

the NIH Record

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Dr. Leon Jacobs Named to Direct DBS Research

Dr. Roderick Murray, Director of the Division of Biologics Standards, has announced the appointment of Dr. Leon Jacobs as Assistant Director in Charge of Scientific Coordination of research programs, effective Jan. 3.



Dr. Jacobs

Dr. Jacobs, who spent his entire professional career at NIH, assumes his present position with a record of outstanding accomplishments as a scientist, research administrator, editor and writer.

He served most recently as Acting Director for Intramural Research, National Institute of Allergy and Infectious Diseases. He had been associated with NIAID since 1937, except for service in World War II. Until 1964 he was Chief of the Institute's Laboratory of Parasitic Diseases.

Research Interests Noted

Dr. Jacobs' research interests lie in the study of disease-producing organisms and how they relate to problems in diagnosis and disease control. Some of his major accomplishments have been in the field of parasitic diseases, with particular emphasis on malaria.

(See DR. JACOBS, Page 3)

Dr. Morrison Appointed NCI Assistant Director

Dr. Kenneth M. Endicott, Director of the National Cancer Institute, recently announced the appointment of Dr. Bayard H. Morrison III as Assistant Director.



Dr. Morrison

Dr. Morrison will have primary responsibilities in program planning, working closely with the Institute's Associate Director for Program, Dr. Carl G. Baker.

Joins NCI in 1958

He will also assist the Director in managing the total activities of the Institute, including cooperative work with volunteer health groups, professional organizations and educational institutions.

Dr. Morrison, previously with NCI's Clinical Branch of Collaborative Research, joined the Institute in 1958 as a staff member of the Cancer Chemotherapy National Service Center.

A native of Philadelphia, he received a B.S. degree from Rollins College in 1953, and the M.D. degree from Emory University School of Medicine in 1957.

He served his medical internship at the Veterans Administration Hospital in Atlanta, Ga., and held a medical residency at the U.S. Public Health Service Hospital in New Orleans.

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to identify the kinds of stress, both environmental and psychological, that bring about disease.

The research may ultimately yield information on why and under what conditions people get diseases, and point the way toward ways of predicting—and intervening—in the onset of disease.

For example, a means may be found to minimize the psychological

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Wild Baboons to Aid Study of Blood Pressure and Rate Flow

By Gary Goldsmith

Not many medical research groups shoot leopards to retrieve their laboratory equipment, but then, not many scientists need an entire African wildlife preserve as their laboratory. A recent expedition to Kenya required all that space for a most unusual project: studying blood circulation in completely unrestricted wild primates.



Members of the research expedition adjust the radio antenna of the vehicle used to track released baboons.

Supported by a \$22,000 grant from the National Heart Institute, this research marked perhaps the first time that blood pressure and flow have been studied in any animal in its natural habitat.

It was especially important as part of the overall research effort to correlate activity and behavior with heart response—to understand how and why the heart performs differently under stress. For these studies the baboon was chosen because its cardiovascular responses under laboratory conditions are remarkably similar to man's.

Expedition Organized

The expedition was organized by Dr. Robert L. Van Citters, a Cardiovascular Physiologist and Associate Professor at the University of Washington, Seattle. Also from the university were Dr. Orville Smith Jr., Assistant Director of the Regional Primate Research Center, and Nolan W. Watson, an electronics technician.

Dean L. Franklin, Chief of Biomedical Engineering, and William

(See BABOONS, Page 3)

1st Grants Issued Under '64 Nurse Training Act

The first grants—totaling almost \$2.75 million—to improve nursing education under the Nurse Training Act of 1964 were announced recently by the Department of Health, Education, and Welfare.

Available through the Public Health Service, the grants are for assistance under two provisions of the legislation:

1.e Project grants to improve, strengthen, or expand nursing education programs; and

2.e Payments to reimburse diploma (hospital) schools of nursing for some of the cost of increased enrollment resulting from other provisions of the Nurse Training Act.

\$2 Million Awarded

Nearly \$2 million for 39 project grants was awarded to 35 diploma and collegiate schools of nursing located in 21 States, the District of Columbia, and Puerto Rico.

The awards were made on the recommendation of the National Advisory Council on Nurse Training which was created by the legislation. As required, each of the 35 schools receiving project grant funds is accredited by the National League for Nursing or has reasonable assurance of accreditation.

How Mind, Emotions May Cause Disease Is Subject of NIMH-Supported Study

How the mind and emotions may contribute to the development of physical illness is the subject of a major study recently awarded a Public Health Service grant.

The award entails an initial grant of \$132,549 for the first year, plus additional support for the following six years from the National Institute of Mental Health.

Dr. George L. Engel, Professor of Medicine and Psychiatry at Rochester University, Rochester, N.Y., is the principal investigator.

The study is based on clinical evidence that seems to indicate that psychological factors frequently influence the onset of physical illness.

A variety of studies are planned

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

INCOME TAX HELP

Tax assistance will be available in the cloakroom off the main lobby of Building 10 beginning Jan. 24. More specific information on the time will appear in the Jan. 25th issue of the *Record* and on bulletin boards. Tax forms will be available in the Institute/Division personnel offices on Jan. 24 also.

It is suggested that individuals who plan on asking for help begin now to collect the necessary data, such as receipted medical bills, tax receipts, and proof of contributions.

HEALTH BENEFITS

A desk-to-desk distribution has been made of the pamphlet "Information about Plan Changes Effective January 1966" (BRI 41-117). If by some chance an employee did not receive this pamphlet, he may obtain one from his personnel office. Employees are advised to keep it with the brochure relating to their particular plan, since there will be no desk-to-desk distribution of brochures.

LENGTH OF SERVICE AWARDS

PMB is compiling lists of employees eligible for 10-, 20-, 30-, and 40-year length of service awards. To qualify for these awards, one must have performed the service prior to the cut-off date of Dec. 31, 1965. All periods of military and civilian service are included in the computation, and the service need not have been continuous.

Employees who believe they have been overlooked in the past for these awards should call Ext. 64851, Employee Relations and Services

List of Latest Arrivals Of Visiting Scientists

11/30—Dr. Yasuhiro Anraku, Japan, Research training in the Laboratory of Biochemistry and Metabolism. Sponsor: Dr. L. A. Heppel, NIAMD, Bldg. 10, Rm. 9N111.

12/6—Dr. James W. Gibb, Canada, Research training in the Laboratory of Clinical Biochemistry. Sponsor: Dr. S. Udenfriend, NHI, Bldg. 10, Rm. 7D20.

12/13—Dr. Peter L. Cook, England, Research in the Diagnostic and X-ray Department. Sponsor: Dr. B. E. Hathaway, CC, Bldg. 10, Rm. 6S211.

