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Senate Approves \$1.07 Billion for NIH in FY 1965

As this issue of *The Record* went to press, Congress set the stage for final action on the NIH appropriation for Fiscal Year 1965. Senate-House conferees agreed to a conference September 2 to reconcile differences between the House and Senate versions.

Just before recessing, the Senate voted a \$1,074,459,000 appropriation for NIH for 1965, an increase of about \$14 million over that approved by the House, and \$10 million above revised budget requests.

The House previously had approved \$1,060,142,000 for NIH, a net reduction of \$4,250,000 from the revised Administration request of \$1,064,392,000.

As passed by the Senate, the legislation provides a total of \$6.5 billion for the Department of Health, Education, and Welfare, of which \$1.9 billion is for the Public Health Service. NIH funds are included in

(See SENATE, Page 8)

Dr. Overman Is NIAID's Associate Director for Collaborative Research

Dr. Justin M. Andrews, Director of the National Institute of Allergy and Infectious Diseases, has announced the appointment of Dr. John R. Overman as Associate Director for Collaborative Research.



Dr. Overman

Dr. Overman will direct the NIAID programs in which industrial and other research groups participate. At the present time there are two such programs, one for the development of vaccines, especially respiratory vaccines, and the other for the production, certification, and distribution of research reference reagents.

An expert on viruses, Dr. Overman was formerly Professor of Microbiology and Assistant Professor of Medicine at Duke University Medical Center, Durham, N.C.

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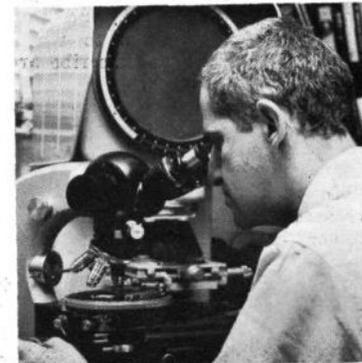
NINDB Perinatal Project Pathologists Seek Clues to Causes of Birth Defects

In NINDB's Collaborative Perinatal Research Project, which is collecting and analyzing data on 50-60,000 mothers and their offspring, pathological specimens provide one major source of clues to factors in birth damage.

A long-term goal of this work is to obtain information which will permit correlation of clinical manifestations, such as cerebral palsy, hyaline membrane disease, and biologically-induced mental retardation, with specific lesions of the brain, or with precise events or chains of events occurring during the perinatal period and recorded on some 10 million sheets of records being collected through the project.

Centered in the Auburn Building, and headed by Dr. Lewis Lipkin, the Section on Pathology of the Collaborative Project is one of its major groups, along with Sections on Behavioral Sciences, Epidemiology and Genetics, Obstetrics,

(See PERINATAL, Page 1)



Dr. Lewis Lipkin, Head of the Section on Pathology, NINDB Perinatal Research Branch, examines slides in his laboratory.—Photo by Sam Silverman.

Expanded Operations of CC Blood Bank Cited in Affiliation With National Group



Dr. Paul Holland (left), Director of the CC Blood Bank's blood donor program, explains the Bank's key-sort system to delegates of the American Association of Blood Banks who visited NIH during the association's 4-day annual meeting in Washington recently. Oscar O. Christianson, M. D. (2nd from right), of the Spokane and Inland Empire Blood Bank, was a special State representative for Washington.—Photo by Sam Silverman.

The Clinical Center Blood Bank became officially affiliated with the American Association of Blood Banks August 18, following receipt of the association's certificate of accreditation.

The need for affiliation with the association became apparent after the Surgical Wing opened and provided additional space for the Blood Bank to greatly expand its operations, including the development of a more active blood donor program.

For example, in mid-1963 when Dr. Paul Holland was added to the staff as Director of the Blood Bank's blood donor program, it was handling about 30 donors per month. At present the number of donors averages more than 250 a month.

Explains Affiliation

Dr. Paul J. Schmidt, Chief of CC's Blood Bank, explained what this affiliation with more than 600 other certified blood banks in the country means to NIH, in addition to the professional recognition which accompanies accreditation.

Specifically, he said, it means that:

- NIH hereby supports a national program to elevate profes-

sional standards of institutional practice;

- NIH is now permitted to complement the work of CC Blood Bank technologists with training credit, thus strengthening its role in training programs for those

(Continued on Page 7)

Dr. Anita Bahn, NIMH, Wins Psychiatry Award

Dr. Anita K. Bahn, Chief of the Outpatients Study Section, Biometrics Branch, National Institute of Mental Health, has been awarded a Certificate of Honorable Mention by the Hofheimer Prize Board of the American Psychiatric Association.

Dr. Bahn, a statistician, received the award for her many published papers on outpatient studies, which were selected by the Board as an outstanding accomplishment in psychiatry.

the NIH Record

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The NIH Record reserves the right to make corrections, changes or deletions in submitted copy in conformity with the policy of the paper and the Department of Health, Education, and Welfare.

NEWS from PERSONNEL

INFORMAL RECOGNITION

Lodge 2419, American Federation of Government Employees, which recently conducted a membership drive here, applied for and was granted informal recognition for employees at the National Institutes of Health in Bethesda and the surrounding metropolitan areas.

Informal recognition under the terms of Executive Order 10988 provides an opportunity for the organization to present its views to management on matters of concern to its members.

SALARY OFFERS STABLE

Contrary to the predictions of some observers in recent years, runaway salaries for new college graduates are not materializing.

In a review of the last five years, the College Placement Council has found that, on the bachelor's degree level, the average gains have been 3.9 per cent a year for technical students and 3.7 per cent for non-technical.

Increases Slight

In both cases, the increases to new college graduates are less than one per cent higher than the across-the-board gains in hourly rates recently reported by the government for production and non-supervisory employees in manufacturing industries during the same period.

In average dollar value, offers to technical students have risen from \$527 in 1960 to the current rate of \$614. For non-technical students the average offer has gone up from \$442 to \$511. (Excerpt from SALARY SURVEY—A Study of 1963-64 Beginning Offers, Final Report, June 1964—published by the College Placement Council, June 1964.)

Showmobile to Entertain CC Patients Sept. 12

One of the most elaborate entertainment programs ever presented for CC patients has been scheduled for Saturday evening, September 12, at 7:30 p.m. in the Clinical Center auditorium.

Members of the Second U.S. Army Showmobile will present "Kaleidoscope" with brilliant colors and resonant tunes which endeavor to make one aware of the relationship that exists between sound and color in the world around us.

