

the



Record

U. S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

March 21, 1978
Vol. XXX, No. 6

NATIONAL INSTITUTES OF HEALTH

NIAID P4 Containment Facility Will Safeguard Recomb. DNA Research

The first laboratory certified as a maximum containment facility for conducting recombinant DNA research will begin operations later this month.

The National Institute of Allergy and Infectious Diseases held a special press briefing on March 17 at the laboratory located on the grounds of the Frederick Cancer Research Center, Frederick, Md.

The new NIH P4 laboratory has been designed to meet the highest standards of physical safety set forth by the NIH guidelines.

Experiments Categorized by Risk

These regulations categorize experiments according to the potential risks involved and specify conditions and procedures devised as safeguards for conducting this research.

According to Dr. Richard M. Krause, Director of NIAID, "the P4 laboratory will enable scientists to safely conduct experiments requiring the highest level of physical containment."

Until now, no laboratory in the U.S. had been certified for maximum containment as stipulated by the NIH guidelines, which apply to all Federally-supported recombinant DNA research.

The first experiments to be per-

Dr. John W. Daly of NIAMDD Receives Hillebrand Award for Frog Toxin Studies

At a banquet held March 9, the Chemical Society of Washington presented the 1978 Hillebrand Award to Dr. John W. Daly of the National Institute of Arthritis, Metabolism, and Digestive Diseases.

Dr. Daly, who is chief of the Section on Pharmacodynamics, Laboratory of Chemistry, NIAMDD, was cited "in recognition of his research in biochemistry, pharmacology, and



Dr. Daly holds a molecular model of pumiliotoxin, isolated from the frog *Dendrobates pumilio*.

formed in the P4 facility will evaluate the potential risks involved in recombinant DNA research.

Two virologists from NIAID—Drs. Wallace Rowe and Malcolm Martin—will link together viral DNA from the mouse polyoma virus with the DNA from a bacterial plasmid and insert this recombined DNA into a weakened strain of *E. coli*.

The bacteria—with the recombined DNA—will then either be injected into or fed to mice, so that the scientists can later search for evidence of infection in these animals by the viral gene. Before these experiments are begun, the facility will be run as a "dummy" laboratory for 1 week to test safety procedures.

Upon completion of the risk assessment studies, the P4 laboratory will be available to other NIH and visiting scientists, who will conduct their experiments with the assistance of a trained staff.

The laboratory itself—under (See CONTAINMENT, Page 5)

medicinal chemistry leading to a better understanding of the mechanisms of drug effects."

Dr. Daly is the seventh member of that laboratory to receive the award.

Dr. Daly addressed the Washington Section of the American Chemical Society on the topic, Tropical Poison Frogs: The Chemistry, Biology, and Pharmacology of Skin Alkaloids.

Dr. Daly received his B.S. and M.A. degrees from Oregon State University and his Ph.D. degree in organic chemistry from Stanford University in 1958.

He came to NIAMDD's Laboratory of Chemistry in 1958 as a member of the PHS, joined the Civil Service in 1960, and became chief of the Section on Pharmacodynamics in 1969.

In 1972 he received the DHEW Superior Service Award.

Dr. Daly began studying frog toxins in 1963, making many field trips to South and Central America to collect frogs and study their skin toxins, some used by the Indians to poison arrow tips.

(See DR. DALY, Page 6)

Dr. Arthur Hand Wins Award for Oral Science

Dr. Arthur R. Hand has received the Basic Research in Oral Science Award from the International Association for Dental Research during its 56th general session held in Washington on March 16-19.

Dr. Hand is acting chief of the Laboratory of Biological Structure, National Institute of Dental Research.

He was honored for his studies of the structure and function of salivary and related exocrine glands.

The award, sponsored by Proctor and Gamble Company, is presented annually to honor a young dental scientist who has made an outstanding contribution to oral science.



Dr. Hand

Dr. Kandel To Present NIH Lecture Mar. 29 On Cellular Insights



Dr. Kandel will discuss the study of memory and learning in simple invertebrate nervous systems.

Dr. Eric R. Kandel will present the NIH Lecture on Cellular Insights into Behavior and Learning on Wednesday, March 29, at 8:15 p.m. in the Masur Auditorium.

Since the evolutionary writings of Charles Darwin, scientists have sought parallels for human behavior in the behaviors of lower forms of life. Dr. Kandel will consider a particular aspect of that research, the study of memory and learning in simple invertebrate nervous systems.

As opposed to the estimated trillion nerve cells found in higher animals and man, the invertebrate nervous system, such as that of the snail, contains some 10,000 to 100,000 cells.

Track Individual Cells

This small number makes it possible to track at the level of individual cells not only sensory information coming in and motor action going out, but the total sequence of events that make up a behavioral response.

By using biological techniques, the neural communications at the cell-to-cell or synaptic level can be analyzed to clarify the mechanisms of learning and memory in these simple animals.

Much of Dr. Kandel's own work has centered on *Aplysia*, a giant (See DR. KANDEL, Page 8)



Researchers use shoulder-length rubber gloves to move and control all the materials and tools in their experiments, preventing direct contact between their hands and anything inside the cabinet system. The interconnected cabinet units allow for the free movement of materials within them.

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, Education, and Welfare, and circulated by request to interested writers and to investigators in the field of biomedical and related research. The content is reprintable without permission. Pictures are 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 the Department of Health, Education, and Welfare.

NIH Record Office Bldg. 31, Room 2B-03. Phone 49-62125

Editor Frances W. Davis

Associate Editor Heather Banks

Staff Correspondents

ADA, Judy Fouche; CC, Susan Gerhold; DCRT, Mary Hodges; DRG, Sue Meadows; DRR, Jerry Gordon; DRS, Arthur F. Moore; FIC, George Presson; NCI, Dr. Robert M. Hadsell; NEI, Julian Morris; NHLBI, Bill Sanders; NIA, Ann Shalowitz; NIAID, Jeanne Winnick; NIAMDD, Pat Sheridan; NICHD, Tina McIntosh; NIDR, Sue Burroughs; NIEHS, Hugh J. Lee; NIGMS, Wanda Wardell; NIMH, Betty Zubovic; NINCDS, Carolyn Holstein; NLM, Roger L. Gilkeson.



Dr. Stanley Newfield (r) leads several NIH employees in prayer during lunch hour services. A group gathers Monday through Friday at 12:45 p.m. in the 11th floor solarium of the Clinical Center to pray for 15 minutes. In order to hold services, 10 men or a "minyan" must be present. Some participants attend services on their lunch hour to say "kaddish" for a family member who has recently passed away. NIH employees, patients, and their families are welcome. If interested, contact Dr. Newfield, 496-5841.