12/15—Dr. Laura C. Shen, Taiwan, Research training in the Section on Biochemistry. Sponsor: Dr. V. eGinsburg, NIAMD, Bldg. 10, Rm. 9N216.e

12/22—Dr. Pavel Albrecht, Stateless, Research in Collaborative and Field Research. Sponsor: Dr. D. C. Gajdusek, NINDB, Bldg. 8, Rm. 100.

12/27—Dr. Uriel Zor, Israel, Research training in the Laboratory of Chemical Pharmacology. Sponsor: Dr. B. B. Brodie, NHI, Bldg. 10, Rm. 7N117.

12/28—Dr. Takashi Tokuyama, Japan, Research in the Laboratory of Chemistry. Sponsor: Dr. B. Witkop, NIAMD, Bldg. 4, Rm. 309.

Air Force Band to Play

The United States Air Force Band will present a concert for Clinical Center patients tomorrow, Thursday, Jan. 13, at 7:30 p.m. in the Clinical Center auditorium.

NIH employees, their families and friends are invited to attend.

Section, PMB, to get a verification of their service,

15 Gray Ladies Honored For Devoted Service to Clinical Center Patients

Fifteen Gray Ladies were commended for their devoted service recently by Dr. Robert M. Farrier, Associate Director of the Clinical Center. Each of the 15 had devoted more than 300 hours to service with CC patients during 1965, according to Mrs. Betsy Popof, CC Gray Service Chairman.

Because their work is voluntary, Dr. Farrier said, they bring to patients here "a personal tie with life outside the hospital walls."

Many Hours Given

Gray Lady with the longest service in 1965 was Mrs. Freda Couch, with 433 hours. Another Gray Lady, Mrs. Polly Utz, is now in her 28th year of Red Cross service.

There are now 100 volunteers in the Gray Service here, Mrs. Popof said. In terms of service she is in the top 15 with 355 hours last year.

Mrs. Lillian Montague and Mrs. Mary Donahue chalked up 386 hours each. Others who gave more than 300 hours include Mrs. Mae Purcell, Mrs. Mary Pope, Miss Hilda Moore, Mrs. Sonia Shockey, Mrs. Gracee Clarvoe, Mrs. Katharine Lewis, Mrs. Irene Dietrich, Mrs. Betty Taylore and Mrs. Mary Schwartz.



Mrs. Polly Utz, CC Gray Lady, helps patient add finishing touches to the knitted cap made during occupational therapy sessions in the CC Rehabilitation Department. Mrs. Utz is now in her 28th year of continuous Red Cross service.—Photo by Jerry Hecht.

Shakespearean Classic To Be Shown Jan. 15

"A Midsummer Night's Dream" will be the next film presentation in the classic sound series sponsored by the Recreation and Welfare Association of NIH. It will be shown Saturday, Jan. 15, at 8 p.m. in the Clinical Center auditorium.

Made in 1935, the movie was one of the first authentic efforts to film Shakespeare and stars James Cagney, Joe E. Brown, Dick Powell, Mickey Rooney, and Olivia de Havilland.

R&W members, their families and friends are invited to attend. Admission is free.

Bookstore for Graduate School Program of NIH Relocates in Bldg. 12A

In addition to such employee services as the film desk, Credit Union, bank and barber shop, NIH employees may be surprised to know that there is also a bookstore on the reservation.

Operated by the Foundation for Advanced Education in the Sci-



Dr. H. G. Fletcher Jr., chairman of the bookstore committee, discusses a new monograph with Elaine Lessenco, manager of the bookstore, as several NIH researchers browse among its collection.—Photo by Jerry Hecht.

ences, which is responsible for the NIH Graduate School Program, the bookstore was established in 1961 as a convenience to registrants in the Graduate School courses.

Recently relocated in new quarters in Rm. 3033 of Building 12A, the bookstore is open from 9 a.m. to 4 p.m. during regular working days.

Although its main function is to handle textbooks for the Graduate School courses, the bookstore has gradually broadened its services. As a member of the National Association of College Stores, it receives from publishers a variety of new books likely to be of professional interest to NIH researchers.

Books Ordered

The bookstore also offers an ordering service which is not restricted to technical books. A book order may be placed by phoning Mrs. Elaine Lessenco on Ext. 66372, giving the author, title and publisher. Within two weeks the book, together with a statement, is delivered to the purchaser.

A committee composed of Drs. H. G. Fletcher Jr. (Chairman), L. A. eCohen, and G. H. Weiss, is responsible for the general policies of the bookstore. Suggestions for improving this employee service may be addressed to Dr. Fletcher (Ext. 62771, Bldg. 4, Rm. 231).e

Two hundred years ago—November 1765—the first medical school in the United States began holding classes in Philadelphia at what is known today as the University of Pennsylvania Medical School. *Today's Health*,

BABOONS

(Continued from Page 1)

S.e Kemper, Electronics Engineer, Scripps Clinic and Research Foundation, La Jolla, Calif., completed the group.

Blood pressure and flow rate were measured in selected baboons, such as the dominant male of a pack, by sensors implanted in the heart and circulatory system. By applying space-age miniaturization of electronic components, the scientists had designed and built small, light-weight radio transmitters which could be fitted on the backs of the baboons.

When the animals were returned to their natural environment, the "back packs" transmitted the measurements made by the cardiovascular sensors as they went about their daily routine.

The researchers left Nairobi, Kenya, in June 1965 with two trucks carrying nearly half a ton of electronic and medical equipment. Their safari outfitter took them to a remote area on the northern slope of Kilimanjaro Mountain, at the edge of Kimana Wildlife Sanctuary.

Animals Share Camp

A base camp, set up on a site originally used by Ernest Hemingway, was shared with lions, rhinoceros, elephants and other wild animals. Most important of all were the many packs, or troops, of baboons.

The scientists assumed that trapping them would be simple since baboons are easily lured into maize-baited cages. The first night the cages were put out, however, not one was trapped, though the next morning hundreds of footprints were found around each cage.