Arrangements for this all-Army award-winning production were made by the Patient Activities Section with the Special Service Branch of the Second U.S. Army, Fort George G. Meade.

NIH employees, their families and friends are invited. Patients will have priority in seating.

EMPLOYEE CONDUCT

A reminder of the rules governing conduct of all employees recently published by DHEW has been posted on NIH bulletin boards.

Copies of the DHEW leaflet "Employee Conduct" giving more details on "do's" and "don'ts" in matters such as outside work, conduct on the job, financial responsibility, and others also may be obtained from I/D Personnel Officers.

In addition, the subject is discussed in full in the Personnel Guides for Supervisors (Chapter IV, Guide 7, Suppl. 1).

Since disciplinary action may be taken for violations, and ignorance of the rules does not excuse the violator, employees are encouraged to refresh their knowledge of the limitations to avoid becoming involved in prohibited activities.

Supervisors or the I/D Personnel Officer should be consulted if there are any questions after reading the pertinent materials.

NIAMD Seminar Hears Dr. Jacob Tomorrow

Dr. François Jacob, internationally known investigator in the field of viral and bacterial genetics, will speak at a seminar in the Clinical Center auditorium tomorrow (Thursday), September 10, at 3:30 p.m.

His topic will be "The Replicon," a theory of the control of synthesis of the bacterial chromosome.

Dr. Jacob, Chief of Service at the Microbial Genetics Division of the Pasteur Institute in Paris, has made major contributions in the fields of bacterial genetics, lysogeny, biochemical genetics of the operon, and control mechanisms of gene function.

With Dr. E. Wollman, Dr. Jacob co-authored the book, Sexuality and the Genetics of Bacteria.

The seminar is being sponsored by the Laboratory of Biochemistry and Metabolism of the National Institute of Arthritis and Metabolic Diseases. All those who are interested are cordially invited to attend.

E. J. La Montain Named NRA Safety Instructor

Edward J. La Montain of the Laboratory of Biology, National Cancer Institute, has been appointed a Home Firearms Safety Instructor by the National Rifle Association.

Award of the NRA instructor's certificate, following successful completion of a written examination, qualifies Mr. La Montain to conduct a new NRA safety course among those who normally do not use firearms for recreation but have them in their homes. The course is designed to help reduce shooting accidents in the home.

Christoferson Appointed NIDR Executive Officer

Dr. Francis A. Arnold, Jr., Director of the National Institute of Dental Research, has announced the appointment of Herbert C. Christoferson as Executive Officer of the Institute.



Christoferson

In this newly created position, Mr. Christoferson will supervise the administration of the Institute's direct operations and extramural programs. "The great expansion of the activities of the Institute," Dr. Arnold said, "has made necessary the establishment of the new post."

Mr. Christoferson comes to NIH from a nine year stint as Executive Officer in the Division of Indian Health of the Public Health Service.

He was stationed for five years in Portland, Oreg., and for four years in Phoenix, Ariz. Prior to that he was Chief of Personnel and Organization Section with the U.S. Office of Education.

Mr. Christoferson holds an A.B. degree in business administration from George Washington University and a Master's in public administration from American University.

After serving as an officer in the U.S. Navy from 1943 to 1946, he was Chief of the Classification Section of the Social Security Administration.

He holds memberships in several professional societies including the American Society for Public Administration, the American Academy of Political and Social Science, and Alpha Kappa Psi.

Commission Announces New Health Insurance Rates

The Civil Service Commission has announced new health insurance rates to be effective November 1964, based on new contracts negotiated with the insurers for the ensuing year. Old and new rates under the plans to which most NIH employees subscribe are shown in the table below.

Rates and benefits in the Low Option of the first two plans remain unchanged under the new contracts.

In several cases, the rate increases will be accompanied by minor increases in benefits. For

example, the new Blue Shield high option plan provides 365 days of hospital benefits, instead of 120 days for each confinement.

In-hospital insurance covering doctors' hospital visits likewise will be increased from 120 to 365 days. And regular basic hospital benefits will be substituted for the present \$118 hospital allowance in maternity cases.

The Commission said it will announce an unlimited "open season" next February 1-15 to give employees a chance to switch from one plan to another.

Plan	Option	Type of Enrollment		Present	New
		Self & Family	Self Only		
Blue Cross-Blue Shield	High	\$5.82	2.11	\$7.88	2.92
	High	5.64	1.82	7.73	2.84
Aetna	High	11.51	4.46	13.27	5.16
	High	7.34	2.74	8.60	3.22
Group Health	Low				
	Low				

Dr. Malone Is Appointed Deputy Chief of NIDR Extramural Programs

Dr. Francis A. Arnold, Jr., Director of the National Institute of Dental Research has announced the appointment of Dr. Thomas E. Malone as Deputy Chief of the Extramural Programs Branch.

With Dr. Robert C. Likins, Chief of the Extramural Programs Branch, Dr. Malone will administer the Institute's research grants, fellowships, and training grant programs.

Research grants for studies of the causes, treatment, and prevention of oral diseases are under way in 138 institutions in the U. S. and 13 foreign countries.

Dr. Malone joined the Dental Institute as Assistant Chief of the Research Grants Section in October 1963. Prior to that he completed



Dr. Thomas E. Malone, newly appointed Deputy Chief of the Extramural Programs Branch, NIDR (center), discusses grant applications with Dr. F. Earle Lyman, Assistant NIDR Director (left), and Dr. Francis A. Arnold, Jr., Institute Director.—Photo by Bob Pumphrey.

a year's on-the-job training in the NIH Grants Associates Program.

Dr. Malone received an M.S. degree from North Carolina College in 1949, and a Ph.D. degree from Harvard University in 1952. He then returned to North Carolina College where he served as Instructor and Assistant Professor of Zoology until 1958.

He was for two years a research associate at Argonne National Laboratory and held a postdoctoral fellowship from the National Research Council—National Academy of Sciences.

From 1960 to 1962, Dr. Malone was Assistant Professor of Biology at Loyola University in Chicago. During this period he also held appointments at Chicago Teachers College and Illinois Institute of Technology, and served on a National Science Foundation review panel for projects in science education and research.

