

The NIH Record

U.S. Department
of Health
and
Human Services

April 27
1982
Vol. XXXIV
No. 9

National
Institutes
of
Health

Dr. Martin Rosenberg Wins Flemming Award

Dr. Martin Rosenberg, chief of the cellular regulation section, NCI Laboratory of Biochemistry, received the 33rd annual Arthur S. Flemming Award on Apr. 23 in Washington, D.C.

The award was presented by Dr. Fleming, former DHEW Secretary (1958-1961), and by Dr. Thomas E. Malone, Acting NIH Director.



Dr. Rosenberg is internationally recognized as a leader in the use of recombinant DNA techniques to investigate the complex and overlapping chemical regulatory signals controlling gene expression.

The award is one of 10 presented annually by the Arthur S. Flemming Awards Commission and the Downtown Jaycees of Washington, D.C., to honor outstanding young men and women in the Federal Government. Award recipients are under 40 and work in scientific and administrative fields.

Dr. Rosenberg was cited "... for his outstanding achievements in elucidating the chemical basis of the regulation of gene expression, and his imaginative use of that knowledge for the construction of new biochemical tools that expand the potential for investigating important genetic questions. ..."

He received the Ph.D. degree in 1972 from Purdue University. During his thesis work, he invented a means of isolating polynucleotides containing 2', 3'-diol moieties. This method is widely used for the isolation of specific transfer RNA molecules and for the isolation of the

(See DR. ROSENBERG, Page 6)

NIH-Produced Film on Genital Herpes Generates Considerable Public Interest

Recognizing the critical need for public education about genital herpes, the Office of Research Reporting and Public Response, National Institute of Allergy and Infectious Diseases, and the NIH Audiovisual Branch have produced *Jennifer: A Revealing Story of Genital Herpes*. This 28-minute film shares the experience of a young woman striving to cope with her own case of genital herpes.

Segments of this film have been televised on national network shows and also on local TV news and public service programs.

Jennifer has been made available to physicians, health facilities, schools and civic groups on short-term loans. The response to initial promotional efforts has been overwhelming. To date, more than 500 loan requests from schools had to be booked for the fall semester.

Infection with the virus causing genital herpes is on the upswing, reaching epidemic proportions. Due to a lack of knowl-



In the film, Jennifer chats with Dr. Straus, whose research group has successfully used acyclovir to prevent recurrence of herpes virus infection.

edge and understanding of the signs and symptoms of this disease, many people with herpes unintentionally transmit it to others.

(See JENNIFER, Page 9)

Intramural Program Discussed During Congressional Visit

Congressman Joseph D. Early, Massachusetts, member of the House Appropriations Subcommittee on Labor, Health and Human Services, and Education, and sev-



eral staff members visited NIH recently to gain a firsthand look at the facilities and research program here, and to meet with the scientific and Institute Directors.

Representative Early had requested a 1-day visit after reviewing a report on the intramural program prepared by Fredette West, an NIH management intern, who for the past several months has had an assignment in the congressman's office.

His tour was aimed primarily at learning more about NIH's intramural program—its people, facilities, problems and needs. The visit began with a meeting with Drs. Thomas E. Malone, Acting NIH Director, and James Wyngaarden, NIH Director-designate.

After meeting with them, the four-term representative from Worcester spent an hour with the Board of Scientific Directors. He was informed about the quality of intramural science at NIH; about the program's characteristics that attract top scientists to it; and how current budgetary constraints are affecting programs, personnel, and equipment.

Dr. James Hofrichter (in lab coat), of the Laboratory of Chemical Physics, NIADDK, explains how a transient spectrometer, that uses two-pulse neodymium YAG lasers in studying the time-resolved structural evolution of hemoglobin, is used. This high resolution piece of scientific equipment was developed within NIH's intramural program. Others pictured are (from l to r) Dr. Wyngaarden, Kathleen M. Griffin, Ms. West, Jan Oliver and Congressman Early.

(See VISIT, Page 7)

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.

The NIH Record reserves the right to make corrections, changes, or deletions in submitted copy in conformity with the policies of the paper and HHS.

NIH Record Office
Bldg. 31 Room 2B-03, Phone 496-2125

Editor
Jerry Gordon

Staff Writers
William B. Reinckens
Joyce F. McCarthy

Staff Correspondents
CC, Barbara Smakula; DCRT, William Hall; DPM, Judy Fouche; DRG, Sue Meadows; DRR, Barbara Menick; DRS, Jim Doherty; FIC, Susan P. Stark; NCI, Patricia A. Newman; NEI, Marsha Corbett; NHLBI, Bill Sanders; NIA, Ann Dieffenbach; NIAID, Jeanne Winnick; NIADDK, Barbara Weldon; NICHD, Pamela Driscoll; NIDR, Sally Wilberding; NIEHS, Hugh J. Lee; NIGMS, Wanda Wardell; NIMH, Harry Bell; NINCDS, Diane Striar; NLM, Roger L. Gilkeson.

Conference Will Be Held On Research Lab Animal Use

A national workshop on the Role of Animals in Biomedical Research will be held at the New York Academy of Sciences on Apr. 28-30.

Funded by the Division of Research Resources and the National Heart, Lung, and Blood Institute, the ultimate purpose is to inform both scientists and the public about issues arising in the use of laboratory animals for research.

In addition, the workshop will be geared to inform and educate the general public about the importance of animal research in scientific and medical progress, and the concerns of scientists about the use of animals in experimentation.

Dr. John E. Holman, DRR project officer for the workshop, advises that the proceedings will be published and made available for distribution. □

How's Your Blood Pressure?

May is High Blood Pressure Month. The Occupational Medical Service invites all employees to have their blood pressure checked.

In addition to the regular OMS health unit offices, screenings will be conducted throughout the campus, in the Federal, Blair and Westwood buildings. A desk-to-desk notice has been distributed indicating specific locations.

For further information, call 496-4411. □

Mail Registration Needed For Nuclear Symposium

NIH employees who plan to attend the symposium on the Medical Consequences of Nuclear Weapons and Nuclear War, Lister Auditorium, George Washington University, on Tuesday, May 11, should mail their registration forms in prior to attending. Forms may be obtained at the FAES Bookstore in Bldg. 10. □



The NIH National Nutrition Month activities during March were enthusiastically received. Attendance and participation were high at the many functions planned by the NIH Nutrition Coordinating Committee, with the cooperation of various BID's, the R&W Association, the Occupational Medical Service, and the GSI Cafeteria Service. Above (c), former NIH Director (1950-55) Dr. W. Henry Sebrell was the "kickoff speaker" to the series of events. Standing next to him (l and r) are: Karen A. Donato, cochairperson of the NCC Subcommittee on Nutrition Education, and Dr. Artemis P. Simopoulos, chairman of the NCC. Second row (l to r) are: Drs. David A. Wolff, cochairperson of the NCC Subcommittee on Nutrition Education, Thomas P. Vogl, NCC staff, and Zekin Shakhshiri, NINCDS representative to the NCC.

19 Different Health Plans Offered to Employees During May 3-28 'Open Season' Period

The Office of Personnel Management has announced an "Open Season" for May 3-28, under the Federal Employees Health Benefits Program.

During that period, eligible employees may enroll in 1 of 19 different plans. Persons already enrolled may change their plan, option, type of enrollment, or any combination of these. The NIH Record issue of Feb. 2 carried details on rates and listing of plans available to NIH employees.

Commissioned corps personnel, employees serving under appointments limited to 1 year or less, and intermittent employees are not eligible for enrollment in the FEHBP.

Eligible employees will receive a packet containing the 1982 enrollment information and plan comparison chart, 1982 Bi-weekly Withholding Rates, and a copy of the government-wide or comprehensive medical plan brochure in which presently enrolled.

Employees covered by employee organization plans will receive a 1982 brochure directly from the sponsoring organization.

Comparison Charts Provided

The comparison chart gives the major features of all plans. It assists employees in selecting the plan most suited to their needs.

The booklet also outlines the four types of plans available. It itemizes major categories of coverage such as catastrophic protection, doctor visits, dental, mental health, maternity and emergency care, outpatient diagnostic tests, etc.

The OPM requests that employees not

rely solely on the contents of the chart but should review the total brochure of the plan for a complete description of benefits. Copies of all brochures are available for review through personnel offices.