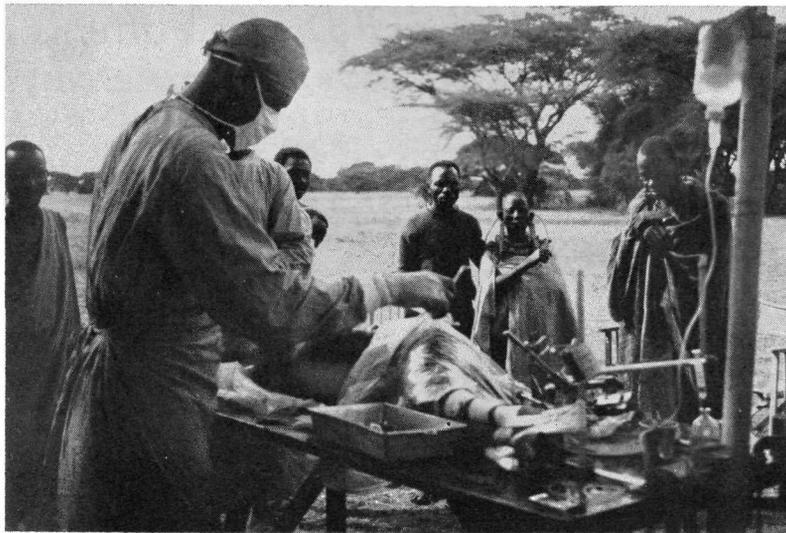
On closer examination, the scientists discovered why: the prints were human. During the night local Masai tribesmen had been milling around, admiring the extraordinary cages.

Baboons from three different troops were finally captured. A regular surgical facility was set up outdoors and sensors to measure blood flow and pressure were implanted in the main artery (aorta) and one or more arteries of the leg, kidney, and intestine of each test animal.

Facility Well Equipped

Although the surroundings were primitive, the facility was modern and completely equipped. Surgery was carried out in the open or under a tent, often attracting bystanders from nearby Masai villages.

After recovering from surgery, the animals were fitted with back packs and released to rejoin their troops. As they made their way through the forest, their blood pressure and flow rate was measured and continuously recorded by in-



Masai natives watch Dr. R. L. Van Citters complete a procedure on an anesthetized baboon. Despite the primitive surroundings, this surgical facility is equipped with every modern device, enabling the staff to carry out a wide range of procedures.



The baboons in the cage are being returned to their troops, or packs, following the implanting of sensors in their arteries to measure blood flow and blood pressure by means of connected, light-weight radio transmitters fitted to their backs. At left is Dr. R. L. Van Citters. Next to him is Dr. O. A. Smith Jr. Nolan Watson, electronics technician, is far right.

struments as far away as two miles.

One of the trucks, a 5-ton, 4-wheel drive vehicle, was converted into a mobile receiving and tracking station. Complete with antennas, homing devices, tape recorders, oscilloscopes, and other electronic gear, it made a strange sight as it lumbered across the wild countryside.

When the baboons were visible, the scientists added a verbal account of their activities and behavior to the tape-recorded heart measurements. This included observations of fighting, eating, facial and body gestures, and reactions to outside stimuli such as the appearance of predators or other baboon troops.

An understanding of the effects of these activities on the cardiovascular system was a prime goal, for it is difficult to conduct even limited studies of this kind in man.

Fifty-six rolls of tape were filled with measurements and observations and are now being computer-



D. L. Franklin, one of the engineers of the Scripps Clinic and Research Foundation, examines the "back pack," containing a light-weight radio transmitter, just attached to still-sedated baboon prior to its release.

analyzed by the scientists at the University of Washington.

Altogether, 12 instrumented animals were released for periods lasting as long as 15 days. Each back pack contained a radio-controlled syringe loaded with a powerful tranquilizing drug.

By sending the appropriate signal, the scientists could immobilize the animals, even at considerable distances, and insure return of the gear. The scientists were especially anxious to retrieve the back packs. Each was worth over \$5,000.

Recovery Challenging

Recovery was not always simple, however. For example, one day while observations were being made on a baboon troop, there was a sudden flurry of activity.

As the researchers watched, they realized what was happening—a leopard was attacking one of the test animals! Accompanied by their professional hunter-guide, they rushed to the scene, arriving too late to save the baboon but in time to recover the equipment.

With other test animals they had better luck and after several months returned to the United

James A. King Dies in CC December 29, Was Computer Authority

James A. King, 51, Associate Chief of the Division of Computer Research and Technology, died in the Clinical Center as a result of cancer on Dec. 29.

Since September 1963, Mr. King had played a leading role in formulating plans and developing programs for the Division of Computer Research and Technology. It was under his direction that the nucleus of the DCRT



Mr. King

professional staff came into being. He was also chairman of the committee appointed by Dr. James A.e Shannon, Director of NIH, to evaluate manufacturers' proposals for a new computer system for the NIH central facility. At the time of his death, Mr. King was serving as Acting Chief of the Division.

Mr. King came to NIH as Executive Officer of the Division of Research Services in 1958. He was appointed Assistant Chief of DRS in 1961 and Associate Chief for Computer Resources, DRS, in 1963.

Born in Dyersburg, Tenn., Mr. King received a B.S. degree from the Tennessee Polytechnic Institute in 1936 and a Master of Public Health degree from the University of Michigan in 1950. From 1939 to 1944 he was a Sanitarian with the Tennessee Health Department.

With PHS Since 1944

He was commissioned as a Sanitarian in the Public Health Service in 1944, and from that time until 1948 participated in PHS sanitation programs in Colorado.

During a brief break in PHS service in 1948 and 1949, he served successively as Director of General Sanitation, Colorado State Health Department, and Education Director of the National Sanitation Foundation in Ann Arbor, Mich.

In 1953 he was a lecturer on sanitation problems associated with milk and food at the University of Minnesota School of Public Health.

Mr. King joined the Communicable Disease Center in 1953 as Training Officer for the Public Health Methods Unit. He was appointed Special Assistant to the Chief, CDC, in 1957, a position which he held at the time of his transfer to NIH.

States with all of their equipment intact. With them they also brought extensive notes, tape recordings and graphs.

From these raw materials of research may come a better understanding of the human heart and its interactions with the pattern of life.

Dr. Stanley J. Sarnoff, NHI Laboratory Chief, Retires on Disability

Dr. Stanley J. Sarnoff, Chief of the National Heart Institute's Laboratory of Cardiovascular Physiology, retired recently due to disability from illness.

During his Public Health Service career as a research scientist, Dr. Sarnoff accomplished outstanding physiologic studies and gained worldwide recognition for a redefinition of the relationship between cardiac work and oxygen consumption, which challenged classic concepts of heart actions.



Dr. Sarnoff

This accomplishment made use of an experimental isolated heart preparation to determine that the heart muscle's requirement for oxygen per minute does not depend on the amount of work it performs, but primarily on the amount of tension which it develops with each beat.

Nervous Influences Studied

Thus the amount of blood which the heart puts out, does not in itself, determine its requirement for oxygen. His studies describing the influence of the central nervous system in the control of heart action have provided a more complete understanding of the extent to which nervous influences contribute to cardiac adaptation under varying states.