Dr. Malone's research has been in the general field of reproductive histophysiology where he has published numerous papers on the histogenesis of lutein tissues and the

Small Unit of NIH Medical Arts Branch Prepares 2,000 Copy Jobs Per Year



Copy Preparation Unit members (left to right) Mary Ann Welsh, Jacqueline Drake and Helen Kerr discuss copy assignments. The fourth member of the unit, Willa Hilsenrath, was not present for the picture taking.—Photos by Lou Cook.

A small unit of the Medical Arts and Photography Branch of the Division of Research Services does a big job of copy preparation for all of NIH.

Helen Kerr, Head of the Copy Preparation Unit, and her assistants, Jacqueline Drake, Mary Ann Welsh, and Willa Hilsenrath, completed 2,000 copy preparation requests this past year, ranging from one to 20 pieces each.

The unit prepares text material for many of the reports and informational material published by NIH. As an important aid in preparing papers for publication, the unit also makes line drawings, tables, charts, and structural formulas from rough drawings.

When preparing material which is to be submitted to a scientific journal, the unit studies the format of the journal in order to produce copy exactly to its specifications.

Work Volume Cited

Copy completed in the last year included 978 tables and slides, many of which were used in talks before professional societies. Also prepared were 461 charts, figures, and structures, most of which were to accompany papers for publication in scientific journals. There were 260 miscellaneous copy preparation requests, such as for brochures and covers for publications.

The material is prepared for reproduction by printing processes or photography, with the exception of overhead projection slides, which are prepared for immediate use. Some of this work is done

cytology and cytochemistry of reproductive tissues.

He holds memberships in several professional societies including the American Association for the Advancement of Science, New York Academy of Sciences, American Society of Zoologists, the Histochemical Society, and American Society for Cell Biology.

partly by hand and partly by machine.

Text material is prepared on the Vari-Typer. This machine, used to prepare copy for brochures, booklets, reports, and other informational material, operates somewhat on the principle of a typewriter. However, it has the ad-



Mary Ann Welsh prepares large structural formula for reproduction.

vantages of being able to utilize many different sizes and styles of type, and the right margin automatically comes out even.

The Headliner is used to prepare titles, headings, or other copy that requires large letter size. Film positives produced by the Headliner are used in the silk screen process—as, for example, in making 4-color flash cards and testing charts used for perception tests in research studies of patients. The silk screen process is used primarily in exhibit work, with headings or text screened directly on panels.

A new photocomposing machine, which is a more efficient version of the Headliner, can produce film strip blocks of copy 8½ inches wide and 25 feet long. These can

(See MEDICAL ARTS, Page 6)

Engineering Lecture Set For Sept. 15 by DRS

"The Development of Criteria for Air Handling and Distribution Systems" will be the topic of the fourth DRS Engineering Lecture, to be given in Wilson Hall, Building 1, at 2 p.m., Tuesday, September 15.

Guest lecturer will be Arthur E. Wheeler, Chief Air Conditioning Engineer with Henry Adams, Inc., a firm of consulting engineers from Baltimore, Md.

Mr. Wheeler's work during the past 17 years has been focused upon the application and concept development of air conditioning, refrigeration, and ventilation for commercial and institutional facilities. A graduate of Duke University Engineering School, Mr. Wheeler spent 12 years with the Carrier Corporation before joining Henry Adams, Inc., in 1959.

Series Presents Specialists

The DRS Engineering Lecture Series presents top-level engineers and scientists closely associated with certain specialty aspects of biomedical research facilities.

The purpose of these lectures is to stimulate thinking and generate new ideas in connection with the many components that make up the total design of such facilities. Although these presentations are primarily for engineers, others who are interested are invited to attend.

Sept. 11-19 Registration Scheduled for Classes in NIH Graduate Program

Registration for classes in the Graduate Program at NIH will be held September 11 through September 19 in Building 31, Rm. B1B38 from 10 a.m. to 4 p.m. daily except Sunday. Classes will start on Monday, September 21.

The Graduate Program offers fifty-three courses in the fields of Behavioral and Social Sciences, Biochemistry, Chemistry, Genetics, Mathematics and Physics, Medicine and Physiology, Microbiology and Immunology and Languages and General Studies.

New courses introduced this year include Demography, Psychopharmacology, Survey of Biochemistry, Spectroscopy, Methods of Particle Separation, Ordinary Differential Equations, Mathematical Probability, and Chemical Thermodynamics.

Also, Introduction to the Planning and Analysis of Scientific Experiments for Bio-Medical Scientists, Histochemistry, Medical Bacteriology, Advanced Topics in Microbiology, Reading Improvement, and Information Storage and Retrieval.

Catalogs are available in Rm. B1B38, Building 31, Ext. 66371.

PERINATAL

(Continued from Page 1)

Pediatric Neurology, Infectious Diseases, and Data Processing and Analysis and others.

The Section on Pathology is now beginning to undertake the detailed examination of hundreds of neuropathological specimens that have become available through the 15 participating medical centers and other sources.

In addition, tens of thousands of color slides of pathological tissue related to pregnancies under observation have been collected.

In the studies now under way, high priority has been given to the assessment of effects of maternal diseases on placental and fetal pathology, of placental changes in relation to the stillborn infant, and of hyaline membrane disease and congenital pneumonia.

For example, tissue samples may be employed to determine whether infectious agents such as viruses were directly involved in the neuropathological processes.

In addition to specimens supplied through the collaborating institutions, the Section on Pathology obtains materials through the Acad-



This picture of an NINDB Collaborative Perinatal Research Project brain shows sub-arachnoid hemorrhage (indicated by dark areas), a form of birth injury manifestation frequently encountered in project material. Measure at the top indicates size of the brain.

emy of Cerebral Palsy, with which it cooperates in maintaining a Brain Registry. Also, the Clinical Center occasionally provides the section with specimens for study.

Eventually, computers of the more advanced types are expected not only to correlate data from the pathological studies, as they will from other project investigations, but also, hopefully, to be adapted to cell counts, discrimination between cell types, identification of neurons, and other scanning activities.

Such a process will employ a man-machine interaction in which the electronic facility of the machine will extend the trained judgment of the neuropathologist.

Research on Human Dental Pulp Shows Range of Response, Biologic Variations

Scientists at the National Institute of Dental Research have studied the response of human dental pulp to changes induced by dental drilling procedures and by various restorative materials and cavity liners.

The studies have furnished the dental profession with practical information on operative procedures, particularly in regard to optimal cutting speeds, the proper use of coolants, and modifications in technique necessary for the safe placement of certain restorative materials.