NIH Tennis Club Meets March 29, Plans Season

The NIH Tennis Club will hold its first meeting of the new season at 11:30 a.m. on March 29 in Bldg. 31, Conference Room 4 (A Wing).

Announcements will be made regarding membership applications, singles ladder, tennis lessons, flight tennis (new), team tennis, and the spring tournament.

Begin Playing in May

Attend this meeting to avoid missing out on interesting events beginning in early May.

Officers of the R&W-sponsored Tennis Club are: Richard Hargett, president (496-4602); Lynne Reamer, secretary (496-4833); and John Shaw, treasurer (496-3204).

Telephone Tape Recordings Inform on Personnel Topics

Short telephone tapes on personnel-related subjects are being offered to NIH employees 24 hours daily by the Division of Personnel Management.

Dial 496-4608 to hear recordings on the dates listed:

Freedom of Information Act
—March 20-24

Your Leave Benefits—
March 27-31

AWOL and LWOP—
April 3-17

Injured on the Job—
April 10-14

Topics with dates recordings may be heard will be posted on NIH official bulletin boards under the heading, Telephone Tapes for Personnel Topics.



Nathaniel Polster (l), who represents Research to Prevent Blindness and other organizations, and Bill McLin (r), who represents the Epilepsy Foundation of America, discussed the Work of Health Lobbyists on Feb. 27. The NIH Information Training Committee sponsored the meeting. Dr. Seymour Perry, NIH Associate Director for Medical Applications of Research, will speak on Consensus Development and Technology Transfer at the next program, March 24.

Health's Angels Schedule Lecturer, Films, Spring Runs and Challenge Relay

The NIH Jogging Club (Health's Angels) will hold its spring meeting on Friday, March 31, at 7:30 p.m. in Bldg. 30, Room 117.

Dr. Wayne Ledbetter, an orthopedic surgeon, will present a lecture on Structural Problems Encountered by Runners. He will also present a film he has recently produced showing various running styles and their problems.

There will also be several short films on the Pentathlon and the Olympics. Refreshments will be served. Members will be admitted free, non-members for \$1.

On Wednesday, April 12, at 5:30 p.m. in front of Bldg. 1, the NIH Jogging Club will start the Spring Beginners One-Mile Series. Awards will be given to all who complete 4 of 8 runs. At the same time and place, there will be a 3-mile fun run. Runners of all levels are encouraged to participate. Literature on jogging will be available, and runners will answer questions and suggest equipment.

The First Annual Institute Challenge Relay will take place at 12:15 p.m. on Wednesday, May 24, in front of Bldg. 1.

Five-person teams will compete, with each person running 1/2 mile. The Relay is designed to promote friendly competition, and all runners will receive a ribbon for participating. Runners of all levels are encouraged to enter—preferably from the same B/I/D but this is not required.

For information write to Dr. Peter Pentchev, Bldg. 10, Room 3D-14.

For an application to join the NIH Jogging Club write to Pat Carmichael, Bldg. 1, Room 118.

Information Training Seminar To Feature Dr. Perry Mar. 24

Consensus Development and Technology Transfer will be the subject of the next NIH Information Training Committee Seminar, featuring Dr. Seymour Perry, NIH Associate Director for Medical Applications of Research.

The meeting is scheduled for Friday, March 24, at 9:30 a.m., in Conference Room 9, Bldg. 31-C.

All are invited to this discussion of the transfer of research findings to physicians and allied health professionals at the community level.

National Graduate University New Catalogue Is Available

The revised catalogue for graduate courses in Human Service and in Management Science at the National Graduate University is now available.

Special courses offered include studies in gerontology, development planning, affirmative action and equal employment opportunity, human resource management, and environmental quality and resource management.

For information, write to: National Graduate University, 1101 North Highland St., Arlington, Va. 22201, or call (703) 527-4800.

NIH'ers and Friends Can Relax Fridays in Bldg. 10 Cafeteria

Are you looking for a place to meet other NIH'ers socially in an informal setting?

Friday afternoons, from 5 to 6:30 p.m. the left side of the Bldg. 10 cafeteria is being reserved by the NIH Singles Club as just such a place. Food and drinks may be purchased, and new acquaintances can be made in a relaxed atmosphere. For information, call Dr. Christopher Aylmer at 496-1000.

Outdoor Club Organizes Backpacking, Rafting, Orienteering, Spring Hike

The first meeting of the Outdoor Activities Club, sponsored by the R&W Association, was held on Feb. 24 in Wilson Hall.

Hiking, backpacking, orienteering, and whitewater-rafting were four basic activities of interest to members.

Some of the most attractive and wild areas of the Shenandoah National Park will be explored during planned hikes of medium length. The first hike, to Little Devil's Stairs in the northern section of the Park, is planned for April 1.

On Memorial Day weekend, a 2½ day backpacking trip is planned in the Spruce Knob-Seneca, National Recreation Area. Supplies, tents, and sleeping gear should be provided by participants. Such a trip provides relatively inexpensive fun, excitement, and exercise.

The above trips are intended for both individuals and families. School-aged children with some prior hiking experience are welcome.

Orienteering, widespread in Europe, is a relatively new sport in the U.S. It unites compass and map handling skills with rapidity and tenacity in the wilderness.

Since interest at the meeting was overwhelming, basic instruction followed by practical demonstrations will be undertaken soon. If interest persists, NIH-wide competitions will be organized. Special family competitions may broaden participation further.

Whitewater rafting on the Youghiogheny River, Pa., is famous for the thrills and beauty it provides. The Club hopes to organize a couple of rafting trips later this summer. This will be the only activity where a 12-year-old age limit will be imposed on participants.

Interested persons may watch for Club activities announced in the R&W "Smoke Signals" or contact Robert Katz at 496-7501.

History of Medicine Society Sponsors Lecturers March 23

The Washington Society for the History of Medicine will meet Thursday, March 23, at 8 p.m. in the Billings Auditorium, National Library of Medicine.

Dr. Edward Ruestow of the University of Colorado will discuss Boerhaave, Leeuwenhoek, and the Red Corpuscle: Discovery and Fiction.

Also, Dr. Welmoet Bok-van Kammen will present an illustrated lecture on Congenital Malformations as Viewed in the De Groot Moenster Boek of 1736.

Guests are welcome for the free program. For information call 496-5961.