For this work, Dr. Sarnoff received the Princeton University Class of 1938 Distinguished Service Award in 1956 and the Lesslie L. and Helen F. Jacobs Foundation Award for meritorious investigation in the field of cardiovascular disease in 1957.

Other awards bestowed upon him include the Porter prize of the American Physiological Society; the 1961 Malcolm Rogers Memorial Award; and the 1961-62 award of the Kansas City (Mo.) Heart Association for "outstanding contributions in the field of cardiovascular basic research."

Receives Gairdner Award

He also received the 1962 Gairdner Foundation Award for discoveries "clarifying the roles played by the involuntary nervous system and hormones in controlling heart function in both the normal and diseased states."

A native of Brooklyn, N.Y. and a graduate of the Peddie School and of Princeton and Johns Hopkins Universities, Dr. Sarnoff was a Fellow and Resident in Surgery at several eastern hospitals and medical schools before turning his

Research on Sleep and Dream Patterns May Hold Clues to Body, Brain Activity

The extraordinary recent growth in sleep and dream research is indicated in a substantial new volume published recently by the Public Health Service.

In "Current Research on Sleep and Dreams," reports of the latest studies have been woven into an up-to-date account of the state of knowledge today regarding the mental and physical aspects of sleep and dreaming.

Within hardly more than a decade, scientists have found that the exploration of sleep may hold important clues to basic questions about the chemistry and timing mechanisms of the body, brain activity, and even development of the human personality. Much of the research being undertaken is toward penetrating problems of mental health and illness.

Sleep Study Helpful

While the study of sleep is new in its present dimensions, it has already contributed to the clinical diagnosis and treatment of narcolepsy, behavioral predictions in several mental disorders, understanding of the effects of drugs and drug therapy, and understanding of infant development.

The new publication, prepared by the National Institute of Mental Health, also points out several implications of sleep research for general medicine.

While sleep disorders are characteristic of many mental illnesses, there are many physical ailments that manifest symptoms frequently during sleep, such as epilepsy, enuresis, asthma, and heart failure.

Coronary attacks, often fatal, tend to occur during the early morning hours when people are most likely to be in a particular phase of sleep, attended by certain distinct physiological changes.

DRFR Completes Move To Westwood Building

The Division of Research Facilities and Resources has started the New Year in its new home in the Westwood Building. The move to DRFR's new quarters from NBOC No. 1 took place last month.

The staff occupies portions of the fourth and fifth floors. Dr. Thomas J. Kennedy Jr., Chief of the Division, is in Rm. 552, Ext. 67574. Dr. Thomas G. Bowery, Assistants Chief, is in Rm. 553A, Ext. 67531.

attention to physiological problems of heart disease.

He became a Research Fellow in the Department of Physiology at Harvard School of Public Health at Boston in 1948, advanced to Assistant Professor and Associate Professor before becoming Chief of the NHI Cardiovascular Physiology Laboratory in 1954.

There are about two dozen laboratories in the United States, in universities and hospitals, designed for the study of human sleep, and in many more the sleep of animals in various stages of their development is under study.

The 125-page publication includes findings about body cycles and life rhythms, sleep deprivation, sleep disorders, the chemistry of sleep, control over sleep and other states of consciousness, the dream state and meaning of dreams, and the development of infant sleep.

It also discusses significance of the research in treatment and understanding of mental and physical disorders.

Single copies of "Current Research on Sleep and Dreams," PHS Publication No. 1389, are available without charge from the Public Information Section, NIMH, Bethesda, Md. 20014.

Multiple copies may be purchased from the Government Printing Office, Washington, D.C. 20402.

MIND-EMOTIONS

(Continued from Page 1)

cal shocks that in many cases lead to physical illness; or, through drugs, diet and other means, methods may be developed to short-circuit physical reaction to stress.

Such stresses are not necessarily factors in all physical disease, the investigators emphasize, nor are they invariably associated with physical disease.

The study is concerned only with those situations in which psychic, emotional and social factors are relevant to the onset of illness.

Important to the study is the concept of "giving up," a psychological state of helplessness or hopelessness often found preceding organic disease.

Healthy Subjects Observed

In exploring the possibilities of predicting illness, one phase of the study will be concerned with a number of well subjects, who will be followed over a period of four years. During that time data will be collected on life events, "giving up," and the occurrence of illness.

The investigators will also explore certain types of situations with a high potential for provoking a psychological state.

They will study, for example, women whose husbands are known to be dying of cancer; the reactions of family members to an accident which has killed several members of the family; acute and chronic grief; and reactions to therapeutic abortions, hysterectomies and sterilizations.

Dr. Moloney to Present Martin Refuss Lecture

Dr. John B. Moloney of the Laboratory of Viral Oncology, National Cancer Institute, has been selected to give the Third Annual Martin Refuss Lecture at Jefferson Medical College in Philadelphia next Saturday, Jan. 15.



Dr. Moloney

In the lecture, entitled "Virus Etiology of Neoplasia," Dr. Moloney will review investigations in the animal model tumor virus systems including selected studies in the field of avian cancers, murine leukemias and murine sarcomas.

He will describe efforts to detect and relate viruses as etiological agents of human disease.

Tumors, Viruses Unrelated

Dr. Moloney notes that to date no human tumors have been shown to be causally related to viruses but concludes that continued studies with established animal tumor virus systems will lead to increased understanding of the nature and cause of human cancer.

Dr. Moloney received world-wide recognition for his discovery of the mouse leukemia virus, now referred to as the "Moloney virus."

His work, in collaboration with Dr. Albert J. Dalton, Chief, Laboratory of Viral Carcinogenesis, NCI, led to virus purification by simple differential centrifugation, making it possible to detect viral infection by electron microscopic examination of ultracentrifugal fractions of plasma.

Preview of 1-Act Play Tomorrow in Wilson Hall

A preview performance of "Would You Take This?", a one-act play dramatizing a local fluoridation situation will be presented by the Division of Dental Health, Bureau of State Services, in Wilson Hall (Building 1) tomorrow, Jan. 13, at 8:15 p.m.

The socio-drama will be performed by a professional theater company from New York. All NIH employees, their families and friends are invited to attend.

Research will also cover studies of subjects predisposed to specific diseases, such as ulcer, colitis, celiac disease and others, in the hope of gaining the ability to anticipate relapses and prevent them.

It is the first time a study of this type has been undertaken on such a large scale. Dr. Engel will head an interdisciplinary team representing medicine, psychiatry, psychology, pediatrics, obstetrics-gynecology and subspecialties.