Conditions Outlined

The Division of Personnel Management emphasizes some special items regarding the open season:

- No transfer fee will be imposed on persons who change plans during the open season,
- Persons who change plans will not be required to meet a new deductible, but will be entitled to transfer the deductible from the losing carrier to the new carrier. Any covered expense incurred from 1/1/82 through 7/11/82 and applied toward the deductible for the losing carrier will be credited toward the 1982 deductible for the new plan,
- For persons who change plans, no preexisting condition may preclude benefits under the new plan, and
- The effective date of enrollment or change in enrollment will be July 11.

After reviewing the literature, eligible employees who wish to enroll or to change enrollments should contact their BID registration assistant and obtain a Health Benefits Registration Form. The names and locations of the assistants are listed on official bulletin boards.

Personnel offices are in the process of distributing materials on the open season at this time. Employees may contact them for program information. □

Gaza Strip Study Is Basis For International Workshop

A 3-day international workshop on The Influence of the Environment on Leukemia and Lymphoma Subtypes will be held in Bldg. 31, Conf. Rm. 10, on May 5-7.

The workshop originated from a series of discussions between Dr. Bracha Ramot, a Fogarty scholar-in-residence, and Dr. Ian Magrath, a visiting scientist in the Pediatric Oncology Branch, NCI.

Dr. Ramot has observed a remarkable change in the pattern of leukemia and lymphoma subtypes in the Gaza Strip Arabs.

These patterns were associated with a dramatic increase in socioeconomic conditions. The high ratio of B-cell to T-cell lymphoid neoplasms were completely reversed as affluence increased, according to the research done by Dr. Ramot.

This, coupled with information on the epidemiology of acute lymphoblastic leukemia, led Drs. Ramot and Magrath to propose a hypothesis that the environment has a major role in determining the predominant type of lymphoid malignancy.

Hypothesis Published

Details about this hypothesis were published in the *British Journal of Hematology*, February 1982. After further discussions with Dr. Greg O'Connor, director of the Office of International Affairs, and Dr. Robert Miller, chief, Clinical Epidemiology Branch, NCI, it was decided to propose this workshop in order to obtain more information regarding the spectrum of lymphoid malignancy in populations living in quite different environments.

The workshop will bring together clinicians, epidemiologists, immunologists, virologists, and pathologists from 12 countries to discuss the differing patterns of lymphoid malignancy throughout the world, and to develop new collaborative studies to investigate the reasons for these differences.

The workshop will be jointly sponsored by FIC and NCI. Preregistration is required and may be arranged by contacting Nancy Shapiro, 496-2517. □

Training Tips

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

Communication Skills	Course Starts	Deadline
Report Writing Workshop	6/1	5/3
Writing Workshop	5/24	5/6
Principles of Editing	6/2	5/18

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

The only old person is he or she who no longer desires to learn.—*Ugo Ojetti* □

Music, Dance, Art To Be Featured During Asian Pacific Heritage Week in May



Love for Young and Old is this year's theme at NIH for Asian Pacific American Heritage Week. This poster of an old Chinese man and a child is the sixth cultural theme done by Medical Arts artist Alfred C. Laoang.

This year's Asian Pacific American Heritage Week, May 12-14, will have lunchtime activities featuring traditional arts and crafts booths, and films about different countries. As in previous years, the activities will culminate with a Friday evening cultural program, May 14.

NIH employees and the general public are invited to all of these events. Admission is free. Films on Bali, Indonesia, Japan, China, Singapore and Malaysia will be shown daily from 11:30 a.m. to 1:30 p.m. in Bldg. 31's Visitors Center.

Patio To Be Used

Traditional arts and crafts will be displayed in booths set up in Bldg. 31's patio and will feature such countries as Japan, Cambodia, China, Malaysia, India, and Burma. In case of rain, they will be moved into the Visitors Center.

On-lookers will see Ikebana, the Japanese art of flower arrangement done by members of the metropolitan Ikenobu school.

An explanation and demonstration of traditional Japanese art will be given. Fortunate spectators might even have their names printed in calligraphy.

Chinese brush painting, kite making, and paper folding, along with a session on Chinese cooking, will also be featured.

Wood and stone carvings from Cambodia; Burmese arts and crafts; artifacts from Malaysia and Singapore; and contemporary handicrafts and reproductions of 17th and 18th century miniature paintings from India will also be on view.

Sari-wrapping from India—the art of turning a piece of cloth into a full-length dress with shawl—will also be shown. Models for this demonstration may be se-

lected from the audience.

On Friday, May 14, from 7:30 until 10:30 p.m. in the Masur Auditorium, Bldg. 10, performances will be offered by cultural groups from India, China, Vietnam, Indonesia, and Cambodia.

The Bharathnatyam—a 4,000-year-old temple dance from southern India will be done, along with classical choral music; and the Fork Dance from the Gujarati district will also be performed.

The Tien Yun Chinese Youth Orchestra will play Chinese and Asian folk music. There will also be a demonstration of board breaking by members of the Chuei Ju School of Martial Arts.

The traditional Vietnamese Fan Dance and a folk dance depicting the Legend of the Betel will be executed by the Vietnamese Mutual Association's dancers.

Both Balinese and Javanese dances depicting ancient warrior epics will be performed by Indonesian artists.

Khmer Dancers Featured

The 1,200-year-old dance tradition of Cambodia will be seen with the performance of two folk dances done by the Khmer Classical Dance Troupe, some of whom had danced with the Royal Ballet of Cambodia.

The purpose of the 10th annual NIH program is to give visibility to the contributions made by Asian/Pacific Americans to the rich cultural diversity of the United States.

The week's activities is being sponsored by the NIH Asian American Cultural Committee in collaboration with NIH's Division of Equal Opportunity. For further information about activities contact Dr. Yoke P. Loh, committee chairman, 496-3239. □

Synthetic Growth Hormone Being Tested in NICHD Studies

In one of the first medical applications of recombinant DNA research, doctors at the National Institute of Child Health and Human Development and nine other medical centers are testing synthetic human growth hormone in patients with growth hormone deficiency.

About 20,000 children in the United States fail to grow at a normal rate because they do not produce enough growth hormone. This hormone, made by the pituitary gland, is the body's main growth-promoting agent.

In most cases, growth hormone deficiency occurs for no obvious reason. Among the known causes are tumors, infection, radiation to the head, and head injury. The disorder can also be inherited.

The patient being treated at NICHD apparently lost the ability to make sufficient growth hormone as a result of an accident 4 years ago in which she fell and hit her head. Until that time, her father recalls, she and her identical twin sister had always been the same height.

After the accident, the patient's growth slowed, while her sister continued to grow at a normal rate. Today, at age 12, she is 4 feet 3 inches tall, 4 inches shorter than her sister and below normal for her age.

Treatment for growth hormone deficiency consists of replacing the hormone. Until now, the only source of human growth hormone has been the pituitary glands of cadavers. Supplies have there-



This picture is typical of a human growth hormone study in which a doctor measures the growth progress of a petite 4-year-old treated for a pituitary gland deficiency.

fore been scarce.

The synthetic growth hormone now being tested is a product of genetic engineering, a technology developed only 9 years ago.

Scientists at Genentech Inc., a south San Francisco research firm, prepare the hormone by inserting the human gene for growth hormone into the DNA, or genetic

material, of bacteria. As the bacteria multiply, they produce large amounts of human growth hormone.

Preliminary tests in animals showed synthetic growth hormone to be nontoxic and as effective as natural hormone in stimulating growth. The safety of the synthetic hormone in humans was demonstrated this past fall in a test involving a group of normal, healthy adults.

The effectiveness and safety of synthetic growth hormone in children with growth hormone deficiency is now being tested in patients at NICHD and nine medical schools. A total of two dozen children throughout the country will receive the hormone during these trials.

Researchers will compare the growth rates of the children to those achieved in the past with natural hormone. If all goes well, synthetic growth hormone may be available commercially within 2 to 3 years.

The biggest impact of synthetic growth hormone will be in overcoming the shortage of the hormone for research and medical treatment, says Dr. Barry Bercu, a pediatric endocrinologist at NICHD.

With unlimited supplies of growth hormone now becoming available, researchers can try the hormone in children who are short for reasons other than growth hormone deficiency—a population estimated at 100,000 in the United States.

NICHD is planning a study this spring, Dr. Bercu said, in which synthetic growth hormone will be tested in children who are short for various reasons, including delayed puberty and an inherited tendency toward shortness.

—Susan Johnson □

Dr. Liljeroot Dies, NICHD Science Administrator



Dr. Bengt S. Liljeroot

Dr. Bengt S. Liljeroot, health scientist administrator with the Reproductive Sciences Branch of NICHD's Center for Population Research, died Mar. 13 at his home.

