

the



# Record

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

April 13, 1971  
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NATIONAL INSTITUTES OF HEALTH

## Pilot Program Recruits Senior Medical Students For PHS Appointments

The National Eye Institute is participating in a pilot program to commission future doctors in the Public Health Service before they graduate from medical school.

The experience gained through this project may be applied to a nationwide program for the employment of medical students under the Commissioned Officer Student Training and Extern Program (COSTEP) or Civil Service appointments.

### Purpose Explained

The aim of the "early commissioning" program is to test this method for recruiting more minority group physicians into PHS. Selected senior medical students will be paid a salary and receive tuition, fees, and incidental expenses during internship, residency, and further education.

Seven students have been selected for the program. Six are sponsored by the Health Services and Mental Health Administration.

(See RECRUITS, Page 4)

## Dr. John Holman Named Chief of DRR Section

Dr. John E. Holman, Jr. has been named chief of the Laboratory Animal Medicine and Vivarium Sciences Section, Animal Resources Branch, Division of Research Resources.

Dr. Holman will be in charge of the Laboratory Animal Medicine program, which administers 68 animal resources in institutions throughout the Nation.

He was commissioned in the PHS in 1956. Dr. Holman served with the National Heart Institute for 6 years and the Armed Forces Institute of Pathology for 2 years before coming to DRR as a laboratory animal specialist in 1967.

From 1962 to 1965, he attended Ohio State University, where he received a Ph.D. degree in Veterinary Pathology. He also holds a B.S. degree and a D.V.M. degree from the University of Missouri. Dr. Holman is a Diplomate of the American College of Veterinary Pathologists.

## British Surgeon to Give Results of Lobectomies Performed on Epileptics

Most people when they think of epilepsy immediately think of the grand mal—the violent convulsions. There are epilepsies, however, which take other forms.

One of these is temporal lobe epilepsy in which patients may fumble with their clothing, smack their lips, remove their clothing, and perform other bizarre activities.

This type of epilepsy, which is particularly resistant to drugs, is believed to be the most common form of childhood epilepsy.

On Friday, April 16, from 2:30 to 3:30 p.m., the Section on Epilepsy, National Institute of Neurological Diseases and Stroke, will sponsor a guest speaker who will report on 100 patients with temporal lobe epilepsy.

(See EPILEPTICS, Page 2)

## Sec'y Richardson to Present Departmental Awards to 5 NIH Scientists on April 15

At the DHEW Annual Honor Awards Ceremony next Thursday (April 15), Secretary Elliot L. Richardson will present Departmental honor awards to five NIH staff members. Drs. John F. Sherman and Donald S. Fredrickson will receive the Distinguished Service Award; Drs. Dorland J. Davis, Herbert G. Stoenner, and Robert M. Chanock, the Distinguished Service Medal.

Secretary Richardson will also recognize two other NIH employees who received high awards during the past year, Drs. Robert J. Huebner and George J. Todaro.

Sergeant Harry L. Thompson will be honored for completing 50 years of Federal service.

Dr. Sherman, Deputy Director of NIH, will be cited for "his exceedingly high level of progressive leadership performance, and outstanding achievements in the development and effective administration

of programs in biomedical research and education at the National Institutes of Health."

Dr. Fredrickson, Director of Intramural Research, NHLI, will be cited for "his exceptional skill and leadership in the administration of the National Heart and Lung Institute and for his unusual achievements in the field of lipoprotein disorders leading to heart disease."

### Contributions Cited

Assistant Surgeon General Dorland J. Davis, Director of the National Institute of Allergy and Infectious Diseases, will receive the Distinguished Service Medal for "his extraordinary accomplishments as a researcher in microbiology, parasitology and tropical medicine, for outstanding direction and administration of a complex biomedical research institute and for important contributions to scientific knowledge in infectious diseases."

Dr. Stoenner, NIAID, will be recognized for "his outstanding service and leadership as Director of the Rocky Mountain Laboratory and for his scientific work in rickettsial diseases, leptospirosis and zoonoses."

Dr. Chanock, chief of the Laboratory of Infectious Diseases, NIAID, will be honored for "his outstanding contributions to knowledge of the etiology and epidemiology of human respiratory infections due to viruses and mycoplasma and for his effective and enthusiastic leadership in efforts to prevent or alleviate acute respiratory disease."

Drs. Huebner and Todaro had been nominated through the Department for the awards they received earlier.

### Huebner Honored

Dr. Huebner, chief of the Viral Carcinogenesis Branch, National Cancer Institute, was selected as one of the five recipients of the 1970 Rockefeller Public Service Awards for his distinguished service as one of this country's foremost researchers in the fight

(See AWARDS, Page 5)

## Distinguished Service Award



Dr. John F. Sherman

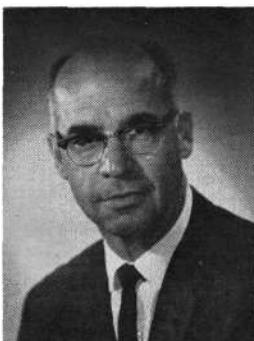


Dr. Donald S. Fredrickson

## Distinguished Service Medal



Dr. Dorland J. Davis



Dr. Herbert G. Stoenner



Dr. Robert M. Chanock

# the NIH Record

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## NIH Television, Radio Program Schedule

### Television

#### PANORAMA: Ask the Doctor

WTTG-TV, Channel 5, 12:30 p.m.  
April 15

Dr. Phillip Gorden, Clinical Endocrinology Branch, NIAMD  
Subject: Diabetes

The television series, NIH REPORTS, will be rescheduled later.

### Radio

#### DISCUSSION: NIH

WGMS, AM-570—FM Stereo 103.5—Friday, about 9:15 p.m.  
April 16

Dr. Harold Baer, chief, Laboratory of Bacterial Products, DBS  
Subject: House Dust Allergy

April 23

Dr. James E. Hamner III, chief, Oncology Section, NIDR  
Subject: Pre-malignant and Malignant Oral Lesions (R)

Interview takes place during intermission of the Library of Congress concerts.

#### Hanna Y. Kwiatkowska to Attend Panel Discussion at Columbia U.

Hanna Yaxa Kwiatkowska, National Institute of Mental Health, will take part in a panel discussion on the "Psychology of Creativity" at Columbia University. Mrs. Kwiatkowska heads the Art Therapy Unit of the Adult Psychiatry Branch.