Preschool Program Holds Open House April 3-7 for Week of the Young Child



Much of the work done by children in the Preschool Developmental Program at NIH will be displayed when they hold their open house.

The Preschool Developmental Program at NIH will observe the Week of the Young Child, April 2-9—a time for emphasizing the rights and needs of young children and their families—by holding an open house at the Preschool, Bldg. 35, Monday, April 3, through Friday, April 7, from 9 to 11 a.m.

Everyone is invited to visit and enjoy the children and their work, much of which will be on display.

The National Association for the Education of Young Children is sponsoring this special week, during which the Maryland State Department of Education is coordinating a number of planned State activities.

These programs and special projects will be listed in local newspapers.

In early June, the Developmental Program at NIH will focus further on the rights and needs of young children and their families by sponsoring Child Care Week at NIH.

That week's program will include panel discussions, films, and activities at the Center that are of interest to all who care about children. The schedule will be described fully later this spring.

For further information on child care at NIH, call Virginia Burke, 496-1811.

Register Now for Summer Camp for 5-12 Year Olds

Persons who have a child 5 to 12 years of age may register the child for summer camp at NIH immediately.

Acceptance is on a first come, first served basis.

A brochure may be picked up in the office of the Child Care Coordinator, Bldg. 31, Room 2B-19, or it will be sent upon request.

For further information, call 496-1811.

R&W Cookbook Reprinted; 1st Printing Nets \$1000 for PEF

The R&W Cookbook Committee recently donated \$1000 from the proceeds of its cookbook sales to the Clinical Center Patient Emergency Fund. Barbara A. Murphy, chief of the Clinical Center Social Work Department, happily accepted the generous gift on behalf of the PEF.

The committee compiled and edited the Cookbook which contains 400 favorite recipes of NIH employees and national dishes con-

Camera Club Meets Tomorrow, Plans May NIH Photo Competition

The NIH Camera Club will meet at 8 p.m. on Wednesday, March 22, in Bldg. 31, Conference Room 4. An open pictorial competition will be held. There will be no judge—persons attending will score each photo (black and white prints, color prints, and slides) on a scale of 1 to 10.

The Club will sponsor a NIH-wide print competition on May 15. All NIH employees and their families are eligible to enter, and the subject matter will be open. The photos may have been taken at any time during the photographer's lifetime.

An individual may enter as many as 4 prints in either black and white or color categories or both. The entry fee will be \$1 per print. Entries may be commercially processed and must be between 5x7 and 11x14 inches on mats no larger than 16x20 inches.

There will be three judges and three prizes in each category.

For further information on the competition, call Gail Planck, 881-1378.

tributed by NIH Visiting Scientists.

The first printing was a sellout, but copies of the second printing are available at all R&W Gift Shops and the Activities Desk, Bldg. 31, Rm. 1A18. Of the \$3.50 cost of each Cookbook, \$1 is donated to the Patient Emergency Fund.

Sailing Association Learns About Sails March 30



Where was Harry Schaefer when he took this photo? Come to the Sailing Association meeting and find out.

The March 30 meeting of the NIH Sailing Association in Bldg. 30, Room 117, at 8 p.m., will feature Jim Marshall and Jim Crane of North Sails, Annapolis. They will discuss cruising and dinghy handling in light and heavy airs, and will show a movie of proper sail trim in action.

Mr. Marshall is the sail designer for North Sails and specializes in

large (30-50 foot) boat offshore cruising and racing. Come spring, he will help the Sailing Association modify its old, blown out sails.

Mr. Crane is the manager of North Sails. He has done considerable one design offshore racing in Solings and took third place in the World Lightning Competition last year. Everyone is welcome.

Minority Biomedical Research Meeting To Feature Students, Noted Scientists

Approximately 1,500 biomedical researchers of minority origin—Black, Hispanic, American Indian, and Hawaiian/Polynesian—are expected in Atlanta March 27-29 for the Sixth Annual Minority Biomedical Support Program Symposium.

The symposium, cosponsored by the Division of Research Resources and Atlanta University Center, is the largest minority biomedical research meeting in the U.S.

At this year's symposium there will be student-researchers from 80 universities, colleges, and junior colleges presenting approximately 400 scientific research papers in biochemistry, microbiology, chem-



An MBS student at Xavier University of Louisiana undertakes pharmacology research seeking important data relating to medicinal properties of drugs.

istry, physiology, pharmacology, parasitology, and other biomedical research areas.

Most of the papers will be given by undergraduate students, but several presentations also will be made by renowned scientists, including:

- 1976 Nobel Prize Winner in Chemistry Dr. William N. Lipscomb, Jr., of Harvard University;
- 1974 National Medal of Science Winner Dr. Britton Chance, Director of the Johnson Research Foundation at the University of Pennsylvania;
- Dr. George Lythcott, Administrator of the Health Services Administration, PHS, HEW;
- Dr. Benjamin Alexander, president of Chicago State University and a former director of the Minority Biomedical Support Program while he was at NIH;
- Dr. Thomas Malone, Deputy Director of NIH;
- Dr. Thomas Bowery, DRR Director;
- Dr. Ruth Kirschstein, Director of the National Institute of General Medical Sciences;
- Dr. Ciriaco Gonzales, director for the MBS Program, DRR;
- Dr. Everett Anderson, associate director of the Laboratory for Human Reproduction and Reproductive Biology, Harvard University;
- Dr. Joe Johnson, Director of the Minority Biomedical Support Program at the Atlanta Univer-

sity Center;

- Dr. Robert Pozos, chairman of the department of physiology, School of Medicine, University of Minnesota at Duluth;
- Dr. Graciela Candellas, professor of biology, University of Puerto Rico;
- Dr. Ramon Piñon, assistant professor of biology, University of California at San Diego.

In addition to these scientists, Sen. Herman Talmadge (D, Ga.) will be the featured speaker at a dinner for MBS program directors on the evening of March 27.

Senator Talmadge will discuss Federally Financed Comprehensive Health Care Programs. The MBS program directors are scientist-administrators who are in charge of the MBS programs at the 80 institutions receiving DRR funds.

Chicago State's Dr. Alexander will speak at a banquet on the evening of March 28 at which time he will pay tribute to Dr. Geraldine Woods, who helped NIH start the MBS Program in 1972. Dr. Woods, a consulting biologist, remains a volunteer adviser to the Program.

On the morning of March 27, Medal of Science winner Dr. Chance will deliver the First Annual George Willis Memorial Lecture. Dr. Willis, a health scientist administrator at NIH prior to his death in 1976, also was instrumental in launching the MBS Program during the early 1970's.