Entering Federal service at NIH in 1966, Dr. Liljeroot worked in the Health Research Facilities Branch, Division of Research Facilities and Resources. He assisted in the scientific review of grant applications for construction of health and mental retardation research facilities.

He transferred to NICHD's Population and Reproduction Grants Branch of the Center for Population Research in 1969. There he was responsible for reviewing and evaluating progress made by research training grantees in population and reproductive sciences. He also served for several years as the executive secretary of the reproductive and perinatal biology training review committee.

Having graduated from Upsala College in 1948, Dr. Liljeroot's academic experience included teaching at both high school and college levels, lecturing in physiology at Rutgers University and chairing the science department of Newark Academy in New Jersey. He also served as an independent research chemist with the American Cyanamid and Westinghouse Electric Corporations.

He received his M.S. from Lehigh University in 1950 and his doctorate in 1964.

Dr. Liljeroot is survived by his wife Kerstin, their daughter Cecilia Liljeroot-Whitman and a son Christian, all of Bowie, Md.; his parents Mr. and Mrs. Sture Liljeroot, a brother Peter and sister Mona Schulz, all of Sweden.

Expressions of sympathy may be made to the Liljeroot Memorial Fund, Trinity Lutheran Church, Laurel-Bowie Rd., Bowie, Md. 20715.

South Koreans Award Gold Medal to Dr. Popper

Dr. Hans Popper, a world renowned authority on liver disease and a former longtime grantee of the National Institute of Arthritis, Diabetes, and Digestive and Kidney Diseases for many years and other Institutes, was recently presented the South Korean Order of Civil Merit, Mungunghwa Medal, by President Chun Doo-hwan.

Highest Award for Civilians

The Mungunghwa Medal, a gold medal featuring the South Korean national flower, the Rose of Sharon, is the highest award that may be given to civilians by the government of South Korea. Dr. Popper is the first foreign medical expert to receive the honor.

An honorary professor at Mt. Sinai School of Medicine in his eighties, and former president of the International Association for the Study of Liver Disease, Dr. Popper began helping South Korea in 1961 by supplying \$20,000 worth of reagents and apparatus to the Republic of Korea Army Liver Research Unit.

Since then, he has continued to support medical programs in South Korea where various diseases such as cancer of the liver and hepatitis have prevailed as in other developing countries. □

Dr. E. G. Trams, NINCDS, Dies in Plane Crash

Dr. Eberhard G. Trams, 56, chief of NINCDS's physiology and metabolism section, Developmental and Metabolic Neurology Branch, died Mar. 28 in a plane crash. The private single-engine plane in which he was traveling crashed shortly after takeoff from a Westminster, Md., airport.

Dr. Trams had been with NIH since 1958 when he worked as a biochemist in the section on lipid chemistry of the National Institute of Neurological Diseases and Blindness, the predecessor of NINCDS. He became chief of NINCDS's section on physiology and metabolism in 1976.

Throughout his career, he traveled the U.S. and abroad as a visiting scientist and lecturer. In 1971, he was a National Academy of Sciences exchange scholar to Eastern Europe.

Before coming to the NIH, Dr. Trams held several positions at the George Washington University School of Medicine, including a faculty appointment in the department of pharmacology.

He received his Ph.D. in physiology and pathology from George Washington University Graduate School, and attended the University of Berlin Medical School.

According to Dr. Roscoe O. Brady, chief of the Developmental and Metabolic Neurology Branch, Dr. Trams conducted extensive and impressive research on cell communication at the biochemical level. Much of his most recent work involved the study of enzymes on cell surfaces—ectoenzymes.

He discovered a new cell product—exosomes—which are small packets of cell membranes that contain enzymes. Exosomes exfoliate from the surface of cells and appear to mediate a form of intercellular communication.

Dr. Trams also studied the phylogeny of neurotransmitters in the brain. His most recent work was on the biochemistry of manic depressive psychosis.

"He was a very busy scientist," said Dr. Brady, "who had an outstandingly fertile and productive imagination."

A memorial service for Dr. Trams is tentatively scheduled for sometime in late May. For details, contact Corinne Gillis, 496-5468.

NIH Federal Credit Union Elects 1982 Board of Directors

New officers were recently elected to serve on the 1982 board of directors for the NIH Federal Credit Union.

The new directors are: president, Dr. Normand R. Goulet, NIH's regional coordinator, Office for the Protection From Research Risks; vice president, Otis Ducker, Director, Division of Administrative Services, Office of Research Services; secretary, Donald F. Cypers, financial management officer, National Institute of Arthritis, Diabetes, and Digestive and Kidney Diseases; and treasurer, Robert S. Dickenson, Office of Grants and Contracts, DRR. □

NIEHS Uses Mass Spectrometers Extensively For Analyzing Environmental Chemicals

The laboratory looks something like the inside of a submarine, packed with high technology instruments and busy people, recognizable computer terminals and less familiar clusters of electronic gear. The scene is in the Analytical Chemistry Group laboratory of the National Institute of Environmental Health Sciences.

The "stars of the technological show" are four mass spectrometers, instruments that can identify and determine levels of chemical concentrations in samples as small as parts per trillion.

Although each instrument has its own personality and appearance, the spectrometers are all made of polished stainless steel, many control knobs and switches, and a complicated collection of connecting wires. The ticking of vacuum pumps and the gentle whine of cooling fans combine to form their sounds.

There seems to be a rapport between the scientists and the electronic devices similar to that between musicians and their musical instruments—part harmony and part negotiation—as problems are traced and results pursued.

The group has adapted each of the four spectrometer systems to perform different specialized applications. Each system has what for a layman is a somewhat awe-inspiring name: ultra high resolution mass spectrometer; high resolution mass spectrometer; tandem quadrupole mass spectrometer system; and the combined high pressure liquid chromatography system.

The capabilities of these instruments are staggering to the imagination. An example of their highest performance can distinguish molecules which differ by one part in a million. By appropriate sample manipulations, analysis of impurities at the part-per-trillion level can be performed.

Chemicals are introduced after evaporation into the high vacuum system into the ion source region of the instrument. Energy is added, converting sample molecules into charged ions. These are then subjected to various electric and magnetic fields which separate the ions on the basis of their mass per unit charge.

The goal of the group, as with the Institute, is to provide and support the basic research to identify agents of environmental concern, how they are handled, stored and eliminated by the body, the specific organ or system they affect, and the diseases they cause. Learning this then facilitates planning for proper handling and control, and assists in the prevention of environmentally related diseases.

Though most work can be described as research, the group has performed routine analysis in response to a number of environmental catastrophes. For example, when a chemical warehouse exploded in New Jersey, Dr. Ronald Hass, head of the ACG, and his staff, determined the amount of the potentially poisonous dioxins that were captured in air-monitoring equipment



Drs. Carol Parker (l) and Ron Hass conduct tests in their NIEHS laboratory while developing new instrumentation.

of a Federal regulatory agency. In another instance, they analyzed samples of ortho-chlorophenol for dioxins after a railroad accident caused a chemical spill in Missouri.

"These situations demonstrate the critical importance of accuracy," Dr. Hass said. "A mistake in the identification of a contaminant may lead to inappropriate action in response to a problem."

In many cases, mass spectrometry provides the only technology currently available with the capability to identify environmental chemical residues retained in the body from either one-time exposures or long-term, low-dose exposures that may cause disease.

As the group's reputation has spread at the Institute, it has been involved in three major activities: support to biomedical research in areas as diverse as pharmacology and reproductive and developmental toxicology; development of analytical techniques; and basic research in spectrometry itself.

With these multiple assignments, the group currently has to limit its efforts to analysis in support of research conducted within the Institute's own laboratories. They can therefore accept no samples for analysis from outside sources that fall outside the boundaries of their existing research involvements. During a typical year, the NIEHS spectrometers have each been used for as many as 2,500 sample runs.

The particular spectrometry system selected to analyze a sample depends on the chemical's composition as well as the information that the researchers are trying to learn about the chemical. The group is now modifying one component of its spectrometers, the ion source, to be able to use a method called fast atom bombardment, or FAB for short.

"With FAB we hope to be able to ionize larger molecules to enable us to look at higher molecular weights," Dr. Hass explained. "We'd like to be able to work with smaller pieces of tissue samples and detect and identify chemicals at even lower concentrations," Dr. Hass said.

—Thomas Hawkins □

DR. ROSENBERG

(Continued from Page 1)

5'-terminal regions of "capped" eukaryotic messenger RNA's.