Dr. Harold R. Stanley, Chief of the Oral Medicine and Surgery Branch, and Dr. Herbert Swerdlow, Chief of the Dental Services Branch, NIDR, have used over 2,000 intact human teeth in these studies.

They have shown that use of high speed techniques (100,000 r.p.m.) with adequate water coolants minimizes pulp trauma compared with low speed cutting instruments, or with high speed instruments with air or no coolant.

Prevents Burn Lesions

Describing measures which can be taken to minimize the problem of biologic variations in pulpal studies, Drs. Stanley and Swerdlow reported that no burn lesion will result at any cavity depth provided an adequate water coolant accompanies the procedure.

Without the use of an adequate water coolant, larger cutting tools, such as a No. 37 diamond point, will create typical burn lesions within the pulp when the remaining dentin thickness is less than 1.5 mm.

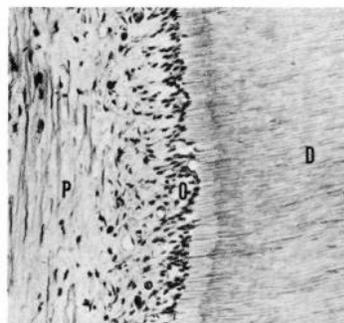
Because of the reduced inflammatory response of the pulp following high speed cutting techniques, the time period for the production of reparative dentin has been greatly prolonged.

Thus, dentinal tubules remain open and permit the toxic or irritating products of sterilizing agents, cements and silicates to permeate to the pulp tissue. For this reason, research on cavity liners has become a most important area of investigation.

James Moynihan Named AO in Allergy Institute

James E. Moynihan has been appointed Administrative Officer for Collaborative Research in the National Institute of Allergy and Infectious Diseases. He will be responsible for the overall coordination and administrative management of the Institute's contract research programs.

Mr. Moynihan was formerly Chief of the Vaccine Development Branch, NIAID, and will continue to act in that capacity until a successor is named.



Microscopic section of a lower anterior tooth in which a cavity was prepared with a high speed technic and restored with an amalgam. At the end of 48 hours the pulpal area at left (P) shows very mild response, no acute inflammatory cells are seen, and very few odontoblasts (dark cells along a line above and below the "O") have been displaced into the dentinal tubules (D).

DRG Releases Revised Grant Application Form

PHS Application for Research Grant (Form PHS-398) has been revised to provide a form consistent with new research grant regulations and to make provisions for project period grants.

The major change in the revised application, already released by the Division of Research Grants, is its 2-section feature.

Section I is not considered a privileged communication. It will be used by the Public Health Service and the Science Information Exchange to provide information on pending applications to other Government agencies and organizations participating in the Science Information Exchange program.

Limitations Noted

Section I will also be used to provide information on approved PHS research projects "to recognized information media and—to the extent that PHS deems it appropriate—to an individual member of the public."

Section II of the revised application is considered a privileged communication within the meaning of PHS regulations which govern the disclosure of information obtained in connection with applications. It contains the research plan, supporting data, biographical sketches, budget, and other research support.

The revised application form reproduced as Exhibit I, Part V of the Grants Manual, is being mailed to grantee institutions.

PHS Publishes Revised Bibliography on Cancer

An annotated and graded bibliography on cancer prepared by the National Cancer Institute in collaboration with the National Science Teachers Association has been published by the Public Health Service.

The booklet, "Reading on Cancer," provides a comprehensive list of books, reports, and magazine and journal articles on the subject. Most of the publications listed require no prior knowledge of cancer on the part of the reader and are graded "easy." Others are graded "moderately difficult" or "difficult."

An annotation under each listing gives a general clue to content and indicates whether the item is of special interest to teachers. A topical index organizes the entries according to major aspects of the cancer problem.

Accompanying the bibliographic listing are suggestions to teachers on sources of information on cancer, and on methods of using this subject matter in science courses.

Is Major Revision

Previous editions of "Reading on Cancer" have been published by PHS, but this issue represents a major revision and is the first undertaken in collaboration with the National Science Teachers Association, the science department of the National Education Association.

Dr. John H. Woodburn of the Walter Johnson High School in Montgomery County, Md., was Chairman of a committee of teachers who worked on the project.

Single copies of "Reading on Cancer—An Annotated Bibliography," PHS Publication No. 457 (revised 1964) are available from the Public Health Service, Washington, D. C. 20201.

Quantities may be purchased at 15 cents per copy from the Superintendent of Documents, Government Printing Office, Washington, D. C. 20402.

Dr. Barter Injured by Automobile in London

Dr. Frederic C. Barter, Chief of the National Heart Institute's Clinical Endocrinology Branch, is reported to be in good condition now after being struck by an automobile in London recently.

Dr. Barter was in England to attend the Second International Conference of Endocrinology, August 17-22. He was accompanied by Drs. Robert L. Ney and John R. Gill, Jr., also of the CE Branch.

Dr. Barter suffered a dislocated right shoulder, five broken ribs and a splintered elbow. He was confined in St. Mary's Abbot Hospital in London.

Dr. Barter is expected to return to NIH this week.

General Hospital Service Seen as Important Aid In Psychiatric Training

A review of the training of a number of psychiatric residents who chose to spend their final year or two years as consultants in a medical service of a general hospital has shown this type of training is an important aspect of their psychiatric education.

Most of the applicants for psychiatric training at the Peter Bent Brigham Hospital, Boston, known primarily for its research and teaching in the fields of medicine and surgery, had considerable interest in psycho-physiology and in general medicine, and the hospital psychiatric unit from the time of its inception has functioned as an integral part of the medical service.

Strengthens Identity

The opportunities afforded in this setting tended to strengthen the resident's identity as a psychiatrist as well as to improve his communication with physicians in other fields.

Each resident was encouraged to assume responsibility for a limited number of patients from the medical wards for extended psychotherapy under supervision as a direct opportunity to learn more about the techniques of psychotherapy.

In addition to his function as consultant, the psychiatric resident participated with the internists and senior psychiatrists in the teaching of medical students assigned to the hospital, primarily through clinical demonstrations to the students.

Observes Research

Although the resident did not actively participate in research, he had ample opportunity to familiarize himself with the complexities of the psycho-physiological research being undertaken at the hospital.