The panel will be held during

## 1971 Operation Cleanup Successful in Locating Property for Reissue

As a result of "Operation Cleanup"—the highly successful 1971 campaign to roundup idle equipment—1431 items valued at \$249,504 were sent to NIH components or other agencies.

These items were transferred to Supply Management Branch's Property Utilization Warehouse for reissue.

The outstanding cooperation of all NIH personnel and members of the "walk-thru" teams was praised by William Morse, Property Management Officer, SMB.

### Urges Warehouse Visit

Employees are urged to visit the warehouse in Bldg. 13 to inspect and select needed equipment before purchasing new items.

For information concerning the availability of specific items, call Ext. 64247.

A significant achievement which resulted from the roundup was the transfer of 39 items of rarely used equipment to the Scientific Equipment Rental Program of the Biomedical Engineering and Instrumentation Branch, DRS.

This program, initiated in September 1970, is a short-term rental plan which loans seldom-used expensive research equipment at a nominal fee. For further information, call Clarence Sharp, Ext. 64131.

meetings of the 2nd Congress of American Scientists and Scholars of Polish Descent, on April 23, 24, and 25. Mrs. Kwiatkowska was invited to participate by the Polish Institute of Arts and Sciences in America.

## Mgmt. Intern Program Seeks NIH Candidates

Applications are now being accepted for the 1971 NIH Management Intern class.

The MI program is designed to develop men and women for administrative positions with the prospect of its leading to top level management appointments.

MI's receive a year of on-the-job training in general administration and administrative specialties. Graduates will be offered permanent appointments at GS-7, 9, 11.

To qualify, an NIH employee must have taken the Federal Service Entrance Exam. Other requirements are: a bachelor's degree, or 3 to 5 years of non-clerical work, or a comparable combination of college and work experience.

To apply, an SF 170 or 171, available at B/I/D personnel offices, should be sent to Training and Employee Development, Bldg. 31, Rm. B2B15, attention: MI program. Applications must be received by April 30.

For further information, call Ext. 62146.

## EPILEPTICS

(Continued from Page 1)

The speaker is Murray A. Falconer M. Ch., F.R.C.S., a neurological surgeon and Director of the Neurosurgical Unit, Maudsley Hospital, London. This seminar, which is open to NIH scientists, will be held in Room 1B-13, Bldg. 36.

Mr. Falconer will report on results of the temporal lobectomies he has performed in these patients whose disorder did not respond to drug therapy.

He will also describe an important pathological finding in 47 of the 100 patients—mesial temporal sclerosis—an unexplained loss of the nerve cells in the hippocampus region of the temporal lobe.

The seminar will also include a film of four of his patients and

## HEW Program Shows Film 'To Seek, To Teach, To Heal'

YOU and the Healing Arts, a television program sponsored by HEW, will show the NIH film, "To Seek To Teach, To Heal," on Channel 4, Thursday, April 15 immediately following the Academy Award program.

The film, which presents the scope of NIH medical research, was also screened on Sunday, April 11. J. Stewart Hunter is moderator of the HEW program.

## Civil Service Retirement Law Incorporates Extra Federal Service Credits

The Civil Service Commission has announced a modification in the Civil Service Retirement Law. This change will now permit credit for certain Federal services performed after 1954. The services are:

- Temporary or indefinite employment in the field service of the U.S. Postal Service, including substitute rural carriers and acting postmasters.

- Temporary or indefinite employment in the Federal Deposit Insurance Corporation.

- Temporary or indefinite employment in a Federal Land Bank or a Bank for Cooperatives.

- Temporary census-taking employment in the Census Bureau.

- Contract or fee basis employment which is otherwise creditable.

- Employment at nominal pay of \$12 a year or less.

- Employment of a patient in a Federal hospital.

Questions relating to such services—either for updating records or for depositing funds into the Civil Service Retirement and Disability Fund—may be referred to the B/I/D Personnel Office.

their mothers describing in their own words all of the symptoms they have experienced with this type of epilepsy.



A new assistant branch chief and two new section heads have been named to the Biomedical Engineering and Instrumentation Branch, Division of Research Services. S. Meredith Meyers (l) has been appointed assistant chief for Technical Services. He has been with BEIB since 1952. Clarence L. Sharp (c), formerly assistant chief, is now chief, Systems Maintenance Section. He came to BEIB in 1959. John W. Holland (r), with BEIB since 1947, is now chief, Instrumentation Fabrication Section.

## Blue Cross-Blue Shield Benefits Are Revised

Effective March 1, the basic surgical-medical benefits and supplemental benefits under the Government-wide Service Benefit (Blue Cross-Blue Shield) Plan of the Federal Employees Health Benefits Program have been revised.

Under the high option, the Blue Shield Plan now pays the full cost of covered services given by Blue Shield *participating* physicians regardless of income.

Previously, if family income was \$10,000 or higher for self-and-family enrollment, or if individual income was \$6,500 or higher for self-only enrollment, the physician could make an additional charge over the amount allowed in the fee schedule.

The additional amount could be claimed under supplemental benefits.

Under both high and low options, *non-participating* physicians may make additional charges for covered services; these amounts must be paid by the enrollee. Eligibility for supplemental benefits has also been revised.

All changes are described on page 2 of the revised benefits folder which was recently distributed to NIH employees enrolled in the Plan.

Enrollees should carefully review the folder and keep it with their copy of the Plan brochure, BRI 41-25. These two documents constitute an up-to-date contract and statement of benefits.

Additional copies of the folder and information on other Federal health benefits plans are available in B/I/D personnel offices.

## MEDLARS Data Tapes Available to Subscribers

In mid-April the National Library of Medicine will make available on subscription, magnetic tapes containing data from the Library's computer-based Medical Literature Analysis and Retrieval System (MEDLARS).

The tapes contain citations to the biomedical journal articles which are indexed to provide the data base for NLM publication and information services.

Tapes will be available in *only* the following format: ½" IBM 7094, 800 BPI, seven-track.

Individuals or organizations may subscribe for \$30,000 per year under conditions established by NLM.

The National Technical Information Service (NTIS), 5285 Port Royal Road, Springfield, Va. 22151, will sell and distribute the tapes.

For further information contact Dr. Joseph Leiter, associate director for Library Operations, NLM, 8600 Rockville Pike, Bethesda, Md. 20014.