He became a postdoctoral fellow at Yale University from 1972-1974, where he studied the regulation of gene transcription in *E. coli* bacteria and conducted studies that led to new understanding of the maturation of early phage messenger RNA.

In 1974, Dr. Rosenberg became a staff fellow in the NCI Laboratory of Molecular Biology. In 1976, he was appointed research chemist, senior staff investigator there. Late in 1979, he moved to the Laboratory of Biochemistry, and became chief of the cellular regulation section. In this position, he directs studies on the regulation of gene expression in both bacterial and animal cells.

He has constructed bacterial vectors for recombinant DNA research on the production of cellular proteins.

His work on the finely tuned mechanisms that regulate the mode of action of a bacterial virus made possible the isolation of a powerful regulatory protein of the virus. This technique is now being applied to the isolation of rare cellular proteins found in cells transformed by animal tumor viruses.

Dr. Rosenberg has participated in teaching workshops sponsored by international scientific societies. He has chaired symposia at meetings of the European Molecular Biology Organization and the American Society of Biological Chemists.

He has been elected chairman of the 1983 Gordon Conference on Biological Regulatory Mechanisms. □

Feeling at Home in the U.S.A.

People coming from outside the U.S. often view this country as a giant maze. To assist those in the NIH community to maneuver effectively in a variety of situations characteristic of American life, the R&W Association will be offering a series of workshops, Feeling at Home in the U.S.A.

Consisting of 10 weekly sessions, the workshops will address a variety of issues. They will be conducted by Susan Keith and Lucy Shahar, experienced intercultural trainers, both of whom have lived in foreign countries.

Ms. Keith and Shahar will preview workshop content at Bldg. 31, Conf. Rm. 4, on Monday, May 17, from 5:30 to 6:30 p.m. and on Tuesday, May 18, from noon to 1 p.m.

Spouses are encouraged to attend. □

Spend a Fun Day at Kings Dominion

Kings Dominion is located 75 miles south of Washington, and 20 miles north of Richmond, Va. The park offers rides, shows, Scooby Doo, Yogi Bear, and a dolphin and sea lion show.

Tickets are available at R&W Activities Desk, Bldg. 31, Rm. 1A-18. □

Firemen Complete Physical Assessment Program



Sometimes NIH firefighters are required to enter infernos, even during training.

For the last 3 years, members of the NIH Fire Department have participated in a confidential physical fitness assessment program designed to determine their overall physical and cardiovascular condition.

Knowing their physical capacity is particularly important to these men whose occupation nationally has a 50 percent disability rate due to heart attack.

Recently, NIH firemen, whose ages range from the mid twenties to the late forties, completed the final phase of their assessment program at the Institute of Human Performance, in Fairfax, Va. At the conclusion, each firefighter received a computer printout of his performance during the various laboratory tests to measure physiological capacity.

IHP is the testing service which Montgomery County police, fire, and sheriff's departments have used. They have also done evaluations for the U.S. Department of Justice and the U.S. Marine Corps.

Over the last few years, more and more private businesses and government agencies have turned to such services as provided by IHP to prevent the premature retirement of employees due to disability, according to Dr. Paul O. Davis, an exercise physiologist who was director of testing services for the Sports Medicine Center at the University of Maryland for 4 years.

"There has become a strong need for addressing the physical assessment of individuals in the fire and police service," says Dr. Davis, president of IHP. His staff evaluates each participant to determine how well they perform as compared with the physical occupational standards established by IHP.

Federal Employment Application Program Available

How to Apply for a Job, an individual learning program designed to assist employees in applying for a Federal job, is now available from any BID personnel office or EEO office.

The instructional package consists of a 25-minute audiocassette tape and workbook. A written version of the materials is



Fireman Paul E. Davis has his body weight hydrostatically measured.

In addition, as part of the program, each fireman is given a cardiac risk profile which permits a self-evaluation based on the information obtained. It could indicate what the probability of a heart attack or other cardiovascular disease.

One measurement taken was to ascertain how well the body reacted to stress created on a graded treadmill. Each fireman ran for a certain period of time while EKG, blood pressure and heart rate were recorded.

Body composition, or the amount of fat, was measured by submerging each fireman in a tank of water to get a comparison of total body fat.

For the test, firemen did stretching exercises, repeated several strenuous broad-jumps, did pushups, pulled down and up on heavy weights, and had their feet bound to the ground to see how many sit-ups they could do in 2 minutes.

Indices and recorded capacities for a particular exercise relating either to muscular strength, endurance, power, flexibility, or aerobic capacity were taken.

At the conclusion of each test cycle over the last 3 years, IHP furnished the NIH firefighters with a record of their physical capacities along with a suggested physical fitness regimen tailored to each man's previous performance and personal needs.

"Regardless of whoever is tested in such a program, it's extremely important that people in this job be physically fit," said NIH Fire Chief William F. Coleman, who noted that many of the firefighters are now going into spring training to follow up on IHP's suggested program. □

also available for hearing impaired employees.

Such topics as hints about vacancy announcements; a brief explanation of the application process; how to fill out an SF-171 Personnel Qualifications Statement; and advice on interviewing are covered in the program. □

VISIT

(Continued from Page 1)

After the discussions, Congressman Early was accompanied by Drs. Wyn-gaarden, Philip S. Chen, Jr., NIH Assistant Director for Intramural Affairs, and Kenneth W. Sell, scientific director, National Institute of Allergy and Infectious Diseases, to observe research in Bldgs. 8 and 7.

While there, Congressman Early and staff met with members of the Laboratory of Parasitic Diseases and the Laboratory of Infectious Diseases, NIAID. He also learned about the planned laboratory renovation program involving these older buildings.

A noontime luncheon was hosted by Dr. Richard N. Krause, Director, NIAID, at his residence. Later, the congressman visited with Dr. William A. Eaton, chief, section on macromolecular biophysics, NIADDK, in



Nobel laureate Dr. Axelrod (l) and Dr. Frederick K. Goodwin, scientific director, NIMH (c), confer with Congressman Early during his tour.

Bldg. 2. This section has for the past several years been studying the basic structure of the sickle cell which besides its original intent has scientific implications for many other areas.

Drs. Mortimer B. Lipsett, Director, Clinical Center, and Jack Orloff, scientific director, National Heart, Lung, and Blood Institute, met Congressman Early at the entrance to the new Ambulatory Care Research Facility. During his tour, the representative and his staff witnessed an open-heart surgical procedure.

The congressional visitors were also taken to a pediatrics ward; observed how the computerized Medical Information System keeps accurate statistics on patients and aids in their care; and viewed how a PET scanner in the Nuclear Medicine Department reflects the metabolic activity of the brain.

Also, the congressman spent time with Nobel laureate Dr. Julius Axelrod, chief, section on pharmacology, Laboratory of Clinical Science, NIMH, and Dr. Phillip Gorden, clinical director, NIADDK.

Toward the end of the day, Congressman Early met with the BID Directors in the CC Medical Board Room. He closed his tour by visiting with Dr. Alan Rabson, director, Division of Cancer Biology and Diagnosis, NCI, and seeing the NCI Central Animal Facility on the B2B Wing. □



A 15-member delegation from the Pan American Health Organization met recently with NHLBI staff to discuss plans for cooperative efforts among scientific institutions in South America and the Caribbean. The discussions focused on prevention and control of cardiovascular disease with special emphasis on the nutritional aspects of these diseases. The PAHO delegation, consisting of members from Brazil, Chile, Ecuador, Jamaica, Mexico, and Trinidad, were in Washington to attend a meeting on the Contribution of Dietary and Pharmacological Interventions in the Prevention and Control of Chronic Cardiovascular Diseases.

International Health Discussed During Dialogue in Washington

The United States, particularly the U.S. Public Health Service, maintains an interest in world health problems. Under multilateral programs with the World Health Organization, the PHS has contributed to disease prevention and health maintenance worldwide.

Cooperative projects with other countries, either through formal bilateral agreements or through informal ties, improve the health of the people both in the United States and other countries by sharing resources and costs.

These were some issues that were discussed during the Dialogue in International Health held on the evening of Mar. 11 at the International Club, Washington, D.C.

Organized by the Fogarty International Center, the dialogue was led by Dr. Edward N. Brandt, Assistant Secretary for Health, HHS, and a panel consisting of Drs. John H. Bryant, Director, Office of In-

ternational Health; Thomas E. Malone, Acting NIH Director; and Claude Lenfant, Director, FIC.