NCI Scientist Presents Data on Virus-Induced Murine Sarcoma Study

A National Cancer Institute investigator has observed particles morphologically indistinguishable from those of murine leukemia viruses in materials from mice bearing sarcomas induced by Moloney leukemia virus.

The study of the ultrastructure of the sarcoma was undertaken to clarify the nature of this tumor, which was observed earlier this year by Dr. John B. Moloney, NCI, in mice inoculated at birth with the Moloney virus.

BALB/c mice developed localized sarcomas following either subcutaneous or intraperitoneal inoculation of cell-free extracts of previous generation tumors.

Electron Microscope Used

Samples of tumor, plasma pellets, and tissues of these mice were studied with the electron microscope.

Particles indistinguishable from murine leukemia viruses were observed budding from the sarcoma cells and lying in the spaces between them.

These particles averaged 100 mu in diameter and resembled both immature and mature murine leukemia virus particles.

The fact that these particles were produced by malignant cells, and the absence of other agents, suggest that they are etiologically related to the sarcoma.

Similar particles were also found in the plasma pellets, in very small numbers. This low incidence is believed to be correlated with the absence of particles in sections of lymph node, thymus, or spleen in mice with the virus-induced sarcoma but free of clinical signs of leukemia.

Different Particles Found

In only the first specimens of material from a subcutaneous tumor were different particles found in a few cells. These particles averaged 50 mu in diameter and were observed in the Golgi zone of the cells. Their significance is unknown.

Another kind of particle was also found budding from the cell sheath, or lying in spaces of single isolated skeletal muscle cells associated with the subcutaneous sarcoma.

The sarcoma cells themselves were also examined. They were either small spindle shaped cells with a single elongated nucleus, or larger cells with one or more nuclei. Both types contained numerous fibrils and large amounts of protoplasm.

These findings were reported by Dr. Albert J. Dalton, Laboratory of Viral Carcinogenesis, NCI, at the Conference on Murine Leukemia held in Philadelphia.



"Since the Surgeon General's report we've been calling them unwinding jackets."

Cartoon by courtesy of Medical Tribune

British Steroid Collection Is Available to U.S. Scientists Under NIAMD Contract

Milligram quantities of more than 300 steroid compounds, most of which are unavailable commercially, are now available without cost to qualified American scientists engaged in biomedical research.

The new service, announced by Dr. G. Donald Whedon, Director of the National Institute of Arthritis and Metabolic Diseases, is the result of a recent contractual agreement between NIAMD and the Medical Research Council (M. R. C.) of Great Britain, which permits ready access by United States scientists to the M. R. C.'s Steroid Reference Collection.

M. R. C. steroids now available

Health Film Emphasizes Cigarette Smoking Risk

The Employee Health Service will present "Who Me?" as its January health education movie. The film which emphasizes the risk of cigarette smoking, was made for the American Cancer Society.

The two-fold risk adults take when they smoke is stressed—the danger to their own health and the encouragement their example gives to youth.

Showings are scheduled in the Westwood Building, Conference Rm. A, Tuesday, Jan. 18 at 1:30 and 2:30 p.m.; Clinical Center auditorium, Wednesday, Jan. 19 at 11:30 a.m. and 1:30 p.m.; and North Bethesda Office Center No. 2, Conference Rm. 113, Thursday, Jan. 20 at 1:30 and 2:30 p.m.

have been purified and characterized both chemically and physically, and new compounds are continually being added to the collection.

It is intended primarily as a source of reference standards for biochemical work, including thin-layer and paper chromatography, infrared spectra, color reactions, and other methods of identification and determination.

Dr. Whedon emphasized that large amounts of steroids cannot be provided for macrochemical studies, nor will any compound be supplied for use as an experimental drug in human subjects.

Requests to Dr. Alford

Requests for samples or further information should be addressed to Dr. W. C. Alford, Rm. 225, Bldg. 4, National Institutes of Health, Bethesda, Md. 20014.

In general, requests for steroid compounds should state briefly the intended use and indicate the minimum quantity (in milligrams) necessary to accomplish the proposed research work.

Requests will be filled as promptly as possible following review of individual applications, and samples will be mailed from England direct to the requestor.

Dr. Raymond Feldman, NIMH Deputy Director, Retires From Service

Dr. Raymond Feldman, Deputy Director of the National Institute of Mental Health, is retiring from a long, distinguished career in public health psychiatry, it was announced last week by the Institute.

While Dr. Feldman has not yet announced definite plans for the future, he anticipates remaining active in the field of psychiatry.

A native of Chicago, Dr. Feldman was a leader in neuropsychiatric services for the Veterans Administration before joining NIMH in 1957.

He was instrumental in the development of the new national mental health program which supports community mental health services, and was a key figure in the expansion of mental health training and research.

Dr. Feldman began his career in public service in 1934. Following work with the Veterans Administration, he joined the U.S. Army Medical Corps.

Active in Reserves

In that war-time post, he served in the Southwest Pacific Theater and was active in the Ready Reserves until his retirement as a Colonel in 1962.

After World War II, Dr. Feldman served with the Veterans Administration in Denver, Colo., for six years. In 1952, he came to Washington as Chief of Outpatient Psychiatry, V.A. Department of Medicine and Surgery, helping to develop a nation-wide network of mental health clinics for veterans.

Dr. Feldman began his NIMH career as Assistant Chief of the Training Branch, Extramural Programs. He became Chief of the Institute's training support program in 1959.

In 1963 he was appointed Associate Director for Extramural Programs and several months ago became Deputy Director.

Last year he was awarded the Superior Service medal for his accomplishments at NIMH.

Average Man, 168 Lbs., Woman Averages 142

According to a recent National Health Survey on the physical dimensions of adult Americans, men average 168 pounds in weight, 5 feet 8.2 inches in height; 90 percent of women average 142 pounds, 5 feet, 3 inches in height.—*Vital and Health Statistics, USPHS.*



Dr. Feldman

Ken Brown Retires as NIAID Executive Officer After 17 Years' Service

Kenneth H. ("Ken") Brown retired Dec. 30 after 17 years' service with the National Institute of Allergy and Infectious Diseases. He had been the Institute's first and only executive officer since its establishment as the National Microbiological Institute in 1948.

Mr. Brown served with three NIAID directors—Dr. Victor H. Haas, Dr. Justin M. Andrews, and Dr. Dorland J. Davis, the present director. During his tenure, the NIAID budget rose from \$1.6 million in 1948 to \$69.8 million in 1965.



Mr. Brown

Helps Found Program

Mr. Brown was one of the founders of the NIH management intern program in 1957. Except for a short period, he was a member of the NIH Administrative Training Committee from its beginning, and was its chairman for three years. His vital interest in the program resulted in the recruitment of many young and talented administrators.