## Two Employees Come up From the Ranks To Become Full-Fledged NIH Librarians

One of the less kind dictionary definitions of the word "bureaucracy" is "excessive governmental red tape and routine."

That good book is certainly not describing what happened when someone high up in the Civil Service Commission called NIH Personnel with the news that two NIH Library employees who started there as clerk typists had passed the stiff CSC Library test.

The red tape was cut and the routine routed—before the official notification date!

NIH Personnel was equally eager to carry the good news to the employees who accomplished this feat.

They called Seymour Taine, chief of the Library Branch, which is in the Division of Research Services, who immediately informed the two employees, Patricia Barnes and Gladys T. Nelson.

Without a day of formal schooling in graduate library training, both passed the test.

And both look back in gratitude to the entire library staff who helped them prepare for the test, and rejoiced with them when they received passing grades.

Mr. Taine explained what made the staff single out Miss Barnes and Mrs. Nelson.

"We recognized that the library had two employees who were essentially performing professional duties," he said, "but were not given the recognition and salary to go



Patricia Barnes looks up a reference for a waiting scientist. She has become completely familiar with many-syllabled medical terms.

with it."

And Mr. Taine did something about that. In May 1970, a pilot project to train employees in lesser echelon jobs to become full-fledged librarians, was started. It has proved so successful it may very well continue.

He explained that in addition to Miss Barnes' and Mrs. Nelson's regular duties some portion of each day was spent in library training.

They attended lectures on the history of libraries, boned up on classifications, and visited university and public libraries.

It was a concentrated dose of one year of graduate work. They sur-



Reaching for a hefty volume on a scientific subject in order to answer a telephone inquiry that requires research, is now all in the day's work for Gladys Nelson.

vived the arduous indoctrination—in fact, thrived on it, because of the cooperation of the librarians and the rest of the staff.

"It was a great day for the library when the news came through, we had a victory lunch to celebrate," said Mr. Taine.

Anna E. Dougherty, assistant chief of the NIH Library, further described that stand-out day:

"We had a couple of emotional situations, they (the staff) were crying back there," Miss Dougherty said.

### Possibilities Considered

"We tried to prepare the girls for every possibility," she continued. "We prepared them for one failing and one passing, or both failing."

"We told them they could take the test again in 6 months, but we didn't prepare them for both passing."

Miss Dougherty said that Miss Barnes and Mrs. Nelson took the test one month ahead of time; they decided to "chance it" rather than wait.

Both employees started in the NIH Library as clerk-typists, and came up from the ranks as clerk-stenographers, library assistants, and library technicians.

Mrs. Nelson came to the Library Reference Unit in 1957. She has an Associate in Arts degree from what was then Carver College, and is now Montgomery College.

### Came Here in '61

Miss Barnes graduated from Sherwood High School in Sandy Spring. She came to the NIH Library in July 1961, for 90 days as a "temporary summer appointment."

The new librarians described their before-and-after feelings the day they took the test.

## Sailing Ass'n Is Offering Classes for Beginners Who Register by May 1

NIH Sailing Association classes for beginners will be scheduled in May for those who register before May 1.

Each class will meet for two evening sessions at NIH before the week of sailing classes. These sailing classes will be held at the Back Creek Marina, Chesapeake Bay, from 4 p.m. to darkness, Monday through Friday, for one week.

### First Come, First Served

Class assignments will be on a first come, first served basis.

To register NIHSA members must pay a \$40 course fee for boat rental, instruction, and instructional materials.

No previous sailing experience is needed. Family members 18 years of age or older are eligible.

Those who complete the course will qualify for NIHSA crew member status, and may accumulate credits for skipper status. Skippers may charter NIHSA boats.

Registration forms may be obtained from the R&W Office in Bldg. 31, Rm. 1A18, Ext. 66061.

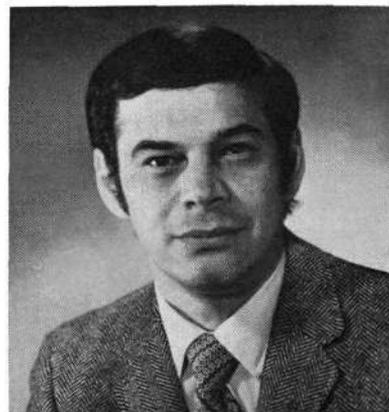
"We rode downtown together," said Mrs. Nelson, "we laughed all the way down there."

"We talked about other things," added Miss Barnes. "We were nervous, that's why we talked about anything but the test."

Following the difficult 2-hour exam they returned to NIH in a much more relaxed frame of mind and "looked up some of the answers."

After their intensive coaching on how other libraries operate, they both say they very much enjoy working in the selective field of a medical science library.

And both agree that "scientists are easy to work with, they're kind and understanding."



David L. Chicchirichi was recently named executive officer of DRR. Prior to this appointment he was assistant executive officer with NICHD. In 1963 and 1964, Mr. Chicchirichi received Superior Performance Awards for his outstanding work.

## Processing Grants in DRG No Small Task But Its Employees Meet the Challenge



Three among the many busy DRG employees who are involved in processing a grant: Don Kaufman (l) and Vernon Smith (r) program a computer in the Westwood Building that is connected to the NIH computer system on the reservation. Bessie Thomas (lower right) records material on the magnetic key tape machine.

By Carol Awtrey and Tim Paulson

Human nature being what it is, many applications for grants arrive at the Division of Research Grants' Mail and File unit only hours before a deadline—this is only one part of DRG involved in processing grant applications three times a year.

Generally speaking, every DRG employee participates in one phase of the grant-awarding process, and every job is essential. Annually, DRG handles the administrative processing for more than 11,000 Public Health Service grant applications.

Every application is examined carefully, and an accurate and impartial judgment of its merits is arrived at.

Each application passes through the hands of at least two experts—scientists with a basic background in science. The eight part-time referral personnel are also executive secretaries who have experience in one specific field.

These scientists in the Referral Office are in a good position to spot national medical trends. Currently, the most popular subjects for research are environmental concerns, drugs, nutrition, population studies, and health-services manpower research.

In referring an application to an institute or review group, the referral officer must be able to read an application and pinpoint the



Dr. Samuel Schwartz (r) and Dr. Alfred Hamel carefully study each grant application before referring it to the proper review group.

primary medical area to be pursued in the research.

By definition, "basic" research contributes to anything—a project on the biochemistry of schizophrenia might increase knowledge in the areas of diabetes or cancer as well as in biochemistry and schizophrenia.