Dr. Walter Sulliver, Director of the Science Research Institute for Atlanta U. Center, is coordinating this year's MBS Symposium.

Dr. Walter Sulliver, Director of the Science Research Institute for Atlanta U. Center, is coordinating this year's MBS Symposium.

Specialists Will Teach Employees How To Cope With Consumer Problems

A Consumer Education Program, conducted by specialists from various Federal, county, state, and private organizations, is being offered to NIH employees.

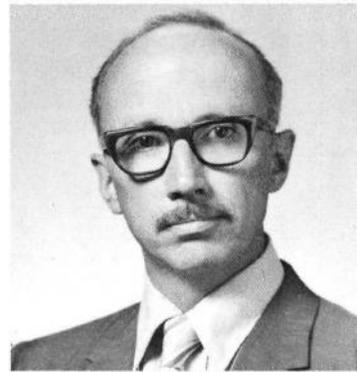
The program—sponsored by the Employee Relations and Recognition Branch, DPM—will consist of three 3-hour lectures on Wednesdays: April 5, 12, and 19 from 8:30 to 11:30 a.m.

Subjects will include: money management; energy conservation in the home; investing in stocks, bonds, real estate; housing in the metropolitan area; ways the consumer can protect himself from unfair and deceptive practices, etc.

A desk-to-desk personnel bulletin was sent March 14. Employees who want to attend the sessions may complete the form at the bottom of the bulletin and submit it to their supervisors by March 23.

For information, call 496-4973.

John M. Gibbons, NCI Contracts Branch, Dies



John M. Gibbons

John M. Gibbons, assistant branch chief of the Research Contracts Branch, National Cancer Institute, died of lymphoma Feb. 28 in the Clinical Center.

Mr. Gibbons, who had been with HEW since 1959 and NCI since 1970, was recipient of a Sustained Superior Performance Award in 1969 for preparation of instructions and organization of training programs in contracting.

Mr. Gibbons, a graduate of the Baruch School of Business of City College of New York in 1955, started his Government career with HEW in 1959. In 1964 and 1965 he served as a supervisory contracts specialist for the FDA.

From 1966 to 1968 he worked with OAM and from 1968 to 1970 he served as procurement analyst in the Office of the Secretary, HEW before coming to NCI in 1970.

He had been a patient at the CC since 1972. Mr. Gibbons is survived by his wife, Marcella, and two children, Julie and John, his mother and two sisters.

Agencies Confer on High Blood Pressure Control For Federal Employees

Representatives from more than 20 Federal agencies participated in the Conference on High Blood Pressure Control in the Federal Worksetting, cosponsored by the National Heart, Lung, and Blood Institute and the Civil Service Commission, on March 6 and 7 in Washington, D.C.

The conference focused on the activities of the Working Group on High Blood Pressure Screening, part of the Interagency Technical Committee on Heart, Blood Vessel, Lung, and Blood Diseases and Blood Resources.

The IATC created the Working Group 2 years ago. This group has been examining Federal employee hypertension control programs and



Dr. Sidney Blumenthal, acting deputy director of NHLBI, was one of the speakers opening the HBP meeting.

exploring ways to stimulate hypertension education and control programs for Federal employees.

Among the panelists were Drs. Barbara Wasserman and Robert Brandt, NIH Occupational Medical Service, who are now developing a hypertension detection and counseling program for NIH employees.

Preventive measures against various poisonous materials—including medicines—that can be taken in the home could mean the difference between life and death, particularly to young children.

Adult patients, especially parents, should be advised by their physicians and dentists on the proper use and care of medications.

- Many prescriptions and over-the-counter medications may be packaged in containers that are very difficult for a child to open.
- Medications should be stored out of reach of children and, preferably, locked.

Other preventive pointers are: make certain that all products are properly labeled; clean out the medicine cabinet periodically; and never refer to medicine as "candy."



CONTAINMENT

(Continued from Page 1)



Despite limitations imposed by the heavy rubber gloves used in performing experiments in the P4 laboratory cabinet system, skilled workers are able to make delicate adjustments on the microscope. A closed-circuit television system with the screen mounted above the researcher's head provides the means for viewing.

negative air pressure—is specifically equipped to prevent the escape of any microorganism into the environment. All experiments will be carried out in an elaborate system of enclosed, interconnected, gas-tight cabinets.

To carry out their experiments, laboratory workers will reach into glove boxes containing shoulder-length, heavy rubber gloves attached to the sides of the cabinets.

The cabinet system measures approximately 70 feet in combined length and is contained in a room of about 400 sq. feet. Before entering and leaving the cabinet line, all materials and equipment must be either sterilized or disinfected.

Operated for NIH by NIAID,



Not even the smallest microorganism can penetrate the cabinet system in the NIH P4 laboratory for recombinant DNA research. The facility at Fort Detrick in Frederick, Md., is the first laboratory certified to meet the P4 requirements set forth in the NIH guidelines. One of the methods for bringing materials into the gas-tight cabinets is through an autoclave, where sterilization is accomplished through intense heat. Only after the heavy door is sealed into place can the interior cabinet side be opened. Each time the interior of the autoclave has been exposed to the inside of a cabinet, it must be run through a sterilizing cycle before the outside door can be opened.

Catherine 'Millie' Dougherty Will Follow Plans Suggested to Many Other Retirees

Catherine P. Dougherty, chief of the Employee Relations and Recognition Branch, Division of Personnel Management, retired on Feb. 28 after 30 years of Federal service, most of it at NIH.

In her first position, Mrs. Dougherty served as a secretary to the branch manager of Paramount Pictures, where she attended parties and met many of the famous movie stars of that era.

She began her career in the Federal service in August 1937 as a secretary in the State Department, and later served with the Justice and Interior Departments. She left Interior in 1946, and had almost a 10-year break while she raised her family, Julie and Vincent.

"Millie," as she is affectionately known, came to NIH in 1955 as a secretary. Later she worked as an employee relations assistant, employee relations officer, placement specialist, and staffing specialist before becoming chief of the Employee Relations and Recognition Branch in 1967.

As a result of her efforts, NIH was among the first Federal agencies to have a retirement planning program for its employees. This has grown into one of the most popular programs at NIH.

She was also instrumental in expanding the Alcoholism Program for training supervisors even be-

the one-room laboratory is expected to function as one of three interim facilities to be set up pending completion of renovations for the National Biomedical Containment Laboratory which will also be located at Frederick, Md.

The national facility, which will house both P4 and P3 laboratories, is not expected to be operational before 1979 or 1980.



