of a complicated computer operation. In 1 hour, an experienced scientist/user can ask 50 or 60 questions of his data revealing information that may not have been apparent without the system.

A 24-hour hotline is available from the user assistance group in Cambridge, Mass., Bolt, Beranek, and Newman, Inc. "Help in using the software or in solving PROPHET-related problems is only a

phone call away," says Dr. Jim Wood, assistant director at BBN, which conducts the PROPHET project under a \$1.5 million contract with DRR.

According to Dr. Jack Hahn, DRR project officer of the PROPHET system, "PROPHET is much more than a computer; it is a social network composed of researchers who rely on each other for knowledge, assistance, and new techniques of analysis."

Some of the PROPHET users include Harvard University's Beth Israel Hospital General Clinical Research Center, the Washington Regional Primate Center, Burroughs Wellcome Research Laboratories, FDA, Lederle Laboratories, Dow Chemical, and Research Triangle Institute.

NICHD applies the PROPHET system in its study of contraceptives. NIEHS uses it in its toxicology program. NEI uses PROPHET in its Laboratory of Vision Research.

As the network expands to include more investigators, cost-effectiveness increases. System capabilities also expand as the system draws from the influx of new expertise, knowledge and experience. Says Dr. Hahn: "PROPHET enhances the sophistication of scientists and in doing so, the system is beginning to have a significant impact on creativity and productivity in national biomedical research." □

## Dr. Burke's Article Wins Magazine Award for 1981

The American Society for Pharmacology and Experimental Therapeutics' annual award for the best paper in the 1981 issues of *Drug Metabolism and Disposition* has been presented to Dr. Terrence R. Burke, Jr., a former NIGMS pharmacology research associate.

### Research Done as NIGMS Fellow

Dr. Burke is now in the medicinal chemistry section of the Laboratory of Chemistry, NIADDK. His award-winning paper, *Mechanisms of Defluorination of Enflurane: Identification of an Organic Metabolite in Rat and Man*, resulted from research done during his 2 years as a fellow of the NIGMS Pharmacology Research Associate Program.

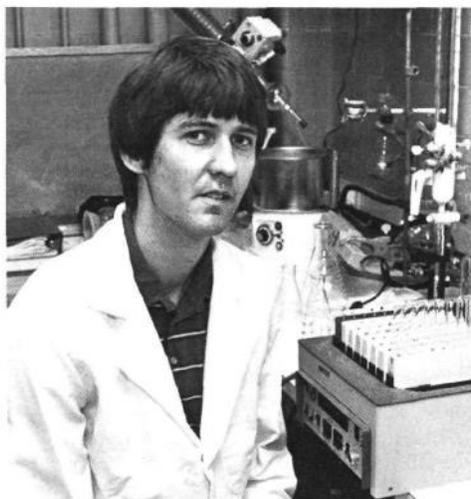
He was looking for a way to develop safer alternative anesthetics to halothane, methoxyflurane, and enflurane, which cause hepatic and renal toxicities.

Since it was already known that when the drug enflurane is metabolized in the liver it releases fluoride ions, Dr. Burke tried to identify model compounds that would enable him to look at the different rates of toxicity of the compounds.

### Accelerated Rate

One of his studies showed that inducing liver enzymes with phenobarbital accelerated the rate at which the drug enflurane loses the fluoride ions.

Dr. Burke's multistep process of defining mechanisms enabled him to isolate an intermediate compound *in vitro*



Dr. Burke's findings will enable pharmacologists to design new anesthetics containing a lesser degree of toxicity.

and in human urine.

Coauthors of the paper were Drs. Richard V. Branchflower, Laboratory of Clinical Pharmacology, NHLBI; David E. Lees, Anesthesiology Service, Clinical Center; and Lance R. Pohl, Laboratory of Clinical Pharmacology, NHLBI. □

Ah, for those good old days when Uncle Sam lived within his income—and without most of ours.—*Barclay Braden* □

## It's Never too Late to Exercise

Most older people—even those with illnesses and disabilities—can take part in and benefit from moderate exercise programs. Exercises such as walking, swimming and bicycle riding are enjoyed by many elderly people. Even modified aerobic dancing, calisthenics and yoga are possibilities.

