

## Program Designed To Aid Teaching, Medical Careers

A program designed to increase the number of career opportunities in medical research and teaching at universities, medical schools and similar institutions throughout the Nation has been announced by the Public Health Service.

Designated the "Research Career Award Program" and administered by the National Institutes of Health, the awards will be made to scientists of "superior potential and capability in the sciences related to health." Awards are intended to provide individuals with some measure of assured support reasonably early in their careers.

### Two Awards Available

Under the new program two groups of awards are available: Research Career Awards and Research Career Development Awards.

Career awards are intended for experienced investigators who are continuing to develop in productive careers of independent research and teaching. These awards will be made in 5-year increments, with the intention of continuing support for the full career of the investigator provided he continues to meet the standards set by his institution.

Development awards are intended for younger investigators who desire additional experience and training in a productive research environment as well as for scientists undertaking independent research who need further experi-

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## October Opening Is Planned For New Office Building



This photograph of the architect's model of the new NIH office building shows the relationship and comparative size of the three wings. The model is on display in the basement of Building 1.

NIH and the Public Buildings Service, General Services Administration, recently set October 15 as a tentative date for opening and occupancy of the new office building here, to be designated as Building 31.

### 3 Lots to Be Reserved For Visitors' Parking

Plant Safety Branch announced today that because of the large number of visitors who will be attending the Annual Instrument Symposium and Research Equipment Exhibit here, October 9-13, three NIH parking lots will not be available for the use of NIH employees during that 5-day period.

The lots to be reserved exclusively for visitors' parking are 19-B, east of Building T-19; and 22-A and 11-B, which are west of Building 22.

PSB suggests that many employees deprived of parking space on those lots can be accommodated on Lots 29-B and 30-B, near the new DBS and NIDR buildings.

Among its features, new to NIH, are an escalator and an under-floor duct system for electrical and telephone wiring.

Designed in the shape of an "H" with Wings A and B linked by a north-south connecting wing, the \$10 million structure will house 1,600 to 1,900 employees. They will move into it from crowded offices on the reservation and rented offices in Bethesda and Silver Spring. According to the Space Management Section, OAM, the move will affect almost every building on the reservation.

The offices of the Institute Directors and of their Extramural Programs, together with the Division of General Medical Sciences, will comprise the largest units in

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## Congress Votes Record Budget To NIH for '62

The Labor-HEW appropriations bill for fiscal year 1962, passed by Congress on September 12 and signed by President Kennedy on September 22, allows NIH a total of \$783,024,000 in new obligating authority.

The NIH appropriations are contained in the Public Health Service portion of the bill (H.R. 7035) which allows PHS \$1,240,052,000 in the HEW appropriation of \$4,260,367,000.

### \$598 Million for Grants

Of the NIH appropriations for operating Institutes and Divisions, \$139,337,000 is for direct operations and \$598,998,000 is for grants—a total of \$738,335,000.

Congress also approved a \$30 million appropriation to continue the Health Research Facilities Construction program which provides matching grants for construction, renovation, and equipment of research laboratories at university medical schools and similar health study centers.

Funds totaling \$5 million were appropriated for grants for construction of cancer research facilities.

### Construction Funds Listed

In PHS central appropriations for direct construction and scientific activities overseas, \$9,689,000 is allocated to NIH. Of this figure, \$4,630,000 is earmarked for direct NIH construction, including \$2,800,000 for the animal farm now in initial design and construction at Poolesville, Md. The balance, \$5,059,000, is for purchase of foreign currencies under P.L. 480.

Appropriations for Institutes, in millions, are as follows: NCI, \$142.8; NIMH, \$108.8; NHI, \$132.9; NIDR, \$17.3; NIAMD, \$81.8; NIAID, \$56.0; NINDB, \$70.8; and general research services at NIH including DBS and DGMS, \$127.6.

Funds for direct operations are  
(See BUDGET, Page 8)

## Employee Health Service Will Give Flu Shots Next Week

The NIH Employee Health Service has announced that all employees wishing to receive influenza vaccine will be vaccinated next week, Monday through Friday.