### Conclusions May Differ

Probably two people approaching the same question regarding support on a disease or in a discipline wouldn't independently arrive at the same conclusion.

On the basis of the referral office's decision, the application is given a coded identification number. In the Project Control Section the proposal is typed by program, institute, and year of support.

The applications are organized in control batches and sent to the Statistics and Analysis Branch, where information is collected from the face sheets and fed into the computer.

All of DRG's study sections exist to facilitate the reviewing task of the institutes. It is their job to evaluate scientifically all applications assigned to them and make recommendation to the national advisory councils of the institutes.

The study section's executive secretary keeps in touch with the applicant informing him if his application is inadequate or unclear, and he arranges project site visits if necessary.

He assigns each application to two or more study section members who are responsible for preparing written reviews to be presented orally at the study section meetings.

Study section members are nomi-

## Scientists at NIH Invited To Cardiac Symposium

The Montgomery County Heart Association will hold its 1971 Cardiac Symposium on Wednesday, May 26, 8:30 a.m. to 4 p.m. at the Holiday Inn, 8120 Wisconsin Avenue, Bethesda.

Dr. Joseph A. Romeo is chairman of the symposium.

NIH scientific staff members and fellows are invited to attend free of charge, but are requested to register in advance, if possible, with the Association, 657-8878.

For others wishing to attend, there is a \$6.50 registration fee.

nated by the executive secretary for their knowledge of a particular area in the section's field of interest.

One vital member of the study section, who is sometimes overlooked, is the grants assistant—the exec sec's right hand. She prepares files for all applications to be reviewed and sends copies to the study section members. She is the official hostess for her group, and makes hotel reservations for members when they come to NIH for meetings and arranges for a conference room.

During the meeting, she records motions, votes, and budget changes in her minutes; she also guards against security breaches and performs myriad tasks for her boss and the study section chairman.

When the study section completes its initial review of applications, DRG's role in the granting process is over. The study sections then make recommendations in the form of priority scores to the appropriate national advisory council.

Each institute has a corresponding advisory council, composed of



The Westwood Building print shop is a noisy, but interesting place during grant processing time. L to r: Clarence Dashiell, James Creek, and William Jones, duplicate grant applications to be examined by the review group.

12 members—half of whom are expert in a given field. The councils meet three times yearly, and rely upon the technical evaluation previously made by the study sections.

The final decision on an application rests with Dr. Robert Q. Marston, NIH Director, who rarely disagrees with decisions made by the councils.

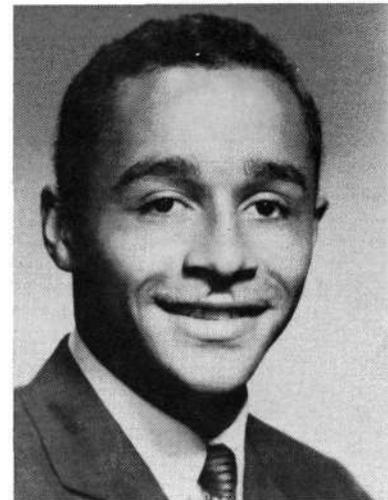
At least 6 months pass between the day the applicant mails his ap-

## RECRUITS

(Continued from Page 1)

The seventh, Rodney H. Lynk, a senior at Howard University Medical School, has been commissioned and assigned to the National Eye Institute.

Mr. Lynk, who will receive his M.D. degree this June, plans to intern at a PHS Hospital, take a residency in ophthalmology, and earn an M.A. degree in Public Health,



Mr. Lynk, who will earn his M.D. degree this June from Howard University, plans to specialize in public health service ophthalmology.

emphasizing community medicine.

According to NEI Director, Dr. Carl Kupfer, there are few, if any, physicians who have extensive training in both public health and ophthalmology.

Most comprehensive health care programs do not include the care of vision because there is a lack of qualified individuals to administer and provide the service.

The pilot project provides both Mr. Lynk and NEI with an opportunity to develop this important area of medicine.

Mr. Lynk became interested in the PHS Pilot Program when he learned of it from a fellow medical student last spring. The opportunity to receive additional training in community medicine convinced him to apply.

His life-long interest in science and medicine were influenced by his father who has taught college chemistry and is now an administrator at the University of Maryland (Eastern Shore).

Mr. Lynk's brother holds a Ph.D. in Physics from Yale University and teaches at Southern University in Louisiana.

plication to DRG and the day he receives final word on its fate.

But by that time, a new deadline date has been reached. The study sections are once again busy deliberating on a new series of applications, and a whole new cycle of grant processing is under way.

## Three Members Named To NEI Advisory Council

Dr. Reynaldo J. Carreon, Jr., Helen Gilbert, and Dr. Vernon Benjamin Mountcastle, Jr. have been appointed to the National Advisory Eye Council.

Dr. Carreon is Director of the Pan American Medical Eye Group in Los Angeles.

He was staff instructor of Eye Surgery at Los Angeles County General Hospital for more than 25 years.

He is a founder and member of the Board of the Indio Community Hospital, and a co-founder of the United States Committee of the World Medical Association.

Mrs. Gilbert has long had an interest in higher education, health, and community organization.

She is Chairman of the Board of Trustees of Radcliffe College and is a member of the Overseers Visiting Committee to Harvard College.

Dr. Mountcastle is a leading neurophysiologist and educator. He has been Director of the Department of Physiology at Johns Hopkins University School of Medicine since 1964.

He has established a laboratory which is an important center for training investigators of visual and other sensory mechanisms of the cerebral cortex.

## Revised NIAMD Booklet Tells Artificial Kidney-Uremia Program Goals

A revised edition of the publication, *Opportunities for Participation in the Artificial Kidney-Chronic Uremia Research and Development Program*, has been prepared by the National Institute of Arthritis and Metabolic Diseases.

The publication is designed to stimulate participation by investigators not now in the Institute's Artificial Kidney Program and to enlist medical and bioengineering talent as well as laboratory and clinical research related to uremia.



Louise Anderson, CC Nursing Department chief (l), attended the ceremony at which staff members received certificates for completing advanced training as practical nurses. From left are: Mrs. Anderson, Robert Grimes, Mattie Davis, Nellie Hyland, Savannah Smith, Janet Parks, Earline Vasquez, Fannie Gaither, and Rose Calisto.