There is evidence that exercise may strengthen the heart and lungs, lower blood pressure and protect against the start of adult-onset diabetes. It can strengthen bones and muscles and help keep joints, tendons and ligaments more flexible.

When combined with good eating habits, exercise can help one lose weight. It may also provide more energy, help one sleep better and contribute to good mental health by keeping one socially active.

Anyone planning to start a fitness program should see a doctor first. People who have been inactive for many years should never try to do too much too soon. One should start with short periods of 5 to 10 minutes twice a week and then add a few minutes each week. If all goes well, exercise periods can be increased to 15 to 30 minutes, three or four times a week.

A doctor may advise stretching, warm-up and cool-down periods of 5 to 15 minutes. One should be alert to unusual symptoms such as chest pain, breathlessness, joint discomfort, or muscle cramp.

For a list of information sources, write to Exercise, National Institute on Aging, Bldg. 31, Rm. 5C35, Bethesda, Md. 20205. □

## Dr. Gilbert Ashwell Receives Gairdner Foundation Award



Dr. Ashwell will give a lecture on *The Dynamics of Receptor-Mediated Endocytosis in Hepatocytes* at the University of Toronto on Oct. 28 as part of his award.

Dr. Gilbert Ashwell was recently named as a recipient of one of five 1982 Gairdner Foundation Awards for outstanding contributions to medical science. He is the chief of the Laboratory of Biochemistry and Metabolism, NIADDK.

Dr. Ashwell was cited in recognition of his fundamental contributions to the direction of current research in cell biology and biochemistry. His original studies, in collaboration with Dr. Anatol Morell of Albert Einstein Medical School in New York, revealed a previously unsuspected biological role for the carbohydrate moiety of serum and cell surface glycoproteins.

In developing these observations, over a period of 15 years, an impressive body of data has been accumulated to document and define the informational content of such protein-bound sugar residues.

The Gairdner Foundation was established in 1957 by the late James Arthur Gairdner. This year marks the foundation's 25th anniversary.

This year's awards will be presented on Oct. 29 by John Aird, Toronto's lieutenant governor. Each recipient will receive a \$15,000 prize. □

## NIH Components Will Be Involved In Computer Medical Use Symposium

Nine components of the National Institutes of Health will participate in the upcoming Sixth Annual Symposium of Computer Applications in Medical Care, Oct. 30 to Nov. 2, at the Sheraton Washington Hotel.

They are the Division of Research Resources, National Library of Medicine, Fogarty International Center, Division of Computer Research and Technology, National Cancer Institute, National Institute of Dental Research, National Institute of Neurological and Communicative Disorders and Stroke, and the Clinical Center.

In addition, the National Institute of Mental Health will be represented. □

## New Literature Searches Now Available From NLM

Fourteen new Literature Searches are available from the National Library of Medicine's Reference Section:

LS 82-1 *Nursing diagnosis*. January 1977-May 1982, 156 citations in English.

LS 82-2 *Brain death criteria*. January 1977-April 1982, 177 citations.

LS 82-3 *Juvenile rheumatoid arthritis*. January 1977-May 1982, 295 citations in English.

LS 82-4 *Health effects of nuclear radiation*. January 1979-May 1982, 427 citations.

LS 82-5 *Medicine and health in China*. January 1979-May 1982, 447 citations in English.

LS 82-6 *Asbestos toxicology*. August 1977-May 1982, 597 citations.

LS 82-7 *Diagnosis-related patient classification*. January 1979-April 1982, 170 citations from the Health Planning and Administration data base.

LS 82-8 *Aquatic toxicology of metals and metallic compounds*. January 1975-May 1982, 236 citations.

LS 82-9 *Inhalation injury*. January 1977-June 1982, 133 citations.

LS 82-10 *Zinc toxicology*. January 1977-July 1982, 204 citations.