The Service requests that employees, including off-reservation and night personnel, report to the EHS suite, B2A06 in the Clinical Center, preferably between the hours of 1 and 4 p.m.

The Service points out that two injections, two months apart, are necessary for immunization; but those who were immunized last year will need only a single booster injection this year. Clinical Center personnel engaged in patient care are especially urged to report for vaccination.

PHS Surgeon General Terry recently predicted probable outbreaks

of influenza in this country during the coming fall and winter. He particularly urged vaccination of those with heart disease, pulmonary disease, diabetes, and other chronic diseases; persons over 65, and pregnant women.

These groups, he said, accounted for most of the 86,000 flu-triggered deaths between September 1957 and March 1960.

# the Record

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## PERSONNEL TO PERSON

**T**HE Civil Service Commission has announced the testing schedule for the 1962 Federal Service Entrance Examination.

Applicants who have a college degree or the equivalent in experience compete in this examination (FSEE) for appointments within sixty career fields.

The success of the FSEE is indicated by last year's use of the examination which resulted in 7,000 appointments to positions throughout the nation. NIH regards the FSEE as a major source of Civil Service personnel.

Candidates who apply by September 28 will be scheduled for the test to be given on October 14. Six additional examinations will be held, the last one on May 12, 1962.

A specific schedule, including deadline dates for filing, and additional information concerning the examination may be obtained from your Personnel Representative.

## Dr. Jakus Is Appointed Coordinator for Vision

Dr. Marie A. Jakus, of the Retina Foundation, Boston, Mass., has been appointed research program coordinator for vision in the Extramural Programs Branch, National Institute of Neurological Diseases and Blindness.

She will be responsible for coordinating the Institute's research grants program in the field of vision, and will serve in a major advisory role.

Dr. Jakus has been associated with the Retina Foundation for the past 10 years. She conducted research there on the fine structure of ocular tissues. A native of Cleveland, Ohio, she received her Ph.D. degree from the Massachusetts Institute of Technology.

## Laboratory Maintenance Of Worm Parasite May Aid Filariasis Study

Laboratory maintenance of a new worm parasite, *Dirofilaria uniformis*, which may prove useful in the study of filariasis, was reported last month at the 36th annual meeting of the American Society of Parasitologists.

Filariasis, a disease which afflicts millions of people in tropical areas of the world, is caused by slender threadworms which parasitize the lymphatic tissues of man. The threadworm is transmitted by the bite of certain mosquitoes.

American soldiers during World War II contracted the disease, which is characterized in its late clinical stages by tremendous swelling of the legs and scrotum, and of the breasts in women. The term elephantiasis is derived from this disfiguring aspect of the disease.

The authors of the report, Dr. Paul P. Weinstein and Thomas K. Sawyer of the Laboratory of Parasitic Diseases, National Institute of Allergy and Infectious Diseases, are conducting studies which may aid future research into these basic questions:

1—Is the worm by itself completely responsible for the disease, or is a combination of lymphatic gland obstruction, caused by the worm, and an invasion of bacteria responsible?

2—Do allergic factors have a role in the lymphatic blockage which occurs in the disease?

3—How early can the disease be detected and could early diagnosis possibly help in controlling the severe symptoms?

4—How do drugs exert their effect on the worms and can medical science find more effective drugs or combinations of drugs?

Until recently, laboratory work on filariasis has been difficult be-

## Heavy Registration Reflects Interest In Expanded NIH Graduate Program

With the heaviest registration and the largest number of courses ever offered here in evening classes, the fall semester of the new Graduate Program at NIH got off to a good start.

When registration closed on Saturday, September 16, enrollment had reached 560, and it was expected that late registrations would bring the total to well over 600, according to Dr. Murray C. Brown,

Chief of the Clinical and Professional Education Branch and Director of the Graduate Program.

The largest prior registration was 552.