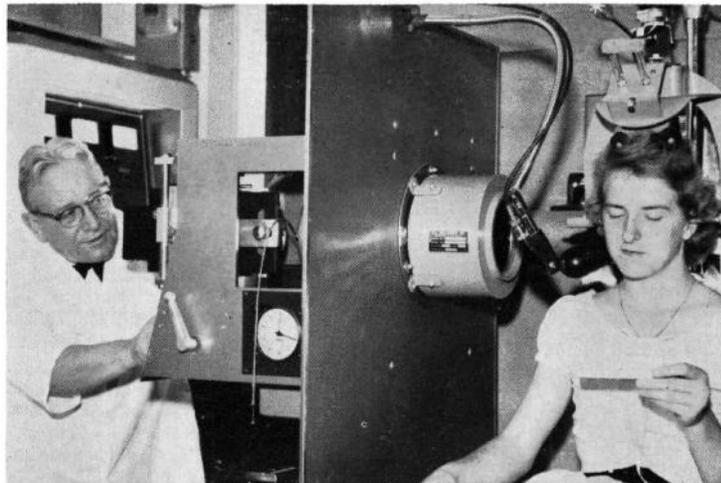
A number of the psychiatrists have gone on to active psycho-physiological research since the completion of their residency training.

The psychiatric training program is supported by a National Institute of Mental Health Training Grant and the report, by Dr. Henry M. Fox, Peter Bent Brigham Hospital and Harvard Medical School, appears in Archives of General Psychiatry.

Julie Dickinson Elected

Julie May Dickinson of the National Heart Institute's Heart Information Center has been elected to the Board of Directors of the American Women in Radio and Television, Washington Chapter. As a board member she will be responsible for publicity.

Cleft Lip and Palate Research Center To Be Established Under NIDR Grant



Dr. Herbert K. Cooper, founder and Director of the Lancaster Cleft Palate Clinic, Lancaster, Pa., uses cineradiography X-ray motion pictures (with sound) to record the movement of oral soft tissue in speaking and swallowing. Dr. Cooper introduced cineradiography techniques in cleft palate research.—Lancaster Clinic Photo.

Surgeon General Luther L. Terry of the Public Health Service recently announced that the largest clinical research center in the United States for the study of cleft lip and palate will be established at the Lancaster Cleft Palate Clinic, Lancaster, Pa., under a grant from the National Institute of Dental Research.

Dr. Herbert K. Cooper, founder and Director of the Lancaster Clinic, will conduct the comprehensive research program under this grant, studying the oral birth defect from its origin to its treatment.

Dr. Cooper will head a scientific team which will probe factors that may cause cleft palate and cleft lip, evaluate various surgical and dental procedures to correct the deformity and habilitate speech, and test the psychological effects on patients and their families.

7-Year Study

Dr. Francis A. Arnold, Jr., NIDR Director, indicated that the Lancaster Clinic will have the first clinical research center grant from the Institute. It will receive a grant of \$428,642 for the first year of a projected 7-year study.

Both Dr. Terry and Dr. Arnold stressed the need for cleft palate research. "A baby with cleft palate faces the world with a handicap which affects the way he eats, breathes, hears and eventually talks," Dr. Terry said. "This common birth defect is treatable and may potentially be preventable."

Dr. Cooper, a dentist who has served as Director of the Lancaster Clinic since its founding in 1938, has been a pioneer in rehabilitation of cleft palate patients.

Once in every 800 births, a facial cleft occurs. In this common birth abnormality, all or part of the solid surface of the "roof of the mouth"

is lacking. Eating, breathing and talking become difficult, and dental development and hearing are usually affected.

"Everybody wants to know what causes this deformity and what we can do about it. Our research will try to find out," Dr. Cooper said.

The skills of physicians, dentists, psychologists, social workers, speech therapists and many others will be adapted to the treatment of the cleft palate patient in the Lancaster research environment. The team approach, including the basic scientific fields, of biochemistry and biology, is the highlight of the study.

Many surgical repair techniques now in use will be compared, and children will be followed closely for a number of years after operation to gauge the varying success of the procedures.

Cites Other Factors

Dr. Cooper feels that many things other than physical abnormalities may contribute to speech defects. Speech patterns of the parents, previous illnesses of the patient, sharpness of hearing, number of cleft palate operations, all contribute to the child's speech development.

The Lancaster Clinic has extensive modern equipment for the diagnosis and treatment of cleft lip and cleft palate. Complex measurements, using X-ray sound motion pictures, are taken of each patient so that development and difficulties can be studied.

48 Institutions Receive Construction Grants For Research Facilities

New York University Medical Center's Institute of Physical Medicine and Rehabilitation, headed by Dr. Howard A. Rusk, has been awarded a grant of \$1.4 million for the construction and equipment of a new, 7-story research wing, it was announced recently by Surgeon General Luther L. Terry of the Public Health Service.

The award to the Institute was the largest PHS award for a facility devoted to research in physical medicine and rehabilitation, and is expected to have a strong impact on research in those fields.

Research Programs Listed

Research programs in the new building will include hyperbaric research on spinal chord injuries and stroke, basic research in mental retardation, cellular physiology, and biomedical engineering.

This grant is one of 48 totalling \$29.5 million awarded to institutions in 24 states to provide matching Federal funds for health research facility construction and equipment.

Largest of the grants is \$3.4 million awarded to Cornell University Medical College for the construction of a 10-story clinical research building.

A grant of \$626,000 was awarded to the State University of Iowa for research construction at its internationally renowned Speech and Hearing Center.

The Methodist Hospital, Houston, Tex., received a grant of \$1.73 million for a cardiovascular research center, plans for which include a hyperbaric oxygen facility in which up to 10 patients may be simultaneously pressurized.

Computer Center Planned

An award of \$144,000 to the Mayo Association, Rochester, Minn., will pay part of the cost of constructing two additional floors to house a computer research center to be used by scientists of the Mayo Clinic and Mayo Foundation.

Including these awards, the Public Health Service's health research facilities program, administered by the Division of Research Facilities and Resources, has made awards totalling \$309.4 million since 1956 to 396 institutions in 50 States, D. C. and Puerto Rico.

The Surgeon General makes these awards only on the recommendation of the National Advisory Council on Health Research Facilities comprised of leading non-governmental scientists, research administrators, and others experienced in assessing health research facility needs of institutions throughout the Nation.

MEDICAL ARTS

(Continued from Page 3)

be used as complete text for publications or for titles for movies. Separate visual slides can also be made for use with overhead projection machines.