LS 82-11 *Formaldehyde toxicology*. January 1977-June 1982, 213 citations.

LS 82-12 *Outcome for intensive care unit patients*. January 1980-July 1982, 113 citations.

LS 82-13 *Health needs and services for Hispanic Americans*. January 1980-July 1982, 96 citations.

LS 82-14 *Informed consent*. July 1977-July 1982, 394 citations in English.

The Literature Searches, part of a series of printed bibliographies on subjects of current interest, were produced through NLM's computer-based system, MEDLARS. They are available without charge.

A complete list of available titles appears in each issue of *Index Medicus* and *Abridged Index Medicus*.

When requesting Literature Searches, please include title and number, enclose a self-addressed gummed label, and mail to: Literature Search Program, Reference Section, National Library of Medicine, Bethesda, Md. 20209. □

## Former NIGMS Associate Wins \$50,000 Award

Dr. Douglas E. Rollins, an NIGMS pharmacology research associate from 1975 to 1977, recently received a \$50,000 unit award from the Pharmaceutical Manufacturer's Assn. Foundation, Inc.

He is currently assistant professor of medicine and pharmacology at the University of Utah. The award is made to promising new clinical pharmacology units or new unit directors to help them develop their research programs. □

## Kindness

I shall pass through this world but once. If, therefore, there be any kindness I can show, or any good thing I can do, let me do it now. Let me not defer it or neglect it . . . for I shall not pass this way again.  
—Grellet □

## NIH Candy and News Stand Sells Prizewinning Pepsi



The Quinlan sisters, (l to r) Kathleen, Karen and Beth, hold the Pepsi can that won them \$5,000. The soft drink was purchased at the Blind Industries and Services of America stand in Bldg. 31.

What would you do if your morning can of Pepsi from the Bldg. 31 candy stand won you \$5,000? According to Karen Quinlan, summer aide in NIH Accounts Payable, Division of Financial Management, OD, "I feel like I should be fainting, but it hasn't happened yet."

Margaret Quinlan, secretary to the NIH Director and Karen's mother, explained that the whole family was involved in the Pepsi contest which runs till the end of September. There are 16 grand prizes. The Quinlans were the first to receive one.

Last month at the beach, the Quinlan family collected all the Pepsi cans except "Life" to spell the phrase, "Pepsi's Got Your Taste For Life." At home, however, they would periodically throw away the empty cans they were collecting.

## "Life" Was the Key

One morning at NIH, Karen checked under the pop top tab on her can of Pepsi and saw the word "Life." She thought they needed it, but she wasn't sure. Her mother knew immediately that it was the winning can. The whole family, including Kathleen, a summer clerk-typist at the Fogarty International Center; and Beth, 14, began collecting cans again. "We started drinking Pepsi by the case," said the sisters.

In a little over a week they had collected all the remaining cans for the phrase and called the Pepsi plant in Cheverly, Md. On July 29, the three sisters and mother went to Cheverly to receive the \$5,000 check.

Pepsi officials spent over an hour checking the "Life" tab for a special symbol to verify its authenticity. Finally they wrote a check, took pictures of the winners, and gave the family a release to sign for advertising purposes.

"It's sort of mind-boggling," said Karen. The family has not yet decided how they will spend the money. "We're not going to spend it all at once," Karen hastened to add. □

No one is ever too old to learn, but some people keep putting it off.—William Feather □

# Diabetes Advances Reported at Seminar

(Continued from Page 1)

in the ability of insulin—once it attaches to its receptor on the cell—to translocate certain proteins called glucose transport molecules from a preexisting intracellular pool to the cell membrane where they can bind glucose and carry it into the cell where it is metabolized. This finding lays the basis for possible future intervention to overcome the interruption of the translocation process.

Dr. Abner Notkins, chief of the Laboratory of Oral Medicine, NIDR, discussed the headway being made in tracking down the causes of type I diabetes (also known as insulin-dependent or juvenile-onset diabetes). He and others have found a few cases in man where this type of diabetes was caused by common viruses.