One of the most important features of the expanded program, Dr. Brown said, is the fact that its sponsor—the Foundation for Advanced Education in the Sciences, Inc.—has been able to meet the needs of NIH staff for advanced courses in areas of study with limited numbers of qualified students.

Formerly, an enrollment of at least 10 was required for each class. This year only eight people were unable to register for courses in which they had indicated an interest.

### Will Foster Research

The Foundation is a non-profit Maryland educational corporation founded by a group of outstanding biomedical scientists. Its aim is to foster scientific research and education by facilitating communication among scientists and conducting organized instruction in the sciences.

Members of the board of directors are Drs. Robert Berliner, David Shakow, Alan Mehler, DeWitt Stetten, Robert Livingston, Roger Cole, Robert Cohen, Christian Anfinsen, Kenneth Cole, Murray Brown, Hewitt Fletcher, Daniel Steinberg, and Herbert Sober, all of NIH; William McElroy, Seymour Kety, and Ralph Gibson, of Johns Hopkins; and Philip Handler of Duke University.

Future plans under consideration by the Foundation include a series of symposia on the philosophy of science, and the organization of a faculty club for enhancing scientific communication and disseminating information on an informal level.

Further information about the Graduate Program may be obtained from the Clinical and Professional Education Branch, Ext. 2427.



Business is brisk as personnel register for evening courses in the new NIH Graduate Program.—Photos by Bob Pumphrey.



Dr. Murray C. Brown, Director of the Graduate Program, counsels Dr. James T. Higgins of NHI, who is registering for the fall semester. Mrs. Frances Lehr, a registrar, records the necessary information.

cause of the lack of a suitable model of study. The possibility of such a model has been provided by the discovery, at Walter Reed Army Institute of Research, of *Dirofilaria uniformis*, a parasite similar to the one which causes filariasis in man. Studies involving this worm parasite, reported by the NIAID scientists, extend the ability of laboratory workers to get at the basis of some of the vital problems of the disease.

For example, the maintenance of the organism in the test tube and the production of embryos from gravid worms for as long as is reported by the NIAID scientists—3 to 4 weeks—provides opportunity

for the preparation of antigens from the products of the parasites in the medium. The antigens thus prepared possibly can be used in diagnosis and in the study of mechanisms, such as hypersensitivity or allergy, which may be involved in the production of the disease.

Laboratory maintenance also may provide the tool for the study of drugs which might be useful in treatment of the disease. An important factor in drug research—the basic mechanisms by which the parasite derives energy from tissue or tissue nutrients—may also be studied if the parasite can be maintained in laboratory culture.

## Terry Announces Broader Support For Institutions

A new program to provide a broader form of financial support to schools of medicine, dentistry, osteopathy, and public health was announced recently by PHS Surgeon General Terry.

"The prime purpose of this program," he said, "is to increase the capacity of the Nation's research and educational institutions for carrying out their health-related research and research training. We believe it will meet the needs of these institutions for greater flexibility in the use of portions of the Federal support funds they have been receiving."

### Provides Continuing Support

Purpose of the grants is to provide general support on a continuing basis for research and research training activities. A distinguishing feature of the grants is the greater freedom the recipient institutions will have in determining the specific use of the funds, as compared with other types of Public Health Service grants.

Dr. Terry said that funds for the support of research and research training projects by the National Institutes of Health have risen from a level of \$3.5 million in fiscal year 1947 to more than \$400 million in fiscal year 1961. For the most part these funds have been used for specific projects proposed by individual investigators.

### Affords More Freedom

"To some extent," he said, "this procedure has limited the autonomy of grantee institutions and investigators in controlling the character and direction of their health-related research and research training activities."

"The new form of support will afford more freedom and enable the institutions to assume greater responsibility in carrying out their programs."

Legislation for the program is contained in Public Law 86-798, passed in September 1960.

The program will be administered by NIH's Division of General Medical Sciences, under the heading of the General Research Support Grants Program. Initially the grants will be awarded to schools of medicine, dentistry, osteopathy and public health. Next year, it is expected that eligibility will be extended to schools of nursing, pharmacy, and veterinary medicine and to hospitals and other nonprofit organizations heavily engaged in health research.