Mrs. Dougherty has been instrumental in initiating several programs at NIH that have become quite popular.

fore it was a requirement of the U.S. Civil Service Commission. Changed to incorporate Drug Abuse, it now includes emotional problems and is called the Employee Assistance Program.

Another program she introduced to NIH is the Consumer Education Program, which is growing in popularity as inflation rises.

She served on the Child Care Committee for the NIH Day Care Center and the Credit Committee for the NIH Federal Credit Union. She was elected to the Board of Directors of the Credit Union in 1973, vice president in 1976, and Credit Union president on Feb. 27, 1978, the day before her retirement.

At a farewell luncheon in her honor, past and present NIH employees, along with many from PHS and HEW, attended. She was presented with a painting and a gold pendant.

"Millie" had many suggestions for her retirement planners, but her plan is to relax for a while. As president of the Credit Union, president of the Holy Cross Guild, with her newly acquired hobby of oil painting, and four grandchildren living across the street, she won't do much relaxing.

MUMPS Users' Group Meeting In June Offers Varied Program

The MUMPS Users' Group (MUG) is meeting in San Francisco, Calif., June 7-9.

The conference will include all-day tutorials on programming in MUMPS, ambulatory care information systems, and technical aspects of ANSI-Standard MUMPS.

For information write to Ms. Pat Zimmerman, Department of Biometry, Wearn Research Building, University Hospitals, Cleveland, Ohio 44106.

DES Task Force Meets; Will Evaluate Issues And Recommend Action

The DES Task Force—appointed by Dr. Julius Richmond, HEW Assistant Secretary for Health, to evaluate the public health issues associated with DES (diethylstilbestrol)—held its first meeting at NIH on March 3.

Dr. Diane J. Fink, director of the NCI Division of Cancer Control and Rehabilitation, is chairman of the Task Force, composed of concerned Federal agencies and consultants from scientific and lay communities.

The first topic discussed was whether mothers who took DES beginning in the 1940's are themselves at higher-than-average risk of breast cancer and other hormone-related cancers.

The Task Force will analyze preliminary data from a National Institute of Child Health and Human Development-supported University of Chicago study of pregnant women who took DES in the early 1950's in a controlled randomized trial; assess other data that would help define risks; recommend steps for notifying women and the medical community, if appropriate; and recommend any necessary action for continuing medical surveillance of exposed women.

Other Issues To Be Considered

Other issues are the risks of exposed DES daughters and sons.

Since 1974, the National Cancer Institute has supported a study of DES daughters, called the DESAD (diethylstilbestrol and adenosis) Project, at the Mayo Clinic, Massachusetts General Hospital, Baylor College of Medicine, and the University of Southern California.

Also, since 1974, the study at the University of Chicago has focused on DES sons as well as on daughters exposed *in utero*, and more recently on the mothers who received DES for complications of pregnancy.

In addition, the Task Force may examine other issues associated with DES and other estrogens.

Task Force members include chairman Dr. Fink; Dr. Mary Ann Sestili, NCI, DCCR, executive secretary; Dr. Heinz W. Berendes, NICHHD; Dr. Philip Corfman, NICHHD; Dr. Marion J. Finkel, Bureau of Drugs, FDA; and Dr. Robert N. Hoover, NCI, DCCP.

Also, Dr. Edward D. Martin, HSA; Dr. John A. McLachlan, NIEHS; Dr. Howard W. Ory, CDC; Dr. William Pomerance, NCI, DCDB; Clara G. Schiffer, HEW Office of the Assistant Secretary for Planning and Evaluation; and Michael White, PHS Office of Public Affairs.

Consultants are Fran Fishbane, DES ACTION; Dr. Arthur Herbst, Chicago Lying-In Hospital; Dr. Jimmie Holland, Memorial Hospital, New York City; Dr. Leonard T. Kurland, Mayo Clinic; Barbara Seaman, New York City; Dr. Howard Ulfelder, Massachusetts General Hospital; and Dr. Sidney Wolfe, Health Research Group.



Dr. Fink

DR. DALY

(Continued from Page 1)

About 80 toxins have been identified in five different classes: batrachotoxins, histrionicotoxins, gephyrotoxins, pumiliotoxin A, and pumiliotoxin C.

Collaborative studies with Dr. Takashi Tokuyama, Osaka City University, Japan, and Drs. Isabella and Jerome Karle, U.S. Naval Research Laboratory, have resulted in the determination of the molecular structure of many of these unique alkaloids.

Dr. Daly has collaborated with Dr. Charles W. Myers of the American Museum of Natural History on a detailed investigation of the species of frogs from which poisons are obtained.

Identify New Species

Their extensive monograph, published as a bulletin of the Museum, is on the taxonomic classification of the different frog species and the alkaloids isolated from them.

They have identified several new species of these land frogs, usually found on the floor of the jungle. The frogs make little or no attempt to hide, and can be readily caught, but some are so toxic that one touch might easily kill a person.

Some members of these families of frogs have brilliant coloration—a warning signal to predators of their poisonous nature.

Indians often use one species as a living poison factory: arrows can be poisoned by rubbing the tips on the frog's skin. The frog is then released and can be reused repeatedly.

Establishing the molecular structures of the toxins is a complex task—there may be as many as 20 alkaloids present in the skin of each frog, but a total of only 50 to 100 micrograms per frog.

The pharmacologic activity of the natural toxins as well as some synthetic analogs have been investigated with Dr. Edson Albuquerque of the University of Maryland.

The isolated toxins have marked-



Dr. Daly indicates a much enlarged photo of the frog which produces, in addition to toxins, a potent analgesic agent.

ly different activities: some are neurotoxic, others analgesic, some potentiate muscle contractions and are useful in cardiac research.

Some of the compounds have become established research tools and are used in binding studies on membrane channels.

Studies Effects on Cyclic AMP

In addition, Dr. Daly has done research since 1968 on the stimulation of cyclic AMP formation by various amines. He and his colleagues established a prelabeling technique that is now widely used for the study of cyclic AMP formation. The frog toxins have found use in such studies to cause selectively depolarized nerves in brain tissue.

Recently, he has written a book on the neurochemical role of cyclic AMP in controlling nerve membrane function.

Dr. Daly is the author or co-author of more than 240 publications and serves on the editorial boards of five journals.

Visits Peru on Alpha Helix

His collecting expeditions allow him to combine scientific pursuits with his favorite recreation—camping, canoeing, fishing, skin diving, hiking, and sailing.