Recently, Dr. Ji-Won Yoon in Dr. Notkins's laboratory developed a vaccine that protected genetically susceptible mice from developing the disease when exposed to a diabetes-causing virus.

Evidence is also accumulating that the host's immunological responses are involved in type I diabetes. Autoantibodies to islet cells and to other hormone-producing cells have been found by Dr. Notkins and others in some patients with type I diabetes.

In addition, Dr. Notkins's group has found autoantibodies to insulin and growth hormone in mice which developed diabetes and growth retardation when infected with a type of virus known as reovirus. If the mice were immunosuppressed first and then exposed to the virus, they did not develop diabetes and showed only minimal growth retardation.

Dr. Carl Kupfer, NEI Director, described the clinical trials now being conducted on the treatment and ultimate prevention of the various stages of diabetic retinopathy.

This condition—in which the blood vessels in the retina are damaged and hemorrhage—is the leading cause of blindness in persons between the ages of 20 and 55.

The ongoing Early Treatment of Diabetic Retinopathy Study seeks to determine whether diabetics with early stages of DR should have photocoagulation—in which a laser is used to destroy the diseased retinal tissue—by itself, or in combination with low doses of aspirin in an attempt to prevent the disease from progressing.

The Diabetic Retinopathy Vitrectomy Study seeks to determine the optimal time for removing the blood-clouded vitreous—the transparent mass of soft, gelatinous material filling the center of the eye behind the lens—in patients with the advanced stage of the disease who can no longer see. The results of this trial should be available in 18 months.

Progress made against diabetic cataract, another complication found in patients with diabetes, was discussed by Dr. Jin Kinoshita, NEI scientific director. Last year, Dr. Kinoshita's laboratory provided the conclusive evidence that aldose reductase—an enzyme present in the lens and many other tissues—initiated the formation of sugar cataracts. They also found

that the inhibitors of this enzyme can delay and actually prevent these cataracts from forming in diabetic animals.

Dr. Kinoshita's studies indicate that AR may play a role in other diabetic problems. They have shown that an AR inhibitor, sorbinil, corrects the wound healing defect in the cornea of diabetic rats.

The enzyme may also be involved in diabetic neuropathy, in which a decreased velocity of impulse transmission exists in the motor and sensory nerves. Patients treated with sorbinil have shown improved motor and sensory nerve conduction velocity.

Dr. Kupfer also pointed out that AR has been implicated in diabetic retinopathy in certain experimental animals. Loss of the mural cells—which contain AR—from capillary walls in the retina is believed to be the first in a chain of events that leads to all the other changes of DR.

If AR inhibitors could prevent the loss of mural cells, it may be possible to prevent all the subsequent complications of DR.

Recently, an application was made to FDA to use sorbinil in three clinical trials: 1) to prevent diabetic retinopathy; 2) to prevent diabetic cataracts; and 3) to prevent diabetic neuropathy. The NEI will be involved in the first of these clinical trials.

—Bobbi Bennett □

## Dr. Bowen Leaves NIDR To Teach at Rochester

Dr. William H. Bowen, a key administrator and researcher with the NIDR's National Caries Program, left the Institute July 30 to become chairman of the department of dental research at the University of Rochester, N.Y. In addition, he will become the Margaret and Cy Welcher professor of dental research and a professor of microbiology.

He joined NIDR in 1973 as acting chief of the NCP's Caries Prevention and Research Branch. In 1979, he became chief.

According to Dr. Bowen, the most exciting approach to preventive dentistry with which he is associated is a new fluoride slow release device which is worn inside the mouth to release fluoride continuously over a period of time. This new way of delivering fluoride has already been tested on laboratory animals and some human volunteers.

His pioneering work in developing and using the primate model for the study of dental caries is widely known. He is also working on the cariogenicity of various foods to determine their potential for causing tooth decay.