Dr. Lenfant emphasized that no country is immune from disease and that the spread of disease is a continual problem. In recent times, he noted that influenza originating in Asia spread to the Americas and Europe. Previously, he added, in the 19th century, cholera from Asia also spread throughout the world.

Dr. Malone, discussing international cooperation in tropical medicine, cited the special priority given by National Institute of Allergy and Infectious Diseases to filariasis, leishmaniasis, leprosy, malaria, schistosomiasis, and trypanosomiasis.

He observed that in recent years, the proliferation of bilateral agreements with developing countries has led to increased cooperative activity in tropical diseases research. □

NIEHS Personnel Honored For EEO Efforts at Meeting

The National Institute of Environmental Health Sciences recently hosted the annual installation meeting of the North Carolina Association of EEO Personnel, with Norman Eubanks, NIEHS EEO officer presiding.

At the meeting Mr. Eubanks, who has served three terms as association chairperson, and newly elected chairperson Frank Evans, EEO officer at Cherry Point Marine Air Station, presented award certificates to two NIEHS staff members.

Dr. William W. Lawrence, NIEHS employees counselor, and Alvin L. Wade, Jr., NIEHS personnel officer, received awards for their active support in pursuit of equal employment opportunity goals. □



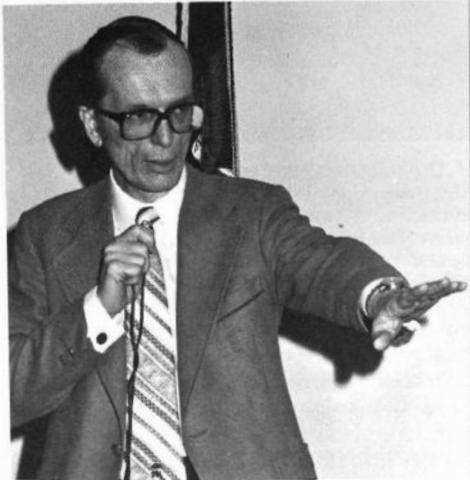
The circus comes to the NIH Toastmasters Club where Jerry Gordon, OD, acts as barker to introduce "Fiddle-Dee-Dee," clowned by Gil Wright, NHLBI.

Instead of loving your enemies, treat your friends a little better.—E. W. Howe □

JC Virus: A Brain Tumor Model Linked to a Rare Disease

Chances are that lurking somewhere in your blood are antibodies for a virus called "JC." Scientists have detected these antibodies—the only evidence of an unrecognized, prior short-term infection by JC—in 84 percent of the U.S. population.

The National Institute of Neurological and Communicative Disorders and Stroke is studying JC because—for a small, unlucky group—the virus persists in the



Dr. Sever moderated the Slow Virus Science Writers Seminar. He opened the meeting with a brief explanation of the different persistent viral infections under study by NINCDS scientists.

body, eventually causing a rare neurological disease. JC's other ability to cause brain tumors in animals provides one of the few model systems for the study of brain tumors in primates.

At a recent NIH science writers' seminar, NINCDS Infectious Diseases Branch chief, Dr. John L. Sever, and six scientists discussed current research on the biology of the JC-induced primate tumor, ways to diagnose the tumors, and progressive multifocal leukoencephalopathy (PML)—the rare disease caused by JC.

The virus was first isolated in tissue culture in 1971 when it was named for a PML patient whose initials were "JC."

"Primary infections with JC virus occur early in life in the majority of the population," said Dr. Sidney A. Houff, clinical neurologist with the NINCDS Infectious Diseases Branch. The symptoms of this primary infection and when it occurs are still unknown.

Years later, JC can strike again—this time in the form of PML. People whose immune systems are weakened by cancer, autoimmune diseases, or the use of immunosuppressive drugs after organ transplants are the most common targets of PML.

It is uncertain whether PML patients are experiencing a reactivation of the latent JC infection or are having an unrecognized primary infection, according to Dr. Houff. The role of the patients' deficient immune system in the development of PML is unclear too, he said.

Clinical symptoms of PML result from the JC virus's infection of the oligodendroglia cells. These cells make myelin, a fatty covering that insulates the axon or trunk of the nerve cell, and assists in the flow of messages sent along nerve fibers.

When the oligodendroglia are infected, the myelin is destroyed in a process called demyelination that leads to the onset of symptoms.

Quite often the PML patient first appears to be a classic stroke case; but as the disease progresses, many areas of the nervous system are involved. Eventually the patient becomes blind and demented. Death usually results from infection.

Many PML patients have giant multinucleated astrocytes (cells that make up the supporting structure of nervous tissue) in their brains. These astrocytes have some malignant characteristics.

Although several PML patients have also developed a type of cancerous brain tumor called an astrocytoma (grades 3 and 4 which are the most deadly kind); it is still not known whether the JC virus can cause malignant tumors in man. Research is under way to evaluate this possibility.

The JC virus has produced grade 3 and 4 astrocytomas in some nonhuman primates. Primates inoculated with JC virus who do not develop tumors may be protected from disease by their immune systems, said Dr. William C. Wallen, chief of the viral immunology unit.

Dr. Wallen said he hopes that research on the role of immunity in monkey tumor growth will lead to the discovery of viral vaccines and tumor-related antigens that would prevent tumors.

Another possible benefit of the JC tumor model research, according to Dr. William T. London, chief of the experimental pathology section, is the development and evaluation of diagnostic tests for human use.

Dr. London, who is conducting research on owl monkeys inoculated with the JC virus, noted that contrast-enhanced computed tomography (CT) allows for the detection of tumors while the animals are still clinically normal.

Like time-lapse photography, CT scans of monkey brains over several days show the rapidly developing tumors and such characteristics as tissue death and hemorrhage—even though the monkeys appear to be healthy. Similarly, CT scans of human brains are being used to predict pathological changes in a tumor.

Other aspects of JC viral research were presented at the science writers' seminar by Dr. Eugene Major, a visiting scientist with the viral immunology unit, and Dr. Nancy Miller, an expert consultant to the unit. In addition, Dr. Clarence J. Gibbs, Jr., deputy chief of the Laboratory of Central Nervous System Studies, discussed transmissible dementias and hemorrhagic fevers with renal syndrome.

—Diane Striar □

Dr. McConnell Receives 1982 Dickson Award

Dr. Harden W. McConnell, a grantee of the National Institute of Allergy and Infectious Diseases, received the 1982 Dickson Prize for Science from Carnegie-Mellon University in Pittsburgh, Apr. 3.

The prize honors persons in the United States who have made an outstanding contribution to the field of science. It was established in 1969 through funds provided in the wills of Pittsburgh physician Joseph Z. Dickson and his wife, Agnes Fisher Dickson.

Dr. McConnell, professor of chemistry at Stanford University, was presented a \$10,000 check and a bronze medal for "his contributions to the development and application of magnetic resonance techniques to chemical biological problems, and for his more recent contributions to the fields of membrane biophysics and cellular immunology."

During the award ceremony, he delivered the Dickson Prize lecture, *Interfaces Between Physics, Chemistry, Biology and Mathematics*.

Dr. McConnell and his colleagues are preparing reconstituted membrane vesicles—"synthetic cells" having precisely defined chemical compositions and physical properties.

These cells are designed to mimic real biological cells in respect to their highly specific interactions with other cells.

His synthetic cells are simple and contain a small number of distinguishing molecules (virus proteins, transplantation antigens, etc.) that may be recognized as foreign by an immune system.

According to Dr. McConnell, "We are using the most sophisticated techniques of physics and chemistry to try to discover how the immune system decides, at the molecular level, whether a given (synthetic) cell is 'friend' or 'foe' and how the chosen enemies are killed.

"In a human," he explained, "the vitality and success or failure of these molecular signals is the difference between life and death."

Dr. McConnell was elected to the National Academy of Sciences in 1965, and this year was elected a fellow of the American Association for the Advancement of Science.

Born in Richmond, Va., he received the B.S. degree from George Washington University in 1947 and the Ph.D. from the California Institute of Technology in 1951. He joined the Stanford faculty in 1964, and was named Robert Eckles Swain professor of chemistry in 1979. □

Visit The Old Country!

The Old Country, Busch Gardens, Williamsburg, offers rides, shows, featured attractions and exhibits. The Loch Ness Monster is a twisting, turning, 300-ton double-looped roller coaster claimed by many to be the scariest ride in America.