## Injected Iron Particles, Held by Magnets, Successful in Healing Brain Aneurysms

Injected iron particles, held in place with a magnet, have been found successful in healing brain aneurysms. These weakened and ballooned out sections of the artery wall are life-threatening because they occasionally burst, causing brain hemorrhage.

This novel technique, developed by grantees of the National Institute of Neurological Diseases and

### AWARDS

(Continued from Page 1)

against cancer.

He is internationally known for his achievements as a virologist.

In February 1970, President Nixon presented Dr. Huebner with the National Medal of Science for his contribution to the modern understanding of the biology of viruses



Dr. Huebner



Dr. Todaro

and their role in the induction of diverse diseases.

Dr. Todaro, acting chief of the Viral Leukemia and Lymphoma Branch, Viral Oncology Branch, Etiology, NCI, was presented one of the Ten Outstanding Young Men of America Awards for his contributions to the understanding of the action of cancer viruses.

Harry L. Thompson, Sergeant, Guard Force Supervisor, Protection and Safety Management Branch, Office of Administrative Services, will be presented with a 50-Year Length-of-Service Award Certificate and Emblem. Last May he completed 50 years of Federal employment—12 of them with NIH.

After the ceremony, officials, and award recipients and their families will attend the Secretary's reception in the Snow Room at HEW.

Stroke, has been tried clinically over a 5-year period.

First, a magnetic probe, which is pushed through a burrhole in the skull, is moved into a position abutting the aneurysm.

Then iron particles, delivered to their proper position by a needle passed through the magnetic probe, are held in position for 3 to 5 days.

During this time, a clot forms around them, thus creating a plug. Eventually the clot and the aneurysm are replaced with scar tissue.

Experience with this technique has varied, depending upon the condition of the patient and the location of his aneurysm.

### Results Encouraging

In one group of patients, who were conscious and had no neurological deficit at the time of surgery, results were considered "very encouraging." That is, according to the investigators, 10 patients out of 15 were able to return to work.

Aneurysms treated in this group of patients were all on the anterior communicating artery.

In 12 patients who had aneurysms on the internal carotid artery results were not as good: only 4 of 8 survivors returned to work, the others being disabled by emboli caused by escaping iron.

Poor results with this group of patients were attributed to larger size of the aneurysms, and larger necks, which allowed portions of the developing clot to be washed out into the circulation.

### Aneurysms Risky

Good results in treating aneurysms of the anterior-cerebral-anterior communicating region are still considered noteworthy because these aneurysms carry a high risk when treated with conventional methods.

Morbidity and mortality rates which accompany the iron technique, according to the investigators, can be reduced through several refinements.

These include better X-ray monitoring which will allow the iron injection to be stopped before any thrombus extends into the feeding artery and better design of the magnetic probe to reduce the possibility of dislodgement.

The current work, by Dr. John F. Alksne, Division of Neurological Surgery, Medical College of Virginia, is reported in the *New England Journal of Medicine*.

It is a continuation of studies at the University of California at Los Angeles by Dr. Alksne and Drs. Aaron J. Fingerhut and Robert W. Rand.

## Arthur Moore Appointed MAPB Branch Chief



Mr. Moore has written, directed, and produced scientific movies. He is HEW's representative on the Interdepartmental Committee on Visual and Auditory Material for Distribution Abroad.

Arthur F. Moore has been named chief of the Medical Arts and Photography Branch, Division of Research Services.

He will be responsible for planning and directing the multi-media activities and services of MAPB, such as still and motion picture photography, medical illustrating, model making, graphic arts services, and exhibits design.

Mr. Moore has been chief of the MAPB Motion Picture Section since 1967. Films produced by this section have received international awards for their excellence.

Before coming to MAPB, Mr. Moore had, for over 25 years, written, produced, and directed multi-media programs for advertising agencies and radio and TV networks.

From 1965 to 1967, while under contract to NIH, Mr. Moore wrote, directed, and produced scientific motion pictures.

Mr. Moore is HEW's representative on the Interdepartmental Committee on Visual and Auditory Material for Distribution Abroad and a member of the American Science Film Association.

### Latest Participants in NIH Visiting Scientists Program Listed Here

3/1—Dr. Indira D. Morris, India, Laboratory of Molecular Aging. Sponsor: Dr. Bertram Sacktor, NICHHD, Gerontology Research Center, Baltimore, Md.

3/17—Dr. Raphael Sharon, Israel, Laboratory of Immunology. Sponsor: Dr. William E. Paul, NIAID, Bldg. 10, Rm. 11N308.

3/30—Dr. Taik Koo Yun, Korea, Laboratory of Pathology. Sponsor: Dr. Louis B. Thomas, NCI, Bldg. 10, Rm. 2A29.

4/1—Dr. Tadashi Hirata, Japan, Drug Development Branch. Sponsor: Dr. Alfred R. Stanley, NCI, Bldg. 37, Rm. 6D25.

## Primate Center Studies Develop New Knowledge Of Human Depression

Over 15 million people in the United States suffer from mental disorders in which depression plays a significant role.

Scientists at the Wisconsin Primate Research Center, in Madison, produced various degrees of such depression in rhesus monkeys by separating them from their mothers at various ages and under a variety of circumstances.

### Variables Affect Severity

Dr. William T. McKinney, psychiatrist at the University of Wisconsin Medical Center, along with Prof. Harry F. Harlow, Primate Center director, and graduate student, Stephen J. Suomi, reported that the severity of this depressive reaction to separation depends on a number of variables.

These include age at time of separation, social environment from which the animal is removed, and the situation during the separation period.

The need to identify and study these variables before connections between separation and depression can be clearly understood was stressed.

"By using the monkey," said Dr. McKinney, "we have the ability to precisely control the variables considered important in separation, and hopefully these studies will contribute to an understanding of the effects of separation on personality development in humans."

Like human children, infant monkeys go through distinct stages when separated from mothers and peers.

The first few days are characterized by intense protest at separation. The infant then "gives up" and enters a despair stage which includes huddling, self-mouthing, and self-clasping behaviors. When reunited, there is increased clinging to another animal.

On the other hand, 3-year-old animals show increases in locomotion and environmental exploration throughout the separation period and no signs of despair.