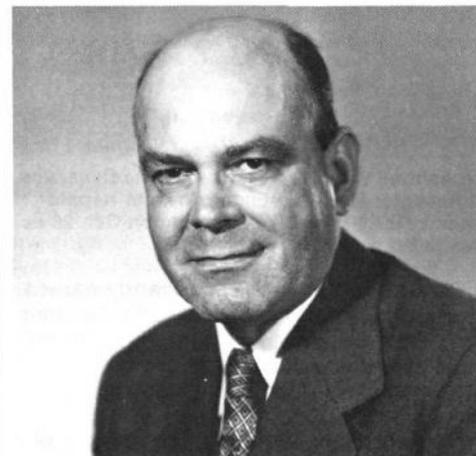
Dr. Bowen earned his dental degree at the University of Ireland in Dublin. Following further studies at the Eastman Dental Center in Rochester, N.Y., he earned his Ph.D. degree in microbiology from the University of London. □

Manuscript: something that is submitted in haste and returned at leisure.—*Oliver Herford* □

## Dr. Wright, Tropical Diseases Researcher, Dies

Dr. Willard Wright, 87, specialist in tropical diseases and former chief of NIAID's Laboratory of Tropical Diseases, died July 31 in Suburban Hospital, Bethesda, of a heart attack.

A native of Ohio, Dr. Wright joined NIH in 1936 as a researcher with the division of zoology and was appointed its chief in 1938. The division later became the Laboratory of Tropical Diseases with the National Microbiological Institute, now the National Institute of Allergy and Infectious Diseases.



Dr. Willard Wright

His research was concerned primarily with parasitic infections such as schistosomiasis, amebiasis and trichinosis. His early studies on the transmission of trichinosis from swine to humans led to Federal regulations controlling the feeding of swine.

In 1945 Dr. Wright was appointed scientist-director in the Public Health Service, taking on increasing responsibilities in the field of international health. He headed the PHS cooperative program that was instrumental in sharply reducing the incidence of schistosomiasis in the Middle East at that time.



During the recent Division of Administrative Services Career Day program, Otis Ducker, DAS director, was presented an EEO award "in recognition and appreciation of your efforts in the advancement of Equal Employment Opportunity at the National Institutes of Health—1974 to 1982."

## 12th Annual Digestive Diseases Week Features Disorders of the Alimentary Tract

More than 5,000 gastroenterologists, research scientists, and physicians concerned with diseases of the alimentary tract attended the recent 12th annual Digestive Diseases Week in Chicago, Ill.

Approximately 165 grantees and intramural scientists of the National Institute of Arthritis, Diabetes, and Digestive and Kidney Diseases made research presentations and exchanged viewpoints with their colleagues at this meeting.

The presentations highlighted the National Cooperative Gallstone Study, a new disease termed chronic erosive gastritis, the surgical control of Crohn's disease, a new receptor blocker which brought relief to functional dyspepsia patients, and rectal biopsy as a tool for diagnosing bloody diarrhea and colitis.

Digestive Diseases Week was coordinated by the American Association for the Study of Liver Diseases, the American

Gastroenterological Association, the American Society for Gastrointestinal Endoscopy, the Gastroenterology Research Group, and the Society for Surgery of the Alimentary Tract.

During the week, NIADDK sponsored an exhibit booth, staffed by members of the National Digestive Diseases Education and Information Clearinghouse and the Institute's Office of Health Research Reports. A wide selection of patient education and professional materials was distributed.

In addition, a half-hour videotape on various digestive disease topics was shown on a TV monitor near the booth. The tape entitled Understanding DD is narrated by John C. Daly, the noted newscaster and host of *What's My Line?* for 17 years.

Interested organizations may borrow the tape by contacting Billie Mackey, NIADDK, (301) 496-6158, Westwood Bldg., Rm 604A, Bethesda, Md. 20205. □

## Dr. A. Goldin Ends 30-Year NCI Career

At a recent reception, Dr. Abraham Goldin was honored by the National Cancer Institute for his contributions to improved cancer therapy. He retired recently from NCI after more than 30 years as a leading researcher in the identification and assessment of anticancer drugs.