Under Mr. Brown's administrative supervision, the Middle America Research Unit was established in the Panama Canal Zone in 1957 as a joint research effort of Walter Reed Army Institute of Research and NIAID.

In 1962, a year after MARU was made a permanent field station, Mr. Brown drew up an interagency agreement for the construction of family living units for NIAID (MARU) employees at Cardenas Village, Canal Zone.

In 1963 Mr. Brown worked out the plans for a \$750,000 renovation program at NIAID's Rocky Mountain Laboratory at Hamilton, Mont. This program included the construction of a new animal building, an insectary, and a new shop building.

Background Cited

Born in 1907 in Petoskey, Mich., Mr. Brown received his B.S. degree from North Carolina State College. After teaching for five years in the public schools of Rocky Mount, N.C., he joined the U.S. Department of Agriculture in Washington, D.C.

When the U.S. entered World War II, he was appointed administrator of the Foreign Economic Administration's London office. After the war, he served with the War Assets Administration until he came to NIH in 1948.

Mr. Brown has many hobbies and talents that will enrich his retirement years. He is an unusually skillful square-dancer, an amateur

Vector of Both Human, Simian Malaria Found in Northern Malay States

A mosquito that transmits both human and simian malaria in nature has been found in the monsoon forests of the northern Malay States.

Dr. McWilson Warren of the Laboratory of Parasite Chemotherapy, National Institute of Allergy and Infectious Diseases, and his co-workers of the Institute for Medical Research, Kuala Lumpur, Malaysia, issued the first report of the malaria vector discovered during field studies there.

Mosquitoes Dissected

Anopheles mosquitoes attracted to man and monkeys were caught and dissected. When found, the sporozoites (the organisms in the infective stage of malaria) were inoculated into uninfected rhesus monkeys.

As a result, the *Anopheles balabacensis balabacensis* mosquito was found to be a natural vector of *Plasmodium cynomolgi* and *Plasmodium inui*, two simian malarial parasites.

The *A. b. balabacensis* mosquito is a serious vector of human malaria in Vietnam, Cambodia, Thailand, and northern Malaya. This finding is therefore highly significant. It may point to a new barrier to worldwide eradication of malaria.

W. H. Cheong, A. H. Omar, and S. Mahavdevan, of the Institute for Medical Research, and Dr. Warren, NIAID, reported their findings in *Science*.

Gertrude Misel Retires; Career Spans 30 Years

Gertrude Misel, a statistical clerk in the Special Cancer Studies Section, Epidemiology Branch, National Cancer Institute, retired Dec. 30, completing 30 years of Federal service.

Miss Misel joined NCI in October 1956. Before coming to NIH she worked for a number of other agencies, including the FHA, WPA, Department of Agriculture Forest Service (CCC camps), RFC, NPA, and the Navy Department.

At a luncheon in her honor, Miss Misel received a money tree and a scroll inscribed with the names and best wishes of friends and co-workers.

painter of water-colors, and a musician.

Mr. and Mrs. Brown—"Miss Ava Lee," whom he met while both were public school teachers—recently bought a trailer, their modern-day "Prairie Schooner," in which they expect to travel across the United States to renew contacts with their many friends.

Drs. Kayhoe and Mullally Named to NIAID Posts

Dr. Dorland J. Davis, Director of the National Institute of Allergy and Infectious Diseases, recently announced two appointments to the Institute staff.

Dr. Donald E. Kayhoe was named Special Assistant to the Associate Director for Collaborative Research, and Dr. Daniel I. Mullally was appointed Chief of the Vaccine Development Branch.

In his newly created position, Dr. Kayhoe will be responsible for managing tissue transplantation



Dr. Mullally



Dr. Kayhoe

immunology programs of the Institute. He will coordinate the activities of various contractors who are trying to develop fast, simple blood tests to match tissue donors to recipients.

Dr. Mullally, who succeeds Dr. Henry H. Bloom, will direct NIAID's collaborative project to develop prototype experimental vaccines against acute respiratory diseases and rubella.

Since 1959 Dr. Kayhoe has served as a scientist and administrator at NIH and as a clinical instructor in medicine at Georgetown University.

A native Washingtonian, Dr. Kayhoe received his A.B. and M.D. degrees from George Washington University. He is a member of the American Society of Tropical Medicine and Hygiene, American Medical Association, American Academy for the Advancement of Science, and the American Society of Clinical Oncology.

Experience Noted

Dr. Mullally was medical officer in the Bureau of State Services (Environmental Health), before joining NIAID. From 1958 to 1964 he served in various posts at the St. Louis University School of Medicine, including instructor in microbiology, assistant to the dean, and assistant dean.

Born in Boston, Dr. Mullally received his A.B. degree from Boston College and the M.D. from Harvard Medical School. He interned and completed residency requirements in internal medicine at various hospitals in St. Louis.

He is a member of the Association of American Medical Colleges and the American Society for Microbiology.

Study Indicates Modified Bovine Growth Hormone May Be Active in Man

Recent investigation has shown that bovine growth hormone (BGH), modified by digestion with trypsin, elicits in man many of the characteristic metabolic responses elicited by human growth hormone (HGH).

Human growth hormone research, particularly in the treatment of hypopituitary dwarfism, is severely restricted by a scarcity of HGH, which is obtainable only post mortem from human pituitary glands.

Researchers thus have attempted to modify bovine growth hormone in order to make it biologically effective in man. Such attempts, however, have met with little success to date.

Growth Measured

Purified BGH was subjected to digestion by trypsin for varying periods of time (5 to 120 mins.) and the relative growth-promoting activity of the digests was determined in hypophysectomized rats.

Under conditions of complete metabolic balance, 19 studies then were performed in 10 hypophysectomized patients (including six with diabetes) and one hypopituitary patient, who were injected with tryptic digests of BGH, with undigested BGH, or with HGH.

The 10-minute BGH digests produced maximal growth-promoting activities in the rat, while further digestion progressively lessened this effect.

In diabetic patients the digests aggravated hyperglycemia and glycosuria, decreased carbohydrate tolerance, produced ketonuria and increased insulin resistance.

Other Studies Reported

In other studies, the digests promoted retention of nitrogen, phosphorus, sodium, and potassium; increased urinary calcium; and caused depression of blood urea nitrogen and elevation of serum inorganic phosphorus. Undigested BGH had no such effect.

Since these metabolic effects have all been noted after administration of HGH to man, this preliminary study suggests the possibility of deriving from BGH a preparation which may have many of the metabolic and growth-promoting properties of HGH.