Tickets can be obtained at R&W Activities Desk, Bldg. 31, Rm. 1A-18. □

Dr. Karl A. Piez Retires From Dental Institute

Dr. Karl A. Piez, chief of the NIDR Laboratory of Biochemistry since 1967, retired Mar. 31 after more than 30 years of service at NIH. He has accepted a position as director of research and development for the Collagen Corporation in Palo Alto, Calif.

Since 1951, he has carried out or directed studies at NIDR elucidating the structure of many connective tissues. He described the chemical structure of collagen and developed many methods used in the connective tissue field.

Dr. Piez and his associates showed that collagen, the major structural protein in skin, bone, tendon, etc., is a long rigid, rod-like molecule which, linked by covalent cross-links, forms the fibrous structures that he has referred to as the "biological rope."

He and his coworkers were the first to show that lysines in collagen were enzymatically oxidized to aldehyde groups which condense to form the cross-links. The cross-linking enzyme was first isolated and described in his laboratory.

Later work led to the discovery that tissues such as cartilage, skin and blood vessels contain different collagens, each arising from distinct genes and having distinct functions.

Several such collagens are now known, and alterations in these collagens are thought to underlie several heritable disorders of connective tissues.



Dr. Piez

The researchers also demonstrated that collagen is synthesized in a precursor form and that the precursors are distinct for the various collagens.

Most recently, Dr. Piez has shown that chemical features inherent in the collagen molecule itself may determine the structure of the fibril that forms as the molecules aggregate.

He will be concerned with developing collagen for medical uses while working at the Collagen Corporation. One product, a highly concentrated solution of collagen, is currently approved for clinical use to correct dermal defects. On injection, the collagen assembles into collagen fibers which can restore normal tissue architecture.

Dr. Piez began work at NIDR in 1949 and then attended Northwestern University where he completed his Ph.D. He has worked at NIDR since 1951, where he served as a research chemist, chief of the protein chemistry section, and later chief of the Laboratory of Biochemistry.

His laboratory became a major training center for postdoctoral fellows in connective tissue research and these scientists are currently researchers at many institutions in the U.S. and abroad.

Dr. Piez received the HEW Superior Service Award in 1966, the T. Duckert Jones Memorial Award in 1970, and presented the G. Burroughs Mider Lecture in 1975.

He has served on the editorial board for the *Journal of Biological Chemistry*, as a member of many scientific committees, cochairman of numerous conferences and workshops, and as an officer and member of the board of directors for the Foundation for Advanced Education. He was president of that organization from 1974 to 1976. □

New Brain Tumor Pamphlet Discusses Treatment Aims

An individual's chance of developing a primary malignant brain tumor is 1 in 22,000. There are 11,000 brain tumors annually in the United States, with both children and adults susceptible to developing the growths.

Brain tumors in children are most common at ages 6 to 9 while adult brain tumors usually strike between the ages of 40 and 60. The reason why primary brain tumors occur is still a mystery.

Not all tumors are malignant however, and surgery can remove some tumors completely, leaving no neurological damage. According to a new NINCDS publication, *Brain Tumors: Hope Through Research*, a combination of improved surgical techniques, better drugs and radiotherapy can mean longer survival times and richer lives for brain tumor patients.

Although the symptoms of a brain tumor vary according to its type and location, there are certain signs that specialists look for: progressive unrelenting symptoms including headache, visual complaints, motor signs such as weakness or

numbness in the arms or legs, and seizures.

The new pamphlet discusses these signs, tumor diagnosis, and the different kinds of tumors that occur. Treatment alternatives such as surgery, radiation and chemotherapy are described, as are new surgical techniques, including the use of high frequency sound waves and laser beams to destroy the tumors.

New methods of treatment for brain tumors are currently under study at NINCDS. In one process called "immune stimulation," the patient's tumor cells are grown in tissue culture and irradiated to prevent reproduction. The cells are then injected back into the patient as a means of producing antibodies.

Other studies of brain tumor treatment currently conducted at NINCDS and elsewhere are outlined in the pamphlet.

Single copies of *Brain Tumors: Hope Through Research* can be obtained from the Office of Scientific and Health Reports, NINCDS, Bldg. 31, Rm. 8A-06, Bethesda, Md. 20205; (301) 496-5751. □

JENNIFER

(Continued from Page 1)

It is estimated that 15 to 20 million people are afflicted with this chronic, incurable infection, a number growing more than 500,000 a year. Genital herpes can be a recurrent, painful, lifelong condition. Not only does it affect an individual physically, but psychologically as well, often causing depression, marital conflicts, and disruptions in social and sexual relationships.

Jennifer takes the viewer through the emotional experience of an individual learning she has genital herpes, and what she can do about it. Admitted as a patient in the Clinical Center as a participant in a special research project, Jennifer meets Dr. Stephen Straus, NIAID, chief, Medical Virology, and Susan Bachrach, R.N., Clinical Center nurse practitioner.

Through conversations with Dr. Straus and Ms. Bachrach, Jennifer begins to understand the nature of the disease and to come to grips with her anger and psychological turmoil.

The film includes interviews with several clinical scientists engaged in genital herpes research and treatment. Interspersed throughout the interviews are short scenes of laboratory work, diagrams, and clinical slides of herpes lesions.

The Occupational Medical Service, Division of Safety, has scheduled showings of the film to NIH employees as part of its regular education series. Knowledgeable NIH staff will be available to answer questions. The film will be shown at 11:30 a.m. and 12:15 p.m. on the following dates:

Monday, May 10	Bldg. 1	Wilson Hall
Tuesday, May 11	Bldg. 10	Masur Auditorium
Thursday, May 13	Westwood Bldg.	Conf. Rm. D
Tuesday, May 18	Federal Bldg.	Rm. B-119
Wednesday, May 12	Poolesville Animal Ctr., 2 p.m.	
Wednesday, May 19	NLM, Bldg. 38A Lister Hill Ctr.	Lister Hill Auditorium

The key to adequate control and prevention of genital herpes is awareness by the sexually active individual of the infection's symptoms, contagious nature and lasting effects. The OMS and NIAID staff believe that *Jennifer* will help more people become aware of genital herpes. □

NAS Public Hearing To Be Held On Research Personnel Needs

The Committee on National Needs for Biomedical and Behavioral Research Personnel of the National Research Council will hold its fourth public hearing in Washington, D.C., on June 2 at the National Academy of Sciences.

The purpose of the hearing is to receive comments on the committee's 1981 report, *Personnel Needs and Training for Biomedical and Behavioral Research*, and to receive suggestions for the committee's future work. Persons wishing to testify are requested to submit written statements by May 14. Address to NAS, 2101 Constitution Ave., Washington, D.C. 20418.

Comments from the floor are also welcome. Single copies of the report are available from the committee. For further information, contact Allen Singer, 334-3186. □

Dr. Joseph Tully To Win Two Mycoplasma Awards

Dr. Joseph G. Tully, National Institute of Allergy and Infectious Diseases, will receive two awards this year for his research on mycoplasmas—a group of filterable, wall-free microbes that produce disease in humans, animals, plants, and insects.

Dr. Tully, chief, mycoplasma section, Laboratory of Molecular Microbiology, received the J. Roger Porter Award of the U.S. Federation for Culture Collection during the recent meeting of the American Society for Microbiology. Next September, he will receive the Klieneberger-Nobel Award of the International Organization for Mycoplasma.

He is the first recipient of the USFCC award for "his outstanding research on the taxonomy of mycoplasmas and contributions to the characterization and preservation of this special category of microorganisms."

The federation intends to give this award of \$1,000 and a certificate annually to microbiologists contributing significantly to USFCC objectives.

The IOM Award is named for Dr. Emmy Klieneberger-Nobel, a pioneer in mycoplasma research. It is also given in recognition of outstanding research in mycoplasma.

Dr. Tully's contributions to the field are numerous. In 1972, while collaborating with French workers, he identified and carefully defined the first cultivated member of a new group of mycoplasmas, the spiroplasmas.

Since then, he has isolated and identified other members of the group: the first spiroplasma found to produce an experimental neurologic and ocular disease in vertebrates, and a number of tick-borne spiroplasmas.



Dr. Tully is currently conducting research on mycoplasmas at the Frederick Cancer Research Facility in the NIAID Laboratory of Molecular Microbiology.

Using a newly developed culture medium designed to grow spiroplasmas, Dr. Tully and his colleagues have been able to isolate two strains of a new mycoplasma from urethral specimens of patients with nongonococcal urethritis. They hope to show the role of these strains in human disease.