At NCI since 1949, Dr. Goldin was instrumental in the development of screening programs—notably the L1210 (mouse leukemia) cell line—to test the effectiveness of various compounds against cancer in animal models.

These models have been useful in the selection of drugs with potential for treating lymphomas, and breast and bone cancers among others.

He pioneered in the development of quantitative methods for evaluating chemotherapy agents. His work focused on the concepts of quantitative tumor cell kill (more favorable treatment outcome is dependent upon a lower tumor burden), and the importance of tailored schedules of drug administration.

Dr. Goldin conducted extensive research on methotrexate, a folic acid analog that interferes with synthesis of DNA, the genetic material of the cell. He showed, in animal studies, that massive and potentially lethal doses of the drug could be administered safely when followed by citrovorum factor, which nullifies the toxic action of methotrexate.

This "rescued" the animal from an otherwise fatal dosage while maintaining potency of the drug against cancer. Methotrexate has been used subsequently to treat bone and breast cancers in humans.

In the international area, Dr. Goldin strengthened NCI relations with the European Organization for Research on Treatment of Cancer. He worked to bring about collaborative chemotherapy and information exchange programs with many countries. A number of foreign investigators



Dr. Goldin (l) was presented a testimonial scrapbook with tributes from the scientific community by Dr. Saul Schepartz at his retirement reception.

came to study in his laboratory.

He is the recipient of many honors including the NIH Superior Service Award; the Purkynje Award from the Medical Society of Czechoslovakia; honorary doctor of medicine degrees from the Universite Libre de Bruxelles, Belgium, and Libera Universita Abruzzese Degli Studi, Chilti, Italy; and membership in the Academy of Anatomy and Surgery, Perugia, Italy.

The author or coauthor of almost 400 scientific publications, Dr. Goldin is currently coeditor of *Advances in Pharmacology and Chemotherapy* and is on the editorial boards of the *Journal of Pharmacology—Dynamics* and the *International Journal of Chemotherapy*. A graduate of Brooklyn College, he received his M.A. and Ph.D. degrees from Columbia University.

At NCI, he served as chief of laboratory research, in the Drug Research and Development Program, and as assistant director for international treatment research in the Division of Cancer Treatment.

Dr. Goldin also has been active in studying the pharmacological and immunological aspects of combined chemotherapy. □

## Crime Prevention Measures Lessen Fear Among Elderly



The impact of crime is greatest on the old because they often have limited budgets, frequently live in inner-city neighborhoods where crimes are more common, and may be injured more easily in the course of a crime.

One of the biggest worries shared by older people is that they might be victims of crime. This fear is useful if it encourages appropriate protection. But experiencing needless fear over a long period of time can be harmful to one's physical and mental health.

Common sense and a few preventive measures can help diminish crimes that affect the elderly such as purse snatching, fraud, theft of checks from the mail, vandalism, and harassment.

At home the best crime prevention measure is to lock doors and windows. Almost half of all home and apartment burglaries occur because someone did not "lock up."

It is also wise to look through the peephole before answering the door, mark valuable property with one's driver's license or state identification number, and install good security equipment.

On the street, prevention means staying alert at all times, even in one's own neighborhood. Walk with a friend and be aware of dark parking lots and alleys. Avoid dressing in a showy manner and don't carry a purse, if possible. Carry little cash and hand it over without question if attacked.

To prevent check theft, have monthly pension or Social Security checks sent directly to the bank for deposit.

Watch out for consumer fraud schemes such as "bargain" glasses and hearing aids sold by unlicensed salespersons, and products claiming to be miracle cures. Be sure to check out "charities" asking for contributions and investment opportunities that are "too good to be true."

Older persons should watch for health insurance policies that appear to pay gaps in Medicare coverage—but don't. They should also be aware of door-to-door salespersons who use various types of pressure to get one to buy.

For more information about the elderly and crime, contact the Information Office, National Institute on Aging, Bldg. 31, Rm. 5C35, (301) 496-1752, and ask for the July 1982 *Age Page*. □

# Information Specialists Seminar Series Started

The first in a series of seminars, designed to assist NIH information specialists in the process of the dissemination of biomedical research activities and accomplishments, was held recently on campus.