Visual slides used with overhead projection machines have proved particularly effective in highlighting lectures. The unit can prepare these quickly, for the slides do not need to be processed photographically. Diagrams, photos, drawings, and lettering can be used to illustrate an important point. Color can easily be employed to add emphasis to a presentation.

The Copy Preparation Unit has received two citations, one a dual



Helen Kerr discusses operation of new photocomposing machine with Jacqueline Drake.

superior performance award presented in January 1960 to Helen Kerr, Jacqueline Drake, and Arlene Kennedy for (1) "special services rendered to the Cancer Institute" and (2) for "increasing services of copy preparation for NIH."

The second award was presented in June 1962 for superior accomplishment to Helen Kerr, Jacqueline Drake, and Mary Ann Welsh "for mastering the art of the silk screen process in the face of many difficulties."

NIH Orchestra Begins 6th Season Sept. 22

The NIH Orchestra, sponsored by the R&W Association of NIH, will begin its sixth season Tuesday, September 22. As in previous years, the group will be conducted by Mark Ellsworth, an experienced teacher-conductor.

With the constant turnover of personnel here, the orchestra always needs additional players of orchestral instruments. Any NIH personnel or members of their families who can play such instruments, especially string instruments, are welcome. There are no auditions.

Rehearsals are held every Tuesday evening at 8 for about two hours in the Clinical Center auditorium. For additional information call Dr. John B. Wolfe, Ext. 67465.

Study Reveals Venodilation Important in Overall Effects of Hypotensive Agents

National Heart Institute scientists have reported that reduction in venous tone produced by certain anti-hypertensive drugs may be an important factor in their overall effects on blood pressure.

The blood-pressure effects of reserpine, guanethidine, alpha-methyl DOPA, and other hypotensive agents have been attributed primarily to their ability to relieve constriction of arterioles and to reduce heart work by curbing the activity of the sympathetic nervous system.

Drugs Reduce Stimuli

These drugs reduce the flow of sympathetic stimuli calling for vasoconstriction or increased heart rate and output by interfering with the neurohumoral function of norepinephrine stored at sympathetic nerve terminals, where it is normally released by nerve impulses to convey their messages to target organs.

Recent NHI studies indicate that the reduction in venous tone also produced by these agents may be an important (though largely overlooked) factor in their overall effects on blood pressure.

Reduced venous tone increases the capacity of the venous bed and reduces the amount of blood returning to the heart. Since the heart cannot pump any more blood than it receives, this reduces heart output and thereby reduces arterial blood pressure.

These studies were carried out on 17 normal volunteers. Forearm venous tone was measured in resting subjects, then again after each subject had undergone procedures known to elicit reflex venoconstriction:

immersion of the opposite hand in ice water and vigorous exercise on a bicycle ergometer.

All measurements were repeated after the subjects had received reserpine, guanethidine, or alpha-methyl DOPA. The dosage schedules were closely similar to those commonly used in the clinical management of hypertension.

The drugs produced slight, but significant reductions in venous tone in resting subjects. They completely abolished the venoconstrictive response to immersion of the hand in ice water and to vigorous exercise.

In fact, in some subjects, venous tone fell below resting values. It appeared that this paradoxical decline in venous tone was mediated by sympathetic cholinergic nerves, whose venodilator action was unimpeded by the adrenergic blocking agents employed.

Atropine Blocks Decline

Subsequently, it was found that this decline could be prevented by atropine, a cholinergic blocking agent.

Thus, while the hypotensive agents used in this study do reduce arteriolar resistance and heart rate, this is only one facet of their effect on blood pressure.

Another possibly important facet is their reduction of venous tone and their ability to prevent constriction of the venous bed in response to exercise and other factors.

These findings were reported in the *Journal of Clinical Investigation* by Drs. Dean T. Mason and Eugene Braunwald, of NHI's Cardiology Branch.

Kety, Landy Named to AMA Advisory Group

Two National Institutes of Health scientists have recently been appointed to the Committee of Scientific Advisers of the newly formed Biomedical Research Institute of the American Medical Association.

The two are Dr. Seymour S. Kety of the National Institute of Mental Health, and Dr. Maurice Landy of the National Institute of Allergy and Infectious Diseases.

Both Dr. Kety and Dr. Landy are



Dr. Kety



Dr. Landy

internationally recognized authorities in their respective fields. Dr. Kety, Chief of NIMH's Laboratory of Clinical Science, is the author of many and varied articles on mental health and is particularly distinguished as an authority on the biological aspects of mental disease.

Dr. Landy is Chief of the Laboratory of Immunology, NIAID. He has made important contributions in a variety of research areas including the characterization of bacterial antigens, the immunology of enteric infections, mechanisms of natural resistance and the distinctive immunological properties of bacterial endotoxins.

Will Advise Institute

As members of the Committee, Drs. Kety and Landy will advise the Bio-medical Research Institute as regards scientific program, the recruitment of staff members and the laboratory arrangements for the new Institute.

Under the auspices of the Educational and Research Foundation of AMA, the new Institute will be housed in facilities presently under construction in Chicago.

which may contain leucosis viruses.

The COFAL test effects a considerable saving of time and labor over the currently used resistance-inducing factor (RIF) test for the detection of avian leucosis viruses. This assay is essential for the production of safe vaccines.

Available evidence also indicates that the COFAL test may be useful in large-scale field tests for the prevalence of naturally occurring leucosis viruses, thereby helping to alleviate a great economic hazard of the poultry industry.

The report appeared in the July issue of *Virology*.

DR. OVERMAN

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A native of Marion, Ind., Dr. Overman took his undergraduate training at Duke University, Washington and Jefferson College, and the University of Maryland. He received his M.D. degree from the Duke University School of Medicine.

Before joining the Duke faculty in 1956, Dr. Overman was a staff member of the Laboratory of Infectious Diseases, NIAID, and of the Rockefeller Institute for Medical Research. He won the Lederle Medical Faculty Award in 1956.

Dr. Overman is a member of numerous scientific societies, including the Society of Experimental Biology and Medicine, the American Association of Immunologists, the Harvey Society of New York, and the American Society for Cell Biology.

New Test Developed to Detect Cancer-Inducing Viruses in Chickens

The development of a direct, rapid, and simple test to detect viruses that induce cancer in chickens but produce little or no visible effect in chicken tissue-cultures has been reported by scientists of the National Institute of Allergy and Infectious Diseases.