This study by NIAMD grantees Drs. M. Sonenberg, C. Free, A. Haymowitz and associates of the Memorial-Sloan-Kettering Cancer Center, N.Y.C., supported in part by NCI grants, appeared in *Metabolism*.

Some 2.3 million Federal employees or 95 percent of those eligible have group life insurance.

Hardier Genetic Strains Help Reaction to Stress, NIMH Grantee Reports

Although psychoanalytic theory holds that adult reaction to stress is determined by childhood experience, those of a hardier genetic strain may not be affected at all by early crises, according to findings of a study supported by a National Institute of Mental Health research grant.

The investigator, Dr. Benson E. Ginsburg, Professor of Biology at the University of Chicago, has found in his work with mice a strong relationship between heredity and certain facets of behavior, including some abnormal behavior under stress. He believes the same relationships may well hold true in people.

Mice Subjected to Stress

In Dr. Ginsburg's work he subjected carefully bred mice to certain types of stress during infancy. Some of them, as adults, became significantly more aggressive than usual; others became less aggressive; others showed no effect. The results depended upon the strains to which the mice belonged—that is, upon heredity.

In other words, says Dr. Ginsburg, "all mice are not created equal."

The Ginsburg project and 19 other selected NIMH research studies in mental health are described in a new publication titled "Research Project Summaries, No. 2," recently issued by the PHS.

Also included in the reports are studies on sleep; family communication as it relates to child de-

Blood Bank Says 146 Units Given in Dec., 9 Join 'Club'

The Clinical Center Blood Bank reports that 146 units of blood were received from NIH donors in December. During the same period CC patients received 1,497 units of blood.

Eight NIH staff members joined the "gallon-donor" club. They are John N. Bartgis, DRS; Gene Maynard Brashers, NINDB; Kirk M. Donovan, NIAID; Chris A. Hansen, DRS; Joseph Janicki, NHI; William C. Mohler, OD; John A. Wassell, DRG; and Bartont Widom, SMB. Howard P. Dewart of NLM also became a gallon donor.

velopment; brain waves and personality; drug tolerance; delinquent gangs; children of the rural South, and the brain's chemical coding system.

The pamphlet, prepared by the Institute's Research Grants Branch, presents detailed information on representative research projects selected from among the two thousand which make up its research grant program. It is the second in a series.

Single copies of "Research Project Summaries, No. 2" (PHS Publication No. 1208-2) may be obtained without charge from the Public Information Section, National Institute of Mental Health, Bethesda, Md. 20014.

Copies in bulk may be purchased from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402, for 60 cents each.

New Ways to Measure Cell Movement May Help in Search for Key Molecule

By Hilah B. Thomas

Ways to see, measure, and record movement as it appears in living cells were discussed by Dr. Robert D. Allen of Princeton University at a recent seminar sponsored by the National Institute of General Medical Sciences.

Dr. Allen is interested primarily in subcellular movements such as cytoplasmic streaming, chloroplasts adjusting to light changes or chromosomes dividing.

Although scientists have searched for a key molecule—perhaps akin to myosin—to account for movement, Dr. Allen said that no common molecular basis is known for this aspect of life shared by all cells.

Motion requires work, and sometimes the energy is spent very rapidly. Eventually, he said, molecular biology is expected to provide explanations for cell movement, but meanwhile understanding must first come from direct observation.

Research Called Significant

Biological research on movement, Dr. Allen noted, has considerable significance for medicine—for example, in attempting to solve the old problem of the movement of leucocytes, and in the new field of movement in nervous tissue. Recent observations indicate that the growth of neurons is similar to the type of movement found in the pseudopodia of single-celled marine animals called *Foraminifera*, whereas, within an axon, material sometimes moves with extreme rapidity by an entirely unknown process.

Old techniques for studying movement, the traditional light microscope, and time-lapse photography, are inadequate, he said, to analyze what happens when several particles move simultaneously at different rates in various planes. Electron microscopy provides detail but introduces problems of sampling and of staining artifacts, and most serious of all, destroys the movement being studied.

Instruments Helpful

For the observation of living material, some of the physicists' particle track analysers combined with computers are helpful. Dr. Allen said they can distinguish saltatory movement, in which particles are displaced over considerable distances, from Brownian movement, in which particles constantly move short distances at random when bumped by atoms. These instruments can also simultaneously distinguish and record viscosity differences in various parts of a cell.

Of all the instruments presently available, those based on the interference of two light waves are most useful. A beam of light is split, half going directly through the microscope to the eye, while the other half goes through the cell and then to the eye,

When the cell contents transmit light differently from the liquid in which the cell is mounted, the two beams will not arrive at the same time, and a contrasting area is seen. From this contrast, differences in depth, surface, changes in shape, and rate of motion can be determined.

Dr. Allen spoke of the qualities and limitations of all types of light microscopes, mentioning that normal interference types can weight visually by means of differences in color, particles as small as one-quadrillionth (10^{-15}) of a gram.

He gave highest praise to a new differential interference microscope developed in France and requiring special training to operate. He considers this the best instrument devised in 25 years for observing surfaces. With it one can make a micron-by-micron study along the length and depth of a chromosome, or see the microtubules in the spindle fibers of a living cell.

Measurement Accurate

Dr. Allen is developing phase modulation microscopy, in which measurements of birefringence (double refraction) permit the accurate measurement of minute differences.

He has contrived to combine in one experimental instrument devices for studying motion through techniques of spectrometry, adsorption, and ultraspectromicrofluorometry. He is now trying to combine this microscope with an electromechanical scanning device.

Because so few investigators with knowledge of optical physics and electronics are interested in biological research, there are only two laboratories in the United States specializing in techniques of light microscopy. Dr. Allen feels that some type of career instructorship will be required to attract such people into this area.

Suggestions Win Awards For DRS Employees

Four cash awards for employee suggestions—all adopted—were recently made in the Division of Research Services. Three of the awards, presented to employees of the Shops Section, Plant Engineering Branch, went to Paul Cavender, William McDonald, and Harry Wease. The other winner was Joseph Federline of the Maintenance Engineering Section, PEB.

A cash award also was made to Norman Gettings and Francis McDonald, both of the Planning and Control Section, PEB.



These two children patients arranging furniture in a doll house in the NIH Clinical Center are among the many aided by the Patients' Welfare Fund. Contributions during this year's Christmas season as a result of the "Davis Plan" totaled \$2,131.42. This exceeded the total of last year's contributions by approximately \$1,000. Dr. Jack Masur, CC Director, said he knew that "the patients and their families who will be aided by the fund will want me to convey to the donors their thanks." The Davis Plan, which enables NIH employees to give money to the Patients' Welfare Fund in lieu of sending Christmas cards, will build a "cushion" for meeting emergency situations in 1966, Dr. Masur said.—Photo by Bob Pumphrey,

Leonard V. Phelps Ends 40-Year Health Career, Retires From NINDB

Completing a 40-year career in public health, Leonard V. Phelps, a health statistician with the National Institute of Neurological Diseases and Blindness, retired on Dec. 30.