## OUTDOOR CONCERT ENTERTAINS 400



An appreciative audience of 400 Clinical Center patients and NIH staff attended a concert by the 60-piece U. S. Marine Band, conducted by Capt. Dale Harpham, on the CC terrace August 31. Third and last in a series of "outdoor" concerts inaugurated this summer, it was actually the first one to be given outdoors. The others, by the U. S. Army Band and the Marine Band, were rained out and had to be moved into the auditorium. Arrangements for the concerts were made by Arnold Sperling, CC Patient Activities Section Chief, in cooperation with James G. Dunton, Director of the Special Activities Division, Office of the Secretary of Defense. Another Marine Band concert is scheduled for tonight (Tues.) in the CC auditorium at 7:30 p.m.—Photos by Norman MacVicar.

The amount of each grant will be based on a formula involving the present research and research training programs of approved institutions being supported by Federal agencies and by nonfederal funds, and other factors, in relation to the total funds available to DGMS from Congressional appropriations each fiscal year.

In addition, each grantee institution will receive a basic amount of \$25,000, plus 15 percent of its total award for the indirect costs of its research and research training programs.

The maximum amount available to any institution in fiscal year 1962 (until June 30, 1962) will be approximately \$300,000. It is estimated that the total amount of these grants this year will be between \$15 and \$20 million.

Applications for grants will be subject to approval by the National Advisory Health Council and the

Surgeon General.

The funds may be used for support of research resources, such as animal facilities; for personnel, such as staff salaries; for research or research training projects, including the preliminary exploration of promising ideas; and for certain other activities for which Public Health Service support now no longer will be available, such as research project grants for less than \$2,000 in one year.

Except as specified in the 15 percent allowance of indirect costs, however, the funds may be used only for the direct costs of research and research training, and may not be used for the costs of new construction, alteration or renovation of facilities.

Eligible institutions interested in the grants this year have been asked to file a letter of intent with the Chief, Division of General Medical Sciences, by September 1,

## Dr. Jack Masur To Be Inducted AHA President

Dr. Jack Masur, Director of the Clinical Center, will be inducted as President of the American Hospital Association tomorrow, during the Association's 63rd annual meeting in Atlantic City. He is the first Federal official to be elected to this office.



Dr. Masur

Dr. Masur joined the Commissioned Corps of the Public Health Service in 1943 and has since held a variety of posts. In addition to being Director of the Clinical Center, he is an Assistant Surgeon General and the NIH Associate Director for Clinical Care Administration.

Active in many medical and health organizations, Dr. Masur has held a number of positions in the American Hospital Association, including membership on the Board of Trustees, 1954-57; chairmanship of the Council on Hospital Planning and Plant Operation, 1950-53; and chairmanship of the Committee on Disaster Planning, 1956-57.

He is an American Hospital Association representative to the Joint Commission on Accreditation of Hospitals, and has served as President of the American Association of Hospital Consultants.

Before joining the Public Health Service, Dr. Masur was Executive Director of Lebanon Hospital and Assistant Director of Montefiore Hospital, both in New York. He also served as hospital consultant for the Federation of Jewish Philanthropies, New York; as Chief Medical Officer, U.S. Office of Vocational Rehabilitation; and as Medical Officer for the U.S. Office of Civil Defense.

### Coatney Lectures at Harvard

Dr. G. Robert Coatney, Chief of the Laboratory of Parasite Chemotherapy, NIAID, will deliver the Annual Lecture at the Department of Tropical Public Health, Harvard University, on October 4. His subject will be "Advances in Chemotherapy of Malaria."

1961 and to file a formal application by October 1, 1961.

Copies of the Policy and Information Statement in General Research Support Grants are available from the Information Office, Division of General Medical Sciences.

## Visiting Niger Official Tours NCI, DBS Labs

Abdou Sidekow, Secretary General of the Ministry of Foreign Affairs of Niger, toured NIH vaccine- and isotope-testing facilities on Wednesday, August 30.