Over 65 specialists attended the seminar sponsored by Elaine Bratic, deputy director, Office of Public Affairs, Office of the Assistant Secretary for Health.

The theme of the seminar was centered on evaluation methods and their utility for increasing the effectiveness of informative public materials and processes.

Presentations were given by Susan Maloney, Office of Health Information and Health Promotion, HHS; Rose Mary Romano, Office of Cancer Communications, NCI; Betsy Singer, information officer, NIADDK; Lois Lipsett, director, National Diabetes Information Clearinghouse, NIADDK; Sheila Pohl, Office of Prevention Education and Control, NHLBI; and Thomas Kean, Office of Cancer Communications, NCI.

Ms. Maloney described pretesting techniques used in a single component of a mass media campaign produced by the National Institute on Alcohol Abuse and Alcoholism.

Although the overall campaign used similar pretesting methods in its messages about fetal alcohol syndrome and the prevention of drinking problems among women, Ms. Maloney concentrated upon the section geared toward creating a credible reminder about the dangers of drinking and driving to teenagers.

In the NIAAA campaign, focus groups were used extensively. These exploratory group sessions provided an incentive for the creative process through the disclosure of popular attitudes, beliefs and misconceptions by target group representatives.

Often consisting of 8 to 10 members, focus groups can serve the pretesting evaluation process in a variety of ways.

## Pretesting Methods

Ms. Romano delivered a talk concerning three pretesting methods of evaluation: readability testing, health professional review, and an analysis by the Health Message Testing Service.

Readability testing is a simple evaluation method which expresses the level of reading comprehension a person must have in order to understand written materials.

For example, the average reading level of America is sixth grade. Therefore, if complex data, such as health materials, are to be successfully conveyed to the public, they must be converted into simplified language.

## Program Tracking Methods

Ms. Singer described program tracking methods that are a form of basic process evaluation. For example, to successfully organize special projects, such as an NIH Consensus Development Conference, the Office for Medical Applications of Research uses a timeline chart to identify in-

dividual duties and specific deadlines.

She also outlined a simple method of tracking public inquiries each month that categorized telephone calls and letters, and provided information on volume, origin, and handling of requests.

## Clearinghouse Methods

In her discussion of the National Diabetes Information Clearinghouse, Ms. Lipsett explained that the initial steps of an evaluability assessment of the clearinghouse concerned the perceptions of voluntary health agencies and people within the diabetes community about the program.

She then explained how the acquired data were used to establish new clearinghouse objectives and to design evaluation techniques to measure its effectiveness in meeting the needs of individuals requesting information.

## Supermarket Pretesting Patterns

Ms. Pohl presented the evaluation techniques utilized by NHLBI's pilot nutrition education program carried out in conjunction with a local supermarket chain, Giant Food. She related several of the pretesting patterns which involved consumer focus groups, expert evaluation and readability assessments.

Various stores also underwent spot checks and reviews by Giant and NHLBI to gather additional information in an effort to measure the program's process elements.

Ms. Pohl also reported on the use of outcome and impact evaluation tools such as the telephone surveys and written consumer questionnaire that revealed detailed information about consumer awareness, knowledge and response to the program.

The project's outcome was measured through an analysis of computerized data on consumer purchase patterns, she explained.

The next seminar to be held during Hispanic Heritage Week, will be on How to Target Materials to Black and Hispanic Women. It will be held Sept. 14, from 1 to 3 p.m. in Bldg. 31, Conf. Rm. 4.

—Carol Clovis □



Toastmasters International area governor Nancy Cherry (at lectern) installs new NIH Toastmasters Club officers. They are (l to r in rear): Loren Ziller, educational vice president; Verna Dickens, sergeant at arms; Maralyn Berlin, treasurer; Gilbert Wright, secretary; Henrietta Hyatt, administrative vice president; and Dr. Leonard Jakubczak, president.

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