Last summer he spent part of a trip to Peru in the upper Amazon on the Scripps Oceanographic In-

GWU To Offer Courses In Electron Microscopy

A series of practical courses are being offered by George Washington University in June: Transmission Electron Microscopy, June 5-16; and Scanning Electron Microscopy, June 19-23 and June 26-30.

These classes are designed to introduce participants to the theory and practical aspects of electron microscopy.

Primary emphasis will be on specimen preparation, operation of electron microscopes, and photographic and darkroom techniques.

For TEM, the tuition is \$550; for SEM, \$475; and for the combined program, \$850.

For information, write Fred Lightfoot, Department of Anatomy, G.W.U., 2300 "I" Street, N.W., Washington, D.C. 20037, or call (202) 676-2881 or 3511.

stitute's Research Vessel *Alpha Helix*.

More recently, Dr. Daly returned from a collecting trip to Colombia. There, Drs. Daly and Myers found true poison dart frogs at a level of about 1200 feet in the foothills of the Andes, within an hour's hike from a tiny town, Santa Cecilia, reached by jeep.

On this same trip he also collected in Panama. From there he brought back black and blue mottled frogs which have interesting toxins, and a new species of small green poison frogs found 20 to 40 feet above the ground in trees.

One Snake Is Immune

Most predators avoid the poison frogs because of the poisonous skin secretions. However, one species of snake has now been found to be immune to the toxins of a variety of poison frogs.

The taxonomy of the poison frogs is now nearly completed, and 80 per cent of the alkaloids have been sampled and screened. Many pharmacological tests remain to be done.

One frog found in Ecuador has an analgesic toxin already found

NIH Visiting Scientists Program Participants

2/22—Dr. Michael Ashley, Australia/United Kingdom, Laboratory of Immunobiology. Sponsor: Dr. Berton Zbar, NCI, Bg. 37, Rm. 2B09.

2/22—Dr. Barbara Lynn Pope, Canada, Division of Virology. Sponsor: Dr. W. J. Martin, Bureau of Biologics, Bg. 29A, Rm. 3B20.

2/26—Dr. Martin Isturiz, Argentina, Laboratory of Oral Medicine. Sponsor: Dr. Abner Notkins, NIDR, Bg. 30, Rm. 124.

2/26—Dr. Panu Vilkki, Finland, Clinical Endocrinology Branch. Sponsor: Dr. Joseph E. Rall, NIAMDD, Bg. 10, Rm. 9N222.

3/1—Dr. Sastry Gollapudi, Canada, Section on Intermediary Metabolism. Sponsor: Dr. Milton Kern, NIAMDD, Bg. 10, Rm. 9B11.

3/1—Dr. Masaaki Kadoma, Japan, Laboratory of Molecular Aging. Sponsor: Dr. Bertram Sacktor, NIA, GRC, Baltimore City Hospitals, Baltimore, Md.

3/6—Dr. Lev B. Klempner, Laboratory of Molecular Biology. Sponsor: Dr. Ira Pastan, NCI, Bg. 37, Rm. 4B27.

3/7—Dr. Angel L. de Blas, Spain, Laboratory of Biochemical Genetics. Sponsor: Dr. Marshall Nirenberg, NHLBI, Bg. 36, Rm. 1C06.

3/7—Dr. Woshio Inoue, Japan, Laboratory of Tumor Virus Genetics. Sponsor: Dr. Brenda I. Gerwin, NCI, Bg. 37, Rm. 1B17.

3/12—Miss Marina Rajacic, Yugoslavia, Developmental and Metabolic Neurology Branch. Sponsor: Dr. Eberhard Trams, NINCDS, Bg. 10, Rm. 10N308.

to be many times more effective than morphine as a painkiller.

Venom from the tiny kokoi frogs, used by the Noanama Indians of Colombia for centuries to poison darts, was the first poison studied. It proved to be nearly 10 times as potent as tetrodotoxin from Japanese globe or puffer fish—the deadliest of all previously known toxins.

Named batrachotoxin—from *batrachos*, the Greek word for frog—the toxin was found to be chemically related to the steroid hormones, but containing nitrogen, which is responsible for its basic properties.

No Antidote Known

One milligram could kill 50,000 mice. Dried venom, which is insoluble in water, has remained lethal on the tips of darts for as long as 15 years. There is no known antidote at present.

Dr. Daly says he knows of a few more species that remain to be collected and studied. These occur in Brazil near the mouth of the Amazon River, on the coast of Colombia, and in the Amazonian region of Peru.



Dr. Daly (l) collected samples on the Pacific slopes of the Andes. Right, one of the camp sites set up by Drs. Daly and Myers in a cloud forest of Colombia.

Dr. Klaus Schwarz Dies; Former NIH Scientist Studied Trace Elements

Dr. Klaus Schwarz, renowned investigator in trace element nutrition and a former scientist with the National Institute of Arthritis, Metabolism, and Digestive Diseases, died Jan. 30 in Los Angeles.

At the time of his death, Dr. Schwarz was chief of the Laboratory of Experimental Metabolic Diseases, V.A. Hospital, Long Beach, Calif., and associate professor, department of biological chemistry, UCLA School of Medicine.

Dr. Schwarz, who came to NIH from Mainz, Germany, in 1949 as a research fellow, eventually became chief of the Liver Disease Unit, Laboratory of Nutrition and Endocrinology, NIAMDD.

In this capacity, he discovered a water-soluble factor, "Factor B" that prevented liver necrosis in rats and subsequently identified the factor as selenium. He was assisted in this work by Dr. Calvin Foltz, now with the Laboratory of Chemistry, NIAMDD.

Dr. Schwarz's work on selenium led to the recognition that this element was deficient in soils from many areas of the world and that large economic losses of livestock and poultry could be prevented by dietary supplements of selenium.

As an outgrowth of the isolation of selenium, a second essential trace element, chromium was discovered in Dr. Schwarz's NIAMDD laboratory in conjunction with Dr. Walter Mertz, now at USDA.

In 1963 Dr. Schwarz moved to the V.A. Hospital in Long Beach and expanded his trace element research there and at UCLA as a grantee of NIAMDD. He showed that tin was also an essential trace element for rats, and that growth promoting effects could be demonstrated for fluorine and vanadium.

NIGMS Meeting Will Consider Membrane Receptors, Disease

A 2-day conference on Membrane Receptors and Disease, sponsored by the National Institute of General Medical Sciences, will be held Thursday and Friday, March 23-24, starting at 8:30 a.m., in Bldg. 1, Wilson Hall.