Mr. Phelps

Mr. Phelps, who was with NINDB's Perinatal Research Branch since 1960 has been associated with several unusual public health programs.

After working on the Public Health Service venereal disease eradication program during World War II, Mr. Phelps spent five years in Japan, developing a national health statistics program. Later, while detailed to the Department of State, he worked for six years in Lebanon planning a similar program.

Mr. Phelps, who has just returned from his fourth trip around the world, plans to spend much of his retirement time traveling.

DR. JACOBS

(Continued from Page 1)

lar interest in toxoplasmosis, a subject on which he is a world authority.

For his studies on toxoplasmosis, Dr. Jacobs received the Washington Academy of Sciences Award for Scientific Achievement in the Biological Sciences, the Arthur S. Flemming Award, and the Henry Baldwin Ward Medal of the American Society of Parasitologists.

A native of Brooklyn, N.Y., Dr. Jacobs graduated from Brooklyn College in 1935. He received an M.A. degree in 1938 and the Ph.D. in 1947, both from George Washington University.

Positions, Membership Cited

Dr. Jacobs is presently Chairman of the Panel on Parasitic Diseases, U.S.-Japan Cooperative Medical Science Program, and a member of the WHO Expert Panel on Parasitic Diseases. In 1960-61 he studied toxoplasmosis in sheep in New Zealand under Fulbright and Guggenheim fellowships.

Dr. Jacobs is a member of numerous scientific societies, including the American Society of Tropical Medicine and Hygiene, the American Society of Parasitologists and the Association of Immunologists. In addition, he has served as editor of both the Journal of Parasitology and Tropical Medicine and Hygiene News.

It's a good idea to remember that all soft soap has a high percentage of lye in it.—*The Washington Post*,



Shown here are 28 of the 29 supervisors and labor leaders of the Operations Section, Environmental Sanitation Control Department, Clinical Center, who recently divided a \$1,000 sustained superior work performance group award for their efforts in maintaining the cleanliness of the Clinical Center despite manpower shortages throughout Fiscal 1965. They are John Summerour, Augustus Proctor, Alexander Davis, James N. Kellum, Ruie Turner, Colon Flood, John A. Stanmore, Audrey Snyder, Lillian Wells, Fannie C. Dickens, John Haygood (not pictured), Charlie Chandler, Robert T. Perrin, Blease Kelley, Walter E. Moten, Louis Holly, Roy Mason, Maybelle H. Newby, Lucille West, James E. Garner, Herbert W. Green, Harry Davis, William H. Lomax, Arthur Bolling, Foreston Gibbons, William H. Bell, Eugene Hill, Fred Whitaker, and Horace Carpenter.—Photo by Ed Hubbard.

Anthony Anastasi Named DRS Information Head

Chris A. Hansen, Chief of the Division of Research Services, has announced the appointment of Anthony J. Anastasi III as Information Officer. He succeeds William T. Kleven, who resigned to become



Mr. Anastasi

sales manager for Miller & Smith Associates, a local home development firm.

Mr. Anastasi will be responsible for planning and conducting the information programs of the Division, which has the primary mission of providing professional and technical support to NIH research programs.

Mr. Anastasi had been Press Officer of the Heart Information Center, National Heart Institute, since 1963. He joined NHI as an Information Specialist in 1962.

Prior to his association with NHI, Mr. Anastasi wrote for the Army Research and Development Newsmagazine, after serving as Assistant Director of Public Relations at Vitro Laboratories, Silver Spring, Md., for one year.

From 1958-1960 he served two years of active military duty as an information specialist with the U.S. Army. Born in Washington, D.C., Mr. Anastasi received an A.B. degree from the University of Maryland. In 1958 he was a reporter with the Washington Daily News for a short time before being inducted into the Army.

CU Meets for Elections And Reports on Jan. 18

New members for the Board of Directors and the Credit Committee will be elected at the 26th Annual Meeting of the NIH Federal Credit Union on Tuesday, Jan. 18, at 12 Noon in the CC auditorium.

Reports from present Board and Committees will include announcement of the 1965 dividend rate.

The Nominating Committee has submitted the following for election to the Board of Directors: Ervin J. Liljegren, Dr. Harold P. Morris, Dr. Heinz Specht, Jeni H. Arliss and Arthur Hilgar.

Nominated for the Credit Committee were: Arthur Broering, Howard M. Biggs, Donald Detzel and Fred Kruhm.



Dr. Stewart H. Webster (left), who retired recently, is presented with a radio by Ervin J. Liljegren, NIAMD Administrative Officer for Intramural Research, at a farewell party given in his honor. Dr. Webster had been a research biochemist with NIAMD since 1937, and served as Chairman of the Institute's editorial board since 1959.—Photo by Ed Hubbard.

Dr. Burch Is Appointed ETC Special Consultant

Dr. Carruth J. Wagner, newly named Chief of the Bureau of Medical Services, PHS, recently appointed Dr. Thomas A. Burch of the National Institute of Arthritis and Metabolic Diseases as a staff consultant to the Epidemiology Training Center in Phoenix, Ariz.

The Division of Indian Health, BMS, established the training center in 1963 to train its professional staff in the use of epidemiology (the study of the occurrence and distribution of disease) as a tool in providing health services to the American Indian and Alaskan native.

Training courses provide formal instruction combined with field study to groups of 15 to 18 stu-



Dr. Thomas A. Burch, Chief of NIAMD's Epidemiology and Field Studies Unit (seated), compiles diabetes statistics on the Pima Indian diabetes survey. With him is Dr. Peter H. Bennett, also of NIAMD.—Photo by Sam Silverman.

dents with varying academic backgrounds.

Dr. Burch, who is Chief of NIAMD's Epidemiology and Field Studies Unit in Phoenix, will participate in the training program by discussing epidemiological principles and problems with the classes. He will also serve on the program's Board of Epidemiologists and provide consultation and advice.

He has headed several NIAMD research teams making epidemiological studies of arthritis and diabetes among North American Indians. The most recent survey revealed that the Pima Indians in Arizona have the highest prevalence of diabetes ever reported for any circumscribed population group.

The Public Health Service Commissioned Corps was authorized on January 4, 1889, establishing by law the policy of a mobile corps subject to duty anywhere upon assignment.—*NIH Almanac*,