Dr. Tully chaired the organizing committee of the International Organization for Mycoplasma and served as IOM chairman from 1976 to 1978. In 1980 he received an honorary doctoral degree from the University of Bordeaux II, France.

He joined NIAID in 1962 as a research microbiologist in the Laboratory of Bacterial Diseases, and became chief of the mycoplasma section, Laboratory of Microbiology in 1968. □

Nurse Mary D. Thompson Ends 28-Year CC Career

After 28 years of nursing at the Clinical Center, the deputy chief of the CC's Nursing Department, Mary D. Thompson, retired on Apr. 3.

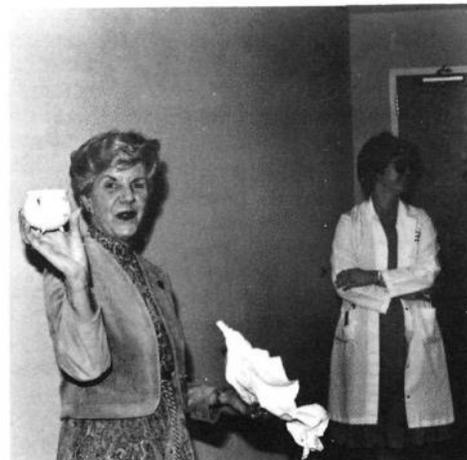
Ms. Thompson began her career in the CC as a staff nurse. Later, she was promoted to night supervisor and head nurse. In 1975, she was appointed chief of the Heart and Lung Nursing Service, and assumed the position of deputy chief in 1977.

One of the highlights of her career was a 1972 nursing conference on myasthenia gravis, a disease characterized by muscular fatigue and weakness. She served as its coordinator.

Commenting on her lengthy service at the CC, Ms. Thompson said, "I would like to feel that I have contributed to the preservation of the caring attitude here. I hope that it will never change. Despite the research going on, there is tremendous concern for the patients. The concept of truly respecting individuals as human beings is outstanding in the CC."

At the farewell party for the retiring deputy chief, Rena M. Murtha, chief of the de-

partment, said, "Mary Thompson has been an invaluable nursing resource at the CC for many years. Her presence as a leader has been vital in its growth." □



Nurse Thompson holds up a farewell gift. She played a key role in the ACRF planning as a member of the committee making inspections at other medical centers throughout the country.

Genetic Mechanism for Cancer Formation Described

The first molecular evidence for a mutation—a gene structure change—in human cells turned cancerous by a chemical has been provided by National Cancer Institute scientists.

In the past, there have been many reports of alterations in the products of genes, such as proteins, in chemically induced cancer cells. These protein modifications have been associated with changes in cell appearance, but these changes have never been directly traced to alterations in the gene itself.

Until now, evidence for genetic alterations causing changes in cancer cells has been indirect. Data from model systems such as the Ames test have shown mutations in the cells of bacteria after exposure to a cancer-causing chemical.

Evidence of these mutations has been seen as cancer-like changes, not in bacteria, but instead in animals or mammalian cells grown in a laboratory.

In order to establish a direct, causal relationship between mutation and cancer formation, it is necessary to demonstrate that some agent can cause genetic as well as cancer-like changes within the same type of cell.

Dr. Takeo Kakunaga and coworkers have done that by demonstrating a gene mutation associated with cancer formation or carcinogenesis in normal human fibroblasts, called KD cells, derived from connective tissue turned cancerous by a chemical.

This work was reported by Drs. Hiroshi Hamada, John Leavitt, and Takeo Kakunaga in the June 1981 *Proceedings of the National Academy of Sciences*, vol. 78, no. 6, pages 3634-3638. □

Neuropharmacology Is Subject Of Dr. Potter's Research

Dr. Pamela E. Potter, a graduate of Dalhousie University, Halifax, Nova Scotia, Canada, began an international research fellowship of the Fogarty International Center at the National Institute of Mental Health under the preceptorship of Dr. E. Costa in February. Her research is on neuropharmacology. □

Want To Go Horsing Around?

R&W is sponsoring a horseback riding weekend, May 14-16 at Deep Creek Lake in western Maryland. Cost is \$84 per person, which includes boarding, unlimited horseback riding and a hayride. The trip is limited to 20 persons.

Reservations can be made at R&W Desk, Bldg. 31, Rm. 1A-18. □

Stop Smoking!

The Employee Assistance Program will present another Stop Smoking program beginning May 12 to run six consecutive Wednesdays from 12:30 p.m. to 1:30 p.m. in Bldg. 31, Rm. B2B-35.

For further information, call Morris Schapiro, 496-4411. □

Three CC Nurses Receive Awards for Exemplary Service

Clinical Center nurses Michelle Maher, Dorothy Belling, and June McCalla were recently presented with individual awards from their colleagues in the Nursing Department for special achievements.

Nurse of the Year

Ms. Maher, a nurse specialist in the Cancer Nursing Service, was selected Nurse of the Year, an award honoring a professional nurse actively engaged in nursing at the CC.

The recipient, nominated for this award by her peers, is recognized for her contribution to the care of patients in a research environment.

Ms. Maher, who has worked in the CC for 13 years, was selected because of her involvement in total parenteral nutrition (TPN), a method of providing nutrients to patients intravenously through a central venous catheter.

She is the nurse specialist on the TPN team, and it is her responsibility to see that specific nutrients are given properly to patients.

Nursing Research Award

Also honored was Ms. Belling, a clinical nurse who works in the Heart and Lung Nursing Service. She is the first recipient of the Nursing Research Award—cited for her contributions to the practice of bedside nursing in the CC through nursing research.

Ms. Belling, a CC employee for 21 years, conducted a 9-month study on two techniques of suctioning mucus from patients while on respirators. This was done by separating the patient from the respirator, inserting a plastic tube into the trachea,

and removing the mucus or by going through an opening in a connecting piece in the respirator itself, while maintaining the patient on the machine.

Using both procedures, each patient was sustained on a 2-hour interval between suctionings performed so a comparison could be done. The study proved that although it took longer to suction patients while maintaining them on the respirator than it did when they separated from it, their blood oxygen levels were significantly higher on the respirator.

Her research entitled *The Effect on Arterial Gases of the Use of a Portex Swivel Adaptor to Maintain Respirator Connection During Suctioning*, is the first published study on the subject.

Distinguished Nurse Award

The Distinguished Nurse Award was presented to Ms. McCalla, a CC employee for over 30 years. The honor is given to recognize a professional nurse whose contribution to nursing goes beyond her regular CC duties and merits commendation.

A clinical nurse specialist/practitioner in the Pediatric Oncology Section of the Cancer Nursing Service, Ms. McCalla received the award for her contributions to pediatric nursing at the CC as well as locally and nationally.

Her responsibilities include the provision of health care and preventive services. This covers patient and family counseling in child growth and development, nutrition, common illness, accidents and child rearing.

All of the awards were presented by Mary Thompson, deputy chief, and Rena Murtha, chief, CC Nursing Department. □

Visiting Scientist Program Participants

Sponsored by Fogarty International Center

3/22 **Dr. Arun Kumar Attri**, India, Laboratory of Biochemical Pharmacology. Sponsor: Dr. Allen Minton, NIADDK, Bg. 4, Rm. B127.

3/22 **Dr. Norio Sasaki**, Japan, Laboratory of Biochemical Pharmacology. Sponsor: Dr. Matthew Rechler, NIADDK, Bg. 4, Rm. B114.

3/23 **Dr. Fritz Buchthal**, Denmark, Medical Neurology Branch. Sponsor: Dr. Thomas N. Chase, NINCDS, Bg. 10, Rm. 4N245.

3/25 **Dr. Atul Sahai**, India, Laboratory of Pathophysiology. Sponsor: Dr. David Salomon, NCI, Bg. 10, Rm. 5B55.

3/29 **Dr. Ken-ichi Tominga**, Japan, Laboratory of Socio-environmental Studies. Sponsor: Dr. Carmi Schooler, NIMH, Bg. 31, Rm. 4C21.

3/30 **Dr. Wei-Chao Ni**, Taiwan, Laboratory of Biochemistry. Sponsor: Dr. Charles Huang, NHLBI, Bg. 3, Rm. 218

3/31 **Dr. Krzysztof Wlodarski**, Poland, Laboratory of Biological Structure. Sponsor: Dr. A. H. Reddi, NIDR, Bg. 30, Rm. 207.

4/1 **Dr. Christian Krarup**, Denmark, Medical Neurology Branch. Sponsor: Dr. Thomas N. Chase, NINCDS, Bg. 10, Rm. 5N222.