Topics to be discussed will include: Membrane Receptors in Human Disease, Acetylcholine Receptor, Adenylate Cyclase, Bacterial Chemotaxis Transmembrane Signaling, Opiate Receptor, Receptor-Mediated Uptake of Lysosomal Enzymes, and Receptors for Low-Density Lipoproteins.

Conference co-chairmen are Dr. Jesse Roth, chief of the Diabetes Branch, NIAMDD, and Dr. Palmer Taylor, associate professor, division of pharmacology, department of medicine, University of California, San Diego.

New Pamphlet Now Available Explains 'How To Donate the Body or Its Organs'

A new publication, *How to Donate the Body or its Organs*, is being distributed by NIH and the Consumer Information Center, GSA, in answer to numerous requests.

Action by a donor's family is important, according to the pamphlet.

"Filling out the donor card does not mean that your wishes will be followed automatically," it states. "Someone must see to it that the donation takes place after death. So tell your wishes to your friends, lawyer, spiritual advisor, doctor, and above all, your relatives."

Author Bowen Hosford, a lawyer and staff member of the NIH Office of Communication, explained that this advice stems from extensive interviews with persons experienced in transplantation and familiar with State laws.

"After the first heart transplants, the Uniform Anatomical Gift Act or laws like it swept through all State legislatures," Mr. Hosford said. "These made possible Uniform Donor Cards that persons carry in their wallets."

These are legal documents, but transplant specialists are reluctant to remove a body part after death unless the next-of-kin specifically consent. The cards do promote a consciousness of the need for donations.

About half the states now authorize "donor" drivers' licenses. More than 90,000 Marylanders have licenses with the words "Organ Donor" on them. Virginia has a donor card as an integral part of its license. D.C. does not have donor licenses.

The pamphlet advises that, "though grief stricken," relatives must act quickly to donate when a family member dies. Medical people must remove kidneys immediately after death for them to be transplanted.

It is best if corneas are removed within 6 hours; tissues such as bones can be used if removed up to 24 hours after death.

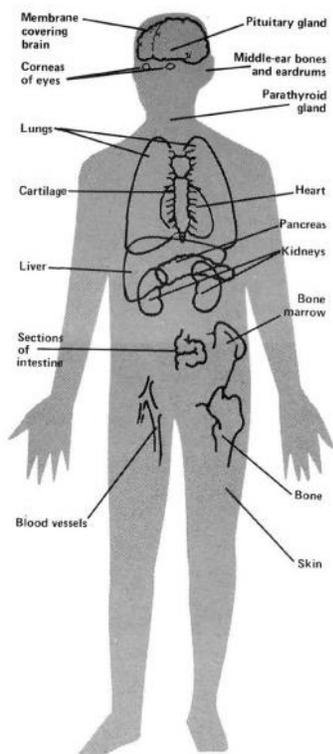
The new NIH pamphlet also advises on how to donate one's body to a medical or dental school for anatomical study.

Potential donors may have been frightened by the novel and movie *Coma* into thinking organs might be prematurely removed. However, the Uniform Anatomical Gift Act provides that a doctor involved in the transplantation cannot pronounce death of the donor. Only a different doctor can do that.

Frequent requests are received for donor information. In mid-1976, the Consumer Information Center asked that NIH sponsor a

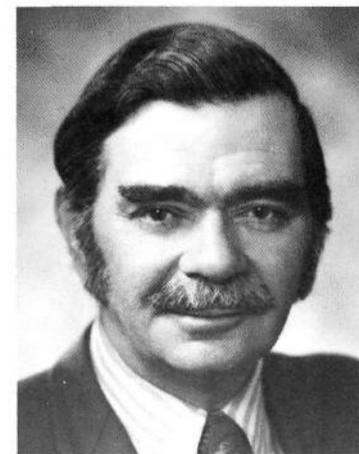
The meeting is open to the public, and no registration is required.

For information, contact Dr. Elke Jordan, NIGMS, Westwood Bldg., Room 910, Bethesda, Md. 20014, telephone (301) 496-7175.



SOME BODY PARTS THAT MAY BE TRANSPLANTED, NOW OR IN FUTURE

Chief of NCI Branch, Dr. Robert Love Dies



Dr. Robert Love

Dr. Robert Love, chief of the NCI Program Analysis and Formulation Branch, Office of the Director, since January 1975, died of heart failure March 6. He was 57 years old.

Served in NCI From 1955 to 1960

Dr. Love came to the National Cancer Institute from the Jefferson Medical College of Philadelphia, where he was professor of pathology from 1960 to 1974. Prior to that, he had done research in pathology and hematology at the NCI Laboratory of Pathology from 1955 to 1960.

He worked at Lederle Laboratories, Pearl River, N.Y. from 1951 to 1955; the University of Cambridge, England, from 1948 to 1950; and the University of Glasgow, Scotland, in 1948.

He received his M.D. Ch.B. degree from the University of Glasgow Medical School in 1944. After service as a resident physician, he served as a Major in the Royal Army Medical Corps from 1946 to 1948.

Dr. Love is survived by his wife, Sheila, and three children.



On Feb. 15, 50 members of the American Association for the Advancement of Science toured the National Library of Medicine as part of an all-day visit to NIH. The AAAS annual meeting theme, Tools of Science, was reflected in an NLM exhibit: Medical Bibliography—Tool of Science, which will remain until May 1. Here, Sally Sinn (c), from the NLM Technical Services Division, shows one of four groups the NLM card catalog room.

Roland Faulkner Retires After 47 Years at NIH

Roland R. Faulkner, who retired from the Division of Research Services last month, may have worked for NIH longer than anyone else—47 years.

In December 1930 Mr. Faulkner began working for the former Hygienic Laboratory, redesignated that year as the National Institute of Health. He held a 3-month temporary appointment while the Civil Service Commission processed his papers and graded his job.

He was not employed by the Federal Government from March until December 1931, when he returned as an appointment clerk and joined the permanent payroll on Jan. 4, 1932.

In those days, he recalls, there were 17 doctors and a total of about 100 people working in the Treasury Building.

Not until 1939 were the research activities moved to Bldgs. 1-6, then newly constructed in Bethesda.

He vividly remembers many his-



At a retirement party on Feb. 28, Mr. Faulkner (l) received the congratulations and good wishes of many friends, including DRS Director Dr. Joe R. Held.

toric occasions, including the visit of President Franklin D. Roosevelt to dedicate Bldg. 6 as the National Cancer Institute, and President Harry S. Truman placing the cornerstone of the Clinical Center in 1951.