### Reunion Restores Normalcy

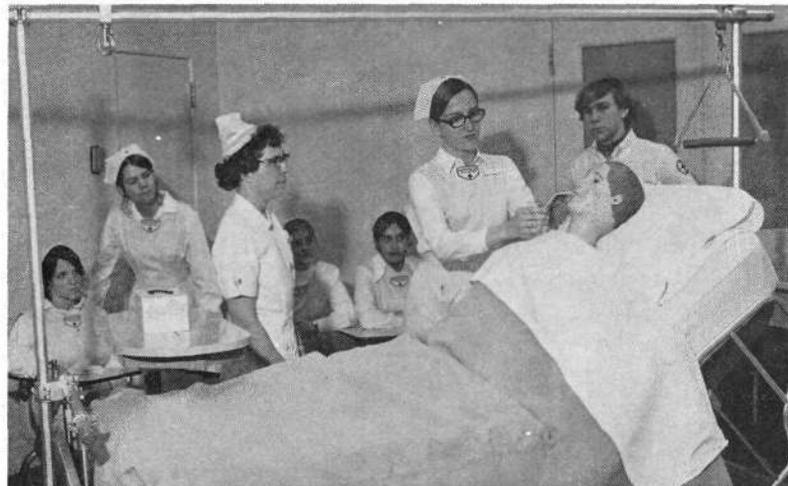
After reunion the animals' behavior returns to normal levels, only to revert upon further separations.

When separation is combined with a period of isolation, a younger animal becomes withdrawn and remains this way even after return to the original environment.

By contrast, the older animal seeks immediate contact with others, and there are increases in clinging behavior as opposed to self-directed actions of younger animals.

These studies, supported in part

## Junior Volunteers to Work Year-Round; They're Called 'A Blessing to CC Nurses'



It's feeding time for Mrs. Chase. Margaret Musgrove, CC nurse, and her volunteer students observe Paula McAdams offering liquid refreshment to the docile patient in the prescribed manner.

Junior Red Cross Hospital Volunteers assigned to nursing units at the Clinical Center will now be available on a year-round basis rather than during the summers only.

This past winter, approximately 20 new volunteers trained for evening and weekend assignments to



There's an art to making up a comfortable hospital bed and Margaret Musgrove, CC nurse, coaches Safeiah Zabara (l) and Irene Gelfand on the proper method.

by the Animal Resources Branch of the Division of Research Resources, confirm clinical observations which indicate that age and prior experiences are important variables in determining one's response to separation.

"We do not believe that experiences during certain critical developmental stages necessarily have specific, inevitable, and irreversible consequences," Dr. McKinney said.

"However," he added, "many basic behavior patterns are determined early in life and with sufficiently rich social experiences, more stress is required to produce psychopathology."

The researchers reported their findings at a recent symposium on "Clinical and Research Aspects of Separation and Depression" during the American Association for the Advancement of Science's annual convention.

nursing units in the Clinical Center.

Junior volunteers are a blessing to busy nurses. These capable young people make beds, accompany ambulatory patients to their appointments play with the children, organize parties, deliver specimens, and pick up blood supplies at the Blood Bank.

Their assistance enables the nurses to really concentrate on patient care.

The young helpers are carefully screened for the volunteer program, which is coordinated by the CC Normal Volunteer Patient Section.

Junior Red Cross Hospital Volunteers must be at least 14 years old, but those chosen for CC assignments must be at least 16. Many have had prior experience in nursing homes or children's centers.

Before their training here, the volunteers attend orientation at the American Red Cross Chapter House in Silver Spring.

Lectures and panel discussions with more experienced volunteers acquaint them with do's and don'ts regarding their duties, relationships with staff and patients, uniforms, and administrative procedures.

### Practice on Mannequins

Here at the CC the volunteers attend 4-day sessions conducted by the Nursing Department's Education and Training division. They practice on Mr. and Mrs. Chase, mannequins who live in the training laboratory.

The volunteers learn the proper procedures for a host of duties which must be done precisely and efficiently—right down to the washing of their hands and emptying water pitchers.

Following training they are as-

## NIGMS Report Details Resistance of Bacteria To Antibiotic Drugs

A report on the resistance of bacteria and other microorganisms to antibiotic drugs was issued by the National Institute of General Medical Sciences.

The 33-page pamphlet, *Antibiotic Resistance*, prepared by the NIGMS Microbiology Training Committee, focuses on the biochemical mechanisms which are reducing the ability of many once-heralded antibiotic "wonder drugs" to kill bacteria and cure disease.

### Action Explained

For example, quick exchange of genetic information among bacterial cells may pass on resistance to as many as seven antibiotic drugs in a single step.

The report points out that some bacterial cells—especially staphylococci—can secrete an enzyme which converts penicillin to an inactive form and that penicillins now available may actually induce the bacteria to destroy the effectiveness of these drugs.

The publication also deals with the problem of determining whether and to what extent antibiotic food additives may favorably influence bacterial resistance.

Single copies of the report may be obtained from the Information Office, NIGMS, Room 4A-46, Bldg. 31, NIH, Bethesda, Md. 20014.

signed to one of the eight CC nursing units. At the end of each assignment, the volunteers are rated on job attitude, quality of work, behavior, grooming, and attendance.

Because of their success as volunteers in the program, many are invited to return, and many do.



Jimmy Davison wheels Mr. Chase, the CC's model patient, through a doorway. And, after a certain amount of practice, he does it with the greatest of ease. Only male volunteers are permitted to push wheelchairs and stretchers.

## Utilization of Telephone Receiver Allows Regular Checking of Heart Pacemaker

For more than 40 patients in the New York City area, the telephone has become as vital to life as the heart itself. Twice a week these patients make telephone calls to the Montefiore Hospital to check the strength of the batteries in their heart pacemakers.

A patient calling the hospital tells the chief nurse in the pacemaker program how he feels and then places his telephone receiver in a cradle—a transducer.

### Patient Grasps Terminals

Connected to the transducer are two terminals, each about the size of the cap on a spray can—big enough so that the patient can grasp one comfortably in each hand.

To produce an accurate count of his pacemaker's beat, he must also use a magnet to cancel out his own heart's effect on the pacemaker rate. One of the terminals encloses such a magnet. This enables the patient to place the magnet on his chest over his pacemaker while grasping that terminal.

At Montefiore, the chief nurse also places her telephone receiver in a transducer. Impulses produced by the pacemaker are then received and mechanically counted.

The readings are recorded on graph paper. If the graph line were to show a drop of one-half beat per minute, it would be a warning of a weak battery.