The new test was made possible by the finding that the complement-fixing antibodies induced in the serum of hamsters by one of the avian leucosis viruses, the Schmidt-Ruppin strain of Rous sarcoma virus, were specifically reactive with every member of the avian leucosis group.

Application of the COFAL (complement fixation avian leucosis) test may safeguard and expedite the commercial preparation of live virus vaccines in chicken embryos

NHI Exhibit Dramatizes Highlights of Research Against Heart Disease

The scope of today's fight against heart disease is dramatically presented in the new National Heart Institute exhibit, "Directions in Cardiovascular Research."

Planned by the Heart Information Center, the exhibit highlights the factors in the development of heart disease (including the "high risk factors" established in the Framingham study), methods of diagnosis, and advancement in the treatment of cardiovascular disorders. Factors in heart disease are illustrated.

A diagram of the human figure, showing the uses of several heart catheters and their routes through the body, exemplifies directions in diagnosis.

Use of Catheters Shown

Catheters are thin, hollow, flexible tubes inserted into veins or arteries and then guided to the heart or other desired area under the guidance of X-ray or fluoroscopy.

The catheters are shown in place in the body as they would be used for measuring blood flow and volume, detecting heart shunts (holes between the heart chambers), listening directly to the heartbeat through a miniature microphone on the catheter tip, injecting radiopaque substances for X-ray examination of the heart, and for measuring internal blood pressures.

Increasing use is being made of these versatile devices both in hospitals and in the laboratory. They are practically indispensable to predicting the value of open-heart surgery.

Other Devices Featured

To represent directions in the treatment of heart disease, the exhibit features the cardiac pacemaker, baropacer, and artificial heart. The pacemaker is used as a regulator and aid for the malfunctioning heart to establish a beat and definite rhythm for pumping blood.

High blood pressure has been reduced considerably in animals with the implantable baropacer. This device works by electrically stimulating the carotid sinus nerve, which is involved in the mechanism of regulating blood pressure.

The artificial heart is one of the newest replacement organs to be developed. Although still experimental, it may well become the medical wonder of the decade.

The new exhibit will have its first showing at the American Heart Association meeting in Atlantic City October 22 through 25.



Louis Cook, writer-producer of the NHI Heart Information Center's radio series "Know Your Heart" (left), emphasizes a point during a recording session with professional announcer Bob Will (center) and NHI's Dr. John Turner, narrator and technical advisor, now serving on the President's Commission on Heart Disease, Cancer and Stroke. The series of ten 2-minute spot programs about heart disease and heart research will be available to all U. S. radio stations shortly. Already well over 1,000 stations have requested the series.

Blood Bank Affiliates With Nat'l Group

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who wish to specialize in blood banking; and

- A more effective exchange of blood and blood credits with other banks may be established—an important point since the majority of CC patients come from other states and thus have not participated in the Washington area blood donor programs.

Accreditation was achieved following physical inspection of the CC Blood Bank by Dr. Oscar B. Hunter, Jr., Chairman of the association's National Committee on Inspection and Accreditation, and the successful completion of a comprehensive questionnaire concerning accepted blood banking procedures.

During the annual meeting of the American Association of Blood Banks in Washington, D. C., August 25-28, more than 150 delegates representing every state and some foreign countries visited the



Dr. Paul J. Schmidt, Director of the CC Blood Bank (center), watches as Dr. N. John Pappas, a member of the bank's staff, explains the process of blood typing and grouping to Carolynne M. Seeman, NIMH Training Branch.—Photo by Sam Silverman.

CC Blood Bank.

About 125 attended the formal program on August 26 which included a welcoming address by Dr. Holland, and guided tours through the Bank.

In addition, throughout the 4-day meeting smaller groups of delegates came for individual discussions and personal tours.

Award Winner Visits CC

Among these was Professor J. J. van Loghem, M.D., from the University of Amsterdam, Holland, the 1964 recipient of the AABB Karl Landsteiner Award presented during the Washington meeting "for his many contributions to the field of immunohematology and its blood banking segment."

All the visitors expressed great interest in the Blood Bank's facilities and activities. They were particularly impressed with the Auto-Analyzer, a device that can analyze samples of blood and tell not only their types—A, B, AB, or O—but their many sub-characteristics as well.

There is only one other machine of this kind and it is used by the Red Cross in Los Angeles. A detailed report on the Auto-Analyzer will be presented in a subsequent issue of *The Record*.

Bank Uses Volunteers

To meet the special blood needs of Clinical Center patients, the Blood Bank depends largely upon the voluntary donations of NIH's own employees assisted by other community donors under the local Red Cross program.

Appointments to give blood may be made by calling Ext. 64509. The Blood Bank is located in the Clinical Center's Surgical Wing, Building 10A, 1st floor.

Wife of Dr. E. D. Becker Killed in Auto Accident At Versailles, France

Ellen L. Becker, 33, wife of Dr. Edwin D. Becker, Jr., Chief of the Section on Molecular Biophysics, Laboratory of Physical Biology, National Institute of Arthritis and Metabolic Diseases, was killed in an auto accident August 20 at Versailles, France. Mrs. Becker was alone in her car at the time of the accident.

Dr. and Mrs. Becker and their two children, Lynn Catherine and Carl, arrived in France early last month for a year in Paris.

Dr. Becker is on Institute assignment at the Sorbonne and the Center for Applied Quantum Mechanics of the French National Center of Scientific Research, where he is studying molecular structure and molecular interactions.

Since their arrival, Dr. and Mrs. Becker have resided at 103 Avenue Pierre, Grenier, Boulogne-Billancourt/Seine, France.

Married in 1952

Born in Chambersburg, Pa., Mrs. Becker was a graduate of the University of Rochester, where she majored in French. She and Dr. Becker were married in 1952.

Dr. and Mrs. Becker and their children made their home at 3920 Rickover Road, Silver Spring, Md.

In addition to her husband and children, Mrs. Becker is survived by her parents, Mr. and Mrs. S. H. Bear of Middleport, N.Y., and a sister, Mrs. Rupert Barnes of Cleveland, Ohio.

Arrangements for the funeral, held in Paris, were handled by the American Embassy, in cooperation with the NIH Overseas (European) Office in Paris.

Educational TV Program Features NHI Grantee

Dr. William F. Bernhard, National Heart Institute grantee of the Harvard Medical School, was recently featured on the "Science Reporter" television show on WETA Channel 26 in Washington.