Mr. Faulkner's career has been in pathology. For 17 years he

Four NIH'ers Elected Officers In Washington Section of ACS

The Chemical Society of Washington has elected four NIH'ers to official posts: Cheryl Marks of NINCDS is serving as secretary; Dr. Cyrus Creveling of NIAMDD and Carl Lauter of NINCDS are serving on the Board of Managers; and Dr. E. Ann Brown of NHLBI continues as an alternate councilor.

For information on membership and the activities of the Washington Section of the American Chemical Society, contact Marjorie T. Striker, 1155 16th St., N.W., Washington, D.C. 20036, telephone 331-1305.

Present Patent Rules Apply to Recombinant DNA Research Inventions

NIH Director Dr. Donald S. Fredrickson has recommended that "recombinant DNA research inventions developed under DHEW-NIH support should, at least for the present, continue to be administered within current DHEW patent agreements with the universities."

Standards Compliance Necessary

He noted that "each agreement should be amended to ensure that the licensees will comply with the physical and biological containment standards set forth in the Guidelines in any production or use of recombinant DNA molecules under the license.

"If legislation is passed, these safety standards will be mandated by the law for all who conduct or support recombinant DNA research," Dr. Fredrickson concluded.

The analysis was released on March 8. Since June 1976 current regulations have been reviewed, comments solicited, and an analysis of these comments referred for review to the Federal Interagency Committee on Recombinant DNA Research, which in turn has made recommendations for development of legislation to govern the conduct of DNA activities.

Guidelines Revisions Considered

A previous analysis, The Report of the Federal Interagency Committee on Recombinant DNA Research: International Activities, describes what was happening concerning recombinant DNA research in foreign countries.

This report was released on Dec. 15, 1977, at a meeting of the NIH Director's Advisory Committee to consider proposed revisions to the NIH Guidelines for Research Involving Recombinant DNA Molecules.

worked in Bldg. 4 under Dr. Ralph D. Lillie. From 1954 to 1959 he worked in the Animal Hospital and aided in setting up new animal facilities in Bldg. 28.

In 1959 he was asked to help establish a laboratory of histology in the Comparative Pathology Section, then in the Laboratory Aids Branch, since renamed the Veterinary Resources Branch, in DRS.

His Work Exceptional

Since then, his laboratory has provided all of the tissue preparation and staining work for the animal disease diagnostic program at NIH. According to the pathologists in the program, his work was surpassed by none.

Now, Mr. Faulkner says, he intends to leave his life at NIH behind him, though not his memories. He wants to relax, enjoy life, travel, and visit his family in Connecticut and Florida.

DR. KANDEL

(Continued from Page 1)

sea snail which grows to about a foot in size.

The nervous system of this invertebrate contains cells that are unusually large, some reaching nearly a millimeter in diameter, making them particularly suitable for study with microelectrodes.

Born in Vienna, Dr. Kandel came to the United States at age 10.

He graduated from Harvard College in 1952 and received his M.D. degree from New York University in 1956.

From 1957 to 1960 Dr. Kandel worked at the National Institute of Mental Health, researching the cellular physiology of the hippocampus, a part of the mammalian brain thought to control memory.

Since 1974 he has been director of the division of neurobiology and behavior, and professor in the departments of physiology and psychiatry at Columbia University College of Physicians and Surgeons in New York.

New Parking Stickers Issued in April/May: All Vehicles Reregister

Total re-registration of all vehicles parking on the NIH campus, beginning Monday, April 17, is necessary to update the parking files, reduce the monthly cost of parking information records, and reduce the use of NIH parking areas by non-NIH'ers.

A decentralized registration system, organized by B/I/D's is intended to reach all employees in a short time and to eliminate long lines.

Parking and Traffic Control staff will move to various campus locations on a schedule to be announced later.

Only vehicles which have been registered with a carpool and now display a white windshield decal do NOT need to be re-registered.

All new decals must be displayed by May 29.

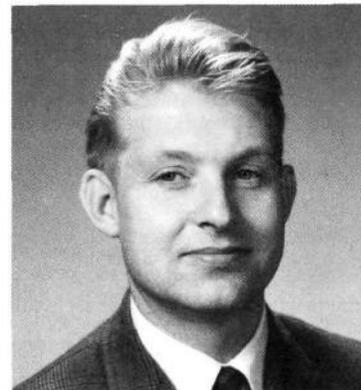
Parking decals currently displayed, with the exception of white carpool decals, must be removed by scraping or using acetone (fingernail polish remover). New decals must be placed inside the windshield behind the rearview mirror.

To register a vehicle, a NIH employee identification card and the vehicle registration card (for each vehicle registered) must be presented. Xerox copies of vehicle registration cards will be accepted.

Employees who now have red parking decals do not need a memo from their Institute executive officer—red parking decals will be re-issued to persons currently possessing a red decal.

Vehicles with temporary license

Dr. Paul Nettesheim Heads Lab at NIEHS



Dr. Nettesheim has published extensively in both Germany and the U.S.

Dr. Paul Nettesheim, a pulmonary pathologist, has been appointed head of the recently established Laboratory of Pulmonary Function and Toxicology, at the National Institute of Environmental Health Sciences in Research Triangle Park, N.C.

Dr. Nettesheim, who attended medical schools in Freiburg, Munich, and Bonn in West Germany, received the M.D. and D.M.S. (Doctor of Medical Sciences) degrees in 1959. He also holds a master's degree in pathology services (1964) from the University of Pennsylvania, Philadelphia.

Since the majority of known environmentally-induced diseases are pulmonary, stated Dr. David P. Rall, NIEHS Director, it is fitting that a laboratory concerned with the fundamental aspects of pulmonary pathology and biology be established to provide the information necessary to form the scientific basis for prevention of respiratory diseases known or suspected of having environmental etiology.

Before joining NIEHS, Dr. Nettesheim was a research biologist at the Oak Ridge National Laboratory in Oak Ridge, Tenn. from 1963 to 1969, when he became a group leader in respiratory carcinogenesis research at the same laboratory, specializing in radiation immunology, pathology, and carcinogenesis.

plates will be issued a temporary parking permit. When permanent license plates are received, the vehicle may be registered at the Parking Office, Bldg. 31, Room B1C15, and a decal will be issued.

Persons desiring to make changes in an already established carpool may do so at the Parking Office. Changes will not be made at the temporary re-registration sites.

Persons registered as passengers only in carpools may not register vehicles for parking. Anyone who has registered a vehicle in a carpool may not register another vehicle as a non-carpool vehicle.