In this country to "learn about the United States," he is surveying programs in agriculture, research, and scientific education.

Formerly a cabinet member of his country's Ministry of Health, he has a Ph.D. degree in pharmacy from the University of Paris.

In the morning he met with Dr. David E. Price, Deputy Director of NIH, to discuss NIH functions and activities.

Also present at this meeting were Dr. Martin M. Cummings, Chief of the Office of International Research; Dr. Howard L. Andrews, Head of the Radiation Physics Section, Radiation Branch, National Cancer Institute; Dr. Roderick Murray, Director of the Division of Biologics Standards; and Harry Hornback, also representing OIR.

### Tours Isotope Labs

In the afternoon, Dr. Andrews took Mr. Sidekow through NCI radiation isotope laboratories, a tour which Mr. Sidekow afterwards termed "most interesting."

Dr. Thomas H. Tomlinson, Jr., Assistant Director, DBS, showed Mr. Sidekow through the new DBS building and explained DBS vaccine testing programs.

Mr. Sidekow was accompanied to NIH by Mr. Illa Salifou, First Secretary of the Niger Embassy, and Clifford Greyson, State Department interpreter.

His trip to the United States was arranged by the Department of State in cooperation with the Governmental Affairs Institute, a non-profit private foundation that organizes and promotes trips to the U.S. by prominent persons of other countries.

The visit here was arranged by the International Education and Exchange Branch, Bureau of State Services, PHS, after Mr. Sidekow expressed his "keen desire to visit NIH."

## Dr. Sober, NCI, Named Journal Assoc. Editor

Dr. Herbert A. Sober, Chief of the Laboratory of Biochemistry of the National Cancer Institute, has been appointed one of nine associate editors of *Biochemistry*.

This new scientific journal will be published by the American Chemical Society six times a year, beginning January 1962.

Dr. Hans Neurath, Chairman of the Biochemistry Department of the University of Washington, Seattle, will serve as editor.

## NHI Studies Shed New Light On Hypotensive Drug Action

Clinical studies conducted during the last two years have shown the drug, alpha-methyl dopa, to have a broad range of effectiveness in the treatment of patients with both severe and mild hypertension, but apparently not for the reason first suspected.

The most recent scientific findings indicate that alpha-methyl dopa lowers blood pressure not by inhibiting the decarboxylating enzyme as first believed, but by lowering the levels of norepinephrine in the brain and peripheral nervous system.

### Findings Presented

Drs. Albert Sjoerdsma, Chief of the Experimental Therapeutics Branch, and Sidney Udenfriend, Chief of the Laboratory of Clinical Biochemistry, National Heart Institute, presented these findings to the first International Congress of Pharmacology held last month in Stockholm, Sweden.

Alpha-methyl dopa given to hypertensive patients lowers blood pressure. It also produces temporary sedative effects which disappear after a few days of treatment, although mild tranquilizing effects persist.

Alpha-methyl dopa is the most effective of a family of compounds described as decarboxylase inhibitors. This family inhibits a decarboxylating enzyme with action essential to the production by the body of norepinephrine, serotonin, and other amines suspected of playing an important role in hypertension. These amines are synthesized from amino acids, supplied by dietary protein.

### Blocks Amine Production

Amino acids, like most organic acids, are characterized by the presence of one or more carboxyl groups on their molecules.

An essential step in the synthesis of amines is removal of carboxyl groups from their amino acid precursors through the action of a decarboxylating enzyme. Thus, by inhibiting this enzyme, alpha-methyl dopa and related compounds block the production of these amines.

When scientists found that alpha-methyl dopa markedly lowers high blood pressure, they began extensive animal and clinical studies encouraged by the idea that decarboxylase inhibition might be a new and promising approach to the little understood problem of hypertension.

Animal studies showed that tis-

sue levels of norepinephrine fall rapidly after administration of alpha-methyl dopa, but probably not, as was then suspected, because of decarboxylase inhibition. Although enzyme inhibition wears off within a few hours, norepinephrine levels do not return to normal for several days, indicating a second, unrelated mechanism of action.