### Graphs Reviewed Daily

If it were to drop three to four beats per minute, it would mean the patient's pacemaker battery was in a sharp decline. A physician would be alerted immediately. Ordinarily, doctors review the graphs each morning.

Members of the Montefiore research team include thoracic surgeon Dr. Seymour Furman; Dr. Doris J. W. Escher, who with Dr. Furman is co-director of the hospital's pacemaker program, and Bryan Parker, an electronic engineer who heads Montefiore's medical electronics laboratory.

The two physicians are also on the teaching staff at Albert Einstein College of Medicine, New York City. This research was supported by the National Heart and Lung Institute.

Pacemakers regulate the heart-beat by sending impulses to electrodes attached to the heart. Batteries ordinarily last 1½ to 2 years, but the time may be longer or shorter.

### Complete Coverage Possible

Until now, doctors have been unable to follow all pacemaker patients adequately, and methods for measuring the pacemaker rate have been accurate only to within a couple of beats a minute.

To guard against unexpected failure, pacemaker manufacturers

recommend a pre-set time for operating on the patient and changing his battery.

This means, Dr. Furman explained, that some still-good batteries have been thrown out and some patients have been operated on prematurely, though prudently.

The research team learned through experience that the pacemaker rate is a good guide to the remaining battery strength.

Dr. Furman said, "You might have a straight graph line for 18 or 20 months—or even 3 years or more. Then there will be a change of 5-6-7 percent from one day to the next.

"That is the beginning of the toboggan slope. The battery may go from normal to all the way down in 2 weeks. That is why frequent testing, with reliable equipment, is important."

The Montefiore device will meas-



A patient calling Montefiore Hospital tells the chief nurse how she feels before having her heart pacemaker battery checked.—Photo by Julie La Fair Miller.

ure with an accuracy of a tenth of a beat a minute. Use of the telephone means that patients can be checked on a regular schedule regardless of weather or impediments, and using less of their own and their doctors' time.

### Volunteers in Various Stages Of Pregnancy Can Aid Study

The National Cancer Institute is seeking volunteers in the first, second, and third trimesters of pregnancy, along with their husbands, to submit a 40 ml blood sample for use in leukemia research.

Participants in this study will be paid \$2 for the sample.

Interested couples may contact Dr. Rosenberg, Ext. 62355.



Five employees of the NCI Laboratory of Biochemistry were presented a special achievement award for their sustained excellent work. The group, working with Dr. Pietro M. Gullino, Tumor Physiopathology Section head, devised unique surgical, physiological, and chemical techniques to facilitate study of the biological property of neo-plastic tissues. Left to right are: Bela Berghoffer, Elbert Isreal, Illona Losonczy, Flora Grantham, and Donald Hill.

## Scientists May Have Deciphered Nature Of Waxy Protein Deposits in Amyloidosis

The nature of the waxy protein deposits accumulating in human organs, such as the liver and kidney, in the puzzling disease called amyloidosis, may have been deciphered by Dr. George Glenner and co-workers at the National Institute of Arthritis and Metabolic Diseases.

Their research suggests that amyloid protein is derived from a fragment of an antibody molecule, the substance formed by the body's response to foreign infectious agents.

Dr. Glenner, an NIAMD pathologist since 1955, feels that further study of this protein should lead to a clearer picture of the role of antibody formation in the production of amyloid.

Dr. Glenner's discovery may result in a more complete understanding of this serious disorder. The disease is commonly associated with rheumatoid arthritis and tuberculosis, and other chronic infections or inflammatory diseases, as well as with the normal aging process.

No successful treatment is available for amyloidosis, although cure of the underlying infection occasionally results in remission of this usually fatal disease.

Symptoms appear when the abnormal fibrillar material, long known to be a protein, begins encroaching upon the tissues of various organs: kidney, liver, spleen, lungs, intestinal tract, and around and within the blood vessels.

Dr. Glenner and his associates had to develop many new exacting techniques of concentration, isolation, and purification during 4 years of intensive research, before the precise chemical characterization of the amyloid protein was possible.

Through immunochemical methods, these investigators demonstrated that a protein circulating in the serum was related to the amyloid protein deposited in the tissue.

After extensive chemical analysis of a number of amyloid pro-

teins from different patients, they postulated that a relation existed between this protein and antibody (immunoglobulin) protein—one of the body's defense mechanisms against infectious agents.

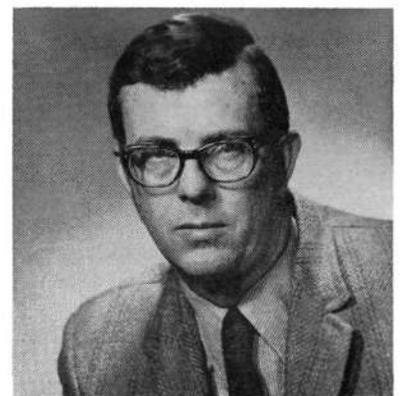
The question then became: what was the relation of this circulating protein to the amyloid protein found in tissues?

The final study determined that the sequence of the amino acids comprising the amyloid protein was indeed derived from a fragment of an antibody protein.

This fragment is believed to be one of the major sites of antigen binding—one of the steps in the body's defense mechanisms to remove foreign particles from the body.

Now, it may be possible to define more precisely the antigen-antibody

(See AMYLOIDOSIS, Page 8)



David E. Ludeman has been named personnel officer for the National Institute of Neurological Diseases and Stroke. Formerly, he was with NCI personnel. Mr. Ludeman came to NIH in 1966 as a personnel management specialist.

## Mountain Lab Receives Bishopp Tick Collection



Dr. James E. Keirans, an entomologist at RML, examines the 800 jars and nine slide boxes comprising the Bishopp collection.

Approximately 50 years of work on the biology and taxonomy of ticks is represented in the Bishopp tick collection recently transferred from the Smithsonian Institution to NIAID's Rocky Mountain Laboratory in Hamilton, Mont.

The late Dr. Fred C. Bishopp, an entomologist who worked for many years for the Oscar Johnston Cotton Foundation, used his own system of numbers and types to identify the ticks.

The Rocky Mountain Laboratory has the world's largest tick collection and is one of two centers for worldwide identification of ticks. The Naval Medical Research Unit #3 in Cairo, Egypt, houses the other center.

## AMYLOIDOSIS

(Continued from Page 7)

relation because a pure, homogeneous and vital portion of an antibody, produced in response to a known foreign, or antigenic stimulus, such as tuberculosis, is available from human sources in large amounts.