4/1 **Dr. Aidan McElduff**, United Kingdom, Diabetes Branch. Sponsor: Dr. Jesse Roth, NIADDK, Bg. 10, Rm. 8S243.

NIH's Betty Ford Retires; Moves to Hilton Head

"There may have been a few headaches along the way, but it was never boring." That's how Betty Ford, recently retired secretary to the NIADDK clinical director, summed up 28 years of government service at the NIH. "It has been a privilege to work with such brilliant people," she said.

Mrs. Ford came to NIH in 1956 as a part-time medical transcriber in the Clinical Center. From 1961 to 1967, she worked in the National Heart Institute as secretary to Drs. J. O. Davis and Jack Orloff. In 1967, she joined NIADDK as secretary to the chief of the Arthritis and Rheumatism Branch, Dr. John Decker.

When Dr. Decker was named clinical director in 1976, she accompanied him to the new post, where she remained to assist the current clinical director, Dr. Phillip Gorden.

Witnessed Research Benefits

Mrs. Ford said it has been especially gratifying to witness how research development has benefitted patients, citing as an example the greatly improved prognosis for patients with systemic lupus erythematosus.

"When I first joined the Arthritis Institute, medical science could do little for lupus patients. Now almost all patients with lupus respond to treatment and leave the Clinical Center with hope for the future."

Before joining NIH, Mrs. Ford worked on Capitol Hill for several years.

She and her husband, Pat, a retired CPA, have moved to Hilton Head Island, S.C. □

Fair To Be Held by NIAID

The NIAID women's subcommittee is coordinating the Second Annual Multi-Cultural Awareness Fair to be held July 14 (Bastille Day) from 5 to 8 p.m. in the Bldg. 31 cafeteria. The entire NIH community is invited to participate with displays, acts, contributions of ethnic foods, or assistance in planning and attendance.

"The original fair in August 1981 was intended to give students a glimpse of the ethnic diversity of the NIH community," Elnora Jackson, women's subcommittee manager, explained. It featured crafts, arts, dance, drama, songs and foods representing the diverse ethnic heritages of NIH employees and others who serve NIH.

A series of planning meetings is under way. The coordinators encourage anyone who wishes to help with any aspect of staging the event to attend these brown-bag sessions. They are scheduled for 11:30 a.m., Apr. 22 and May 20 in Rm. 7A-24; June 17 and June 24 in Rm. 2A-52; all in Bldg. 31, and for July 1 and 8, location to be announced.

In addition, persons interested in providing entertainment, demonstrations, displays or foods may do so by calling Mrs. Jackson at 496-1012. □



David L. Mineo, a recent graduate of the NIH Stride Program, was selected by American University to receive the Financial Executive Institute's award in recognition of his outstanding academic achievement in finance. Mr. Mineo graduated magna cum laude in 1981 and is a member of the Phi Kappa Phi honor society. He received his job training in the Grants Management Office of the National Institute on Aging. His future career interests are to continue his work with the NIA while pursuing an MBA in either finance or business-government relations.

Drs. Davies and Potter Will Present Annual R. E. Dyer Lecture, May 12

Dr. David Davies, chief, molecular structure section, Laboratory of Molecular Biology, National Institute of Arthritis, Diabetes, and Digestive and Kidney Diseases, and Dr. Michael Potter, chief, immunology section, Laboratory of Cell Biology, National Cancer Institute, will present the R.E. Dyer Lecture on Wednesday, May 12, at 8:15 p.m. in the Clinical Center Masur Auditorium.

The two-part lecture is entitled *The Three-Dimensional Structure of the Antigen Molecule: Specificity and Diversity*.

Dr. Davies will focus on the three-dimensional structure of the antigen-binding fragments of mouse myeloma proteins with known binding specificities. Using X-ray crystallography, he analyzes X-ray diffraction patterns of the specimen molecule.

Dr. Davies has been involved in protein structure determinations since the earliest days of this research. He collaborated on the high resolution structure of myoglobin, the first protein to have its three-dimensional structure described.

He has also worked on the structure and physical chemistry of many synthetic polynucleotides, such as Poly (I & C) which became model systems for studying nucleic acids. His section has also determined the structure of two proteolytic enzymes, gamma-chymotrypsin and an acid protease from *R. chinesis*.

Dr. Davies' current interest in immunoglobulins was sparked by Dr. William Terry of NCI, who introduced him to the field of myeloma proteins and their potential for crystallography. This original protein is still the only antibody molecule that has

been completely visualized by X-ray diffraction.

He has been a member of the National Academy of Sciences in biochemistry since 1978.

Dr. Potter will discuss mechanisms of diversity in a series of closely related antibody molecules, in particular the galactan-binding myeloma proteins, which are a family of mouse antibodies that bind to the same antigen.

In the course of his research career, he has concentrated on the study of the plasmacytomas in mice, tumors that produce antibody molecules. Over a period of 28 years, he created a system of plasma cell tumors that have been used for most of the fundamental studies in immunoglobulins, making possible the development of hybridoma technology.

His work has included the pathogenesis of plasma cell tumors, and the genetics, structure, and diversity of antibody molecules. He is currently studying the antigen-binding properties of myeloma proteins, which may have clinical application in the rapidly growing field of monoclonal antibody research.

Dr. Potter received the U.S. Public Health Service Meritorious Service Award in 1969 and the Distinguished Service Medal in 1981. During the past year he was elected to the National Academy of Sciences in microbiology and immunology.

The Dyer Lecture was established in 1950 to honor former NIH Director Dr. Rolla E. Dyer. The lectureship is awarded annually to scientists who have made an outstanding contribution to knowledge in a field of medical science. □

Jack Turlik Retires as NHLBI Contracts Chief

Jack Turlik, chief, contracts operations branch, Division of Extramural Affairs, NHLBI, retired recently after 32 years of government service.

His Federal career included service in the U.S. Navy during World War II and 11 years with the U.S. Treasury Department. In 1961, he entered NIH as an assistant employment officer.

The following year he joined the National Heart Institute as administrative officer for the Office of the Director, a position he held until 1965. At that time, he became program contracts officer of the Artificial Heart Program, and was instrumental in the development of this multidisciplinary contracts program.

He assumed the duties of deputy chief, Contracts Operations Branch, in March 1973. Mr. Turlik also assisted in the development and implementation of the NHLBI's contracting policies and procedures. In July 1981, he became chief of the branch.

Mr. Turlik's professional abilities and valuable contributions were widely recog-

nized throughout NIH. During his NHLBI tenure, he was active in personnel management and contracting.



In addition to his meaningful contribution to the application of NIH procurement regulations and personnel management over the years, Mr. Turlik was noted for his sense of humor and pleasing personality.

Dr. Michael Cole Receives 1982 Oral Science Award

An International Association for Dental Research panel selected Dr. Michael F. Cole, a research investigator with the National Caries Program, National Institute of Dental Research, to receive the 1982 Oral Science Research Award.

The presentation took place Mar. 18 during the association's 60th general session held in New Orleans. The award, sponsored by Procter and Gamble Company, is presented annually to promising young investigators under age 35 who have made outstanding contributions in the field of dental research.



Dr. Cole began his research career at the Royal College of Surgeons in England, where he studied the effect of cariostatic agents on the chemical and microbial composition of dental plaque in monkeys.

Much of Dr. Cole's research has focused on the role of immunoglobulins in plaque and saliva, and their role in dental caries. Since joining NCP, he has extensively studied host defense factors in plaque fluid obtained from children and adults to determine how the host regulates the pathogenic potential of plaque microorganisms.

He is currently studying the ability of various routes and regimens of immunization to induce secretory IgA antibody against not only *Streptococcus mutans*, but also other mucosal pathogens, such as *Escherichia coli*.

Dr. Cole received his dental degree and Ph.D. degree in microbiology from the University of London. He also has a master's degree in immunology from Brunel University, London.

Dr. Cole was the first to use plaque fluid to study bacterial metabolism in plaque. He has been actively involved in developing a vaccine against dental caries, employing both primate/rodent models and human volunteers.

He and a colleague at the Institute of Dental Research, University of Alabama in Birmingham, are credited with first describing the direct bactericidal action of the innate mucosal immune factor lactoferrin, and demonstrated the ability of secretory IgM antibody to compensate for the absence of SIgA antibody in the saliva of some selectively-IgA-deficient subjects. □

U.S. GOVERNMENT PRINTING OFFICE: 1982-341-134/16