In a program titled "Operating Under Pressure," "Science Reporter" visited the Hyperbaric Chamber in Boston's Children's Medical Center where the technique of operating under high atmospheric pressure was explained by Dr. Bernhard.

The program showed how a surgical team using this new technique can safely cut off the blood flow from the ailing heart for several minutes—long enough to make the necessary repairs by open heart surgery.

Lawrence Gray Named DRFR Section Chief

Lawrence C. Gray has been appointed Chief of the Construction and Management Section of the Office of Architecture and Engineering, Division of Research Facilities and Resources. The Division administers grants for research construction and large-scale research centers, and other resources.



Mr. Gray

In his new position, Mr. Gray will be responsible for approval of final working drawings, specifications, and cost estimates for research facilities supported by the Division.

Mr. Gray began his construction engineering career in 1947 with the Arkansas Natural Companies, a subsidiary of Cities Service. In 1952, as Commissioned Officer, he joined PHS as a sanitary engineer in Savannah, Ga.

Joins BSS

In 1954, he was appointed regional construction consultant for the Division of Water Supply and Pollution Control, Bureau of State Services.

From 1961 to 1962, he was Deputy Chief, Construction Grants Branch of that Division, and in 1962 until his present appointment, he was Chief, Scientific Review Branch, Office of Resources Development, Bureau of State Services.

Born in Little Rock, Ark., Mr. Gray received his B.S.C.E. degree from the University of Arkansas in 1947 and his M.S.C.E. degree from Georgia Tech in 1951.

3 Educators Appointed To Child Health Council

Two outstanding medical educators and a leading educator of women were appointed recently to 4-year terms on the National Advisory Child Health and Human Development Council by Surgeon General Luther L. Terry of the Public Health Service.

The two medical educators representing the fields of internal medicine and obstetrics and gynecology are: Dr. Lewis Thomas, Professor and Chairman of the Department of Medicine, New York University School of Medicine, N.Y.C., and Dr. E. Stewart Taylor, Professor and Head of the Department of Obstetrics and Gynecology; University of Colorado School of Medicine, Denver, Colo.

The third appointee is Esther M. Raushenbush, Director of the Center for Continuing Education and Acting Dean of Sarah Lawrence College, Bronxville, N.Y.

QUART-SIZED HEART-LUNG IN TRIAL USE



A new quart-sized heart-lung apparatus is held by one of its developers, Dr. Theodor Kolobow of the National Heart Institute's Laboratory of Technical Development. Although not yet perfected, the apparatus is undergoing experimental trials in animals. Among its potential advantages: it is disposable, easily sterilized, eliminates the hazard of gas emboli, has a high oxygenating efficiency, and requires very little blood for priming. In the background, a technician sits at console of a larger heart-lung machine currently used for open-heart surgery.—Photo by Jerry Hecht.

SENATE

(Continued from Page 1)

the PHS portion of the appropriation.

The Senate-approved appropriation for NIH provides for \$956.5 million in operating funds. This includes a \$650,000 increase over the House amount for the National Heart Institute, for a cooperative study in drug therapy, particularly the use of hormones, in the control of coronary heart disease.

The operating appropriation also includes a \$3.6 million increase over the House allowance for fellowships, with \$1.8 million for NIGMS (earmarked in the Senate for pre-doctoral fellowships), \$100,000 for NIDR, \$1.2 million for NIAMD, \$300,000 for NIAID, and \$200,000 for NINDB.

Included in the Senate total for NIH was a new appropriation of \$10 million for the National Cancer Institute to carry out a special cancer virus program. The House allowance excluded provision for this program.

The Senate also voted \$35 million for construction of community mental health centers, \$58 million for grants for construction of health research facilities, and \$14.9 million for direct construction—as approved by the House.

Mary W. Brunot of NCI Retires After 22 Years

Mary W. Brunot, Head of Grants Operations Section, Operations Branch, Grants and Training, National Cancer Institute, retired August 31 after 22 years of Federal service.

Mrs. Brunot came to NIH in 1942 as a clerk in Shipping and Receiving, and in 1946 was appointed as an Administrative Assistant in the Office of the Director.

She transferred to the U. S. Quarantine Station, Bureau of Medical Services, Miami Beach, Fla., in 1949, and returned to NIH three years later as a clerk in the Field Investigations and Demonstrations Branch, NCI.

Mrs. Brunot served as Grants Assistant in that Branch from 1956 to 1961, when she became Head of the Grants Operations Section in the Operations Branch.

Maurice D. Arnold, Chief of the Operations Branch, noted "Mrs. Brunot has become a beloved friend of many of those associated with her in the Public Health Service. We will certainly miss having her with us."

Mrs. Brunot began her NIH career after the death of her husband, Dr. Felix R. Brunot, a Commissioned Officer of the Public Health Service.

Dr. Saz to be Chairman Of Microbiology Dept. At Georgetown Univ.

Dr. Justin M. Andrews, Director of the National Institute of Allergy and Infectious Diseases, recently announced that Dr. Arthur K. Saz, Assistant Chief of the Laboratory of Infectious Diseases, has resigned to become Professor and Chairman of the Department of Microbiology and Tropical Medicine at Georgetown University School of Medicine.



Dr. Saz

A member of the staff of NIAID since 1949, his principal research at NIH has concerned the metabolism of tubercle bacillus and the bacterial physiology and mode of action of antibiotics.

His new assignment at Georgetown University will not be his first experience in the field of teaching. During graduate studies at Duke University from 1940 to 1943 he was both Assistant Pharmacologist in the School of Medicine and later an instructor in Bacteriology.

Dr. Saz also taught at the New York Medical College, 1946-1947, and was Assistant Professor in the Department of Bacteriology at Iowa State College from 1948 to 1949.

In 1947 he was a Fellow at the Rockefeller Institute. Dr. Saz is a member of the American Society of Microbiology and the American Academy of Microbiology.

A native of New York City, Dr. Saz received a B.S. degree from the City College of New York in 1938. He did post graduate work at the University of Missouri, where he received an M.S. in 1939, and Duke, where he received the Ph.D. in bacteriology in 1943.



Maurice D. Arnold, Chief of Operations Branch, Grants and Training, NCI, congratulates Mary W. Brunot, Head of Grants Operations Section, on completing 22 years of Federal service. Mrs. Brunot was honored recently on her retirement August 31.—Photo by Ralph Fernandez.