A complete study of these amyloid proteins may shed new light, at the molecular level, on the body's response to infection and the manner in which antibodies combine with these infectious agents to eliminate them from the body.

Amyloidosis, therefore, appears to be a disease caused by the deposition of a fragment of an antibody in the tissue, by mechanisms as yet to be determined. Further, the process involved in this disease may be the final common pathway of immunoglobulin breakdown in a variety of infectious or metabolic disorders.

Drs. G. G. Glenner, J. Harbaugh, C. Isersky, J. I. Ohms, M. Harada, P. Cuatrecasas, D. Page, and H. Keiser reported their findings in *Biochemical and Biophysical Research Communications*, Vol. 41, Nos. 4 and 5.

## Interstate Shipping Regulations for Blood Approved; Standards Are Proposed for Platelet Distribution

Human blood which has already supplied a factor to help victims of hemophilia can now be shipped in interstate commerce to help others who need transfusions.

Dr. Robert Q. Marston, NIH Director, announced that standards permitting this were published in the *Federal Register* on April 6.

Dr. Marston remarked on the significant increase in the supply of such blood since 1965. In that year Dr. Judith Pool of Stanford University, aided by research grant funds from the National Heart and Lung Institute, developed a simple method for extracting the anti-hemophilic factor from whole blood.

Last fall, NIH approved that clotting factor for interstate shipment (see *NIH Record*, Sept. 29, 1970, page 10).

The remaining blood, Dr. Marston noted, can be quite useful for many ailments.

"It is truly sophisticated medicine—and it leads to a more bountiful national supply of blood—when one blood component is used for the exact condition for which it serves best, and the remainder helps others," he said.

### 'Bleeders' Need AHF

Dr. Marston noted that sufferers from hemophilia—so-called "bleeders"—need the anti-hemophilic factor from at least 5 million pints of blood a year for adequate treatment. The remaining components would help substantially in meeting the Nation's need for blood.

The new regulations permit such remaining blood, when handled according to prescribed standards, to be shipped freely in any area of the country.

Standards for the safety, purity, and potency of the modified whole blood were developed by the Division of Biologics Standards.

The standards were first prepared in preliminary form last October and as published apply to all blood banks using such blood in interstate commerce.

These regulations become effective in 30 days.

### Dr. Stanford Moore Speaks At FASEB Session Tonight

Dr. Marshall W. Nirenberg is unable to deliver his talk at the General Session of the 55th Annual Meeting of the Federation of American Societies for Experimental Biology previously scheduled today (April 13) at 8 p.m.

In his place, Dr. Stanford Moore, President of FASEB and Professor of Biochemistry at Rockefeller University, will speak on "Enzyme Structure and Function."

NIH took a formal step on April 9, approving for interstate shipment a blood-clotting element that is essential in the treatment of patients who have leukemia and other disorders of the blood and bone marrow.

The clotting element is composed of platelets—tiny, disc-shaped particles in the blood.

Dr. Robert Q. Marston, NIH Director, announced publication of proposed standards for safety, purity, and potency of platelet concentrate in the *Federal Register* April 9.

### Comment Invited

Comments are invited from blood banks and other interested sources so that final standards can be drawn.

Platelets from about two million pints of blood a year are needed to treat patients, Dr. Marston noted.

Platelets must be extracted from fresh whole blood and used in a matter of hours. They have been used primarily in major medical centers.

The new standards will mean the concentrate can be moved quickly in any area of the country and therefore may be used even at the smaller medical facilities.

Leukemia patients often have low platelet levels, either as the result of the disease itself or because of drug treatment.

Patients who have other forms of cancer may also receive drugs that reduce their ability to produce platelets. Internal bleeding can result and lead to death.

### Research Interest Strong

Platelets from 8 pints of blood might be necessary in one day for one patient so research on treating these diseases has led to equally strong interest in preparing and using platelets.

For example, at the Blood Bank of the Clinical Center—the research hospital at NIH—platelets are transfused from 10,000 pints of blood a year.

Because platelets die fast, the remaining blood is as good as any blood that is as much as a day old, and is used to help others who need transfusions, such as heart surgery patients. Every 2 pints of blood helps three patients.

The proposed regulations, published in the *Federal Register*, were developed by the Division of Biologics Standards.

Among other standards, it is proposed that the time for optimal use of the platelets be extended to 24 hours, provided the concentrate is stored at room temperature. Hospitals have generally used platelets within 6 hours after accepting blood from donors.

## NINDS Employees Share Award for Development Of Perinatal Report

Nineteen employees in the National Institute of Neurological Diseases and Stroke, Office of Biometry and the Perinatal Research Branch recently received awards for their sustained superior performance in developing a Collaborative Perinatal Study publication.

These staff members, who worked under rigid deadlines, often week-ends and evenings, on huge workloads, were presented with their awards by Dr. Eldon L. Eagles, Deputy Director of NINDS, at a luncheon on April 1.

They shared an award totaling more than \$3,000 for their contribution in turning out the manuscript which will be titled *Collaborative Perinatal Study: The Women and Their Pregnancies*.

Those honored were: Sebastiano A. Sciabarrasi, S. Barbara Katz, Stephana P. Smith, Eudora L. Beadle, Winnie Faye Miller, Dorothy Jordan, and Margaret Meadows.

Also, Colman Fisher, Lawrence R. Mersereau, Barbara J. Nichols, David C. Smith, and Sylvia Zilber.

Also, Ann G. Shapiro, Carolyn J. Haley, Marshall Dorsey, Phil F. Morgan, Essie H. Lowe, Mildred S. Smith, and Esther C. Jackson.

## Chamber Music Series Ends Season With April 18 Concert

The fifth and final concert of the 1970-71 Chamber Music Series, presented by the Foundation for Advanced Education in the Sciences, will be held Sunday, April 18, at 4 p.m. in the Jack Masur Auditorium, Clinical Center.

The season will close with the Amadeus String Quartet offering a program of quartet music by Haydn, Schubert, and Beethoven.

Admission is by ticket only.



Care of a patient with chronic mucocutaneous moniliasis—a fungal disease in which defense mechanisms are impaired—was discussed during a CC Allergy and Infectious Disease Nursing Service conference. Participants were (l to r): Marion Shapiro, Marilyn Harrison, and Josephine Smith. Dr. Charles H. Kirkpatrick, NIAID, described CC studies under way.