### Affects Storage Sites

Investigators also discovered that the blood pressure lowering effect of the drug may become evident even after decarboxylase inhibition has stopped.

Further studies revealed that alpha-methyl dopa evidently has a rauwolfia-like ability to lower norepinephrine levels by affecting storage sites of the amine.

Norepinephrine is a neurohormone stored in the brain and at the sympathetic nerve endings. It is released by nerve impulses to transmit the nerve message to target organs, among them the muscles in the blood vessel wall. If this action is impaired, nerve impulses calling for blood vessel constriction cannot reach the blood vessel.

### Valuable as Tools

Alpha-methyl dopa may block this nerve traffic by disrupting the storage sites of norepinephrine. For reasons not yet understood, the amine is not bound to the storage site and diffuses away or is destroyed by enzymes.

As for decarboxylase inhibition, recent investigations of the many steps involved in amine synthesis make it seem unlikely that blocking decarboxylase could ever be an effective way of combating hypertension. However, decarboxylase inhibitors are still valuable research tools for studying amines and their regulatory functions in the body, as well as diseases characterized by high levels of certain amines.

Alpha-methyl dopa, besides being an effective research tool, gives promise of being an effective, safe antihypertensive drug. It was synthesized by Drs. Karl Pfister, III, and Gustav A. Stein of the Merck, Sharp and Dohme Research Laboratories, Rahway, New Jersey, which supplied the drug to the NIH investigators.

The Merck Sharp & Dohme laboratories are now sponsoring extensive clinical investigations of the active form of the drug. The drug is not now available for general use by physicians.

## 20 Schools Stand Out As Source of Grantees

Twenty colleges and universities, whose enrollments represent two percent of total U.S. college students, graduated (with bachelor's degrees) 18 percent of the 1,900 scientists who were awarded new NIH research grants in 1960, according to a survey conducted by the Division of Research Grants.

The survey, an inquiry into the academic backgrounds of a sample group of 1,900 scientists, shows that certain U.S. schools stand out as undergraduate sources of scientist material.

### Top 10 Listed

Ranked in descending order, the top 10 schools were: Haverford, University of Rochester, Amherst, Swarthmore, California Institute of Technology, University of Chicago, Princeton, Wesleyan, Reed, and Harvard. These schools, comprising one percent of the U.S. college enrollment in 1959, were the undergraduate schools of 11 percent of the scientists surveyed.

The second group of 10 schools, also in descending order, were: Bowdoin, Bates, Yale, Clark, Franklin and Marshall, Pomona, Dartmouth, Loyola (Chicago), Stanford, and Wellesley. These schools accounted for seven percent of the scientists surveyed.

Only four of the 20 schools have enrollments over 4,000, and none ranked among the 25 largest in 1959. The four: Harvard, with 11,000; Stanford, 8,400; Yale, 7,800; and the University of Chicago, 6,800. The remaining 16 have enrollments ranging from 450 to 3,700, with an approximate average of 1,400.

## Emmons to Visit Orient For Lectures, Research

Dr. Chester W. Emmons, NIAID's senior mycologist, will leave October 2 for Japan and Indonesia, to deliver a series of lectures and participate in collaborative research.

He will deliver a lecture on cryptococcosis to the Japanese Society for Medical Mycology at Sendai, and then lecture in Osaka and other cities.

Dr. Emmons will arrive in Djakarta, Indonesia, on October 12 to spend a month in collaborative research at the laboratory of Dr. Lie-Kin-Joe. The subjects under study are phymycoses and other systemic mycoses.

This project is supported by funds made available under Public Law 480. Under the provisions of the law, Dr. Emmons will visit the research site once each year for a term of five years.

## Scantlebury, Cutler Leave for Caribbean; Negotiate Fellowships

Dr. Ronald E. Scantlebury, Head of the Foreign Grants and Awards Section, Office of International Research, left September 19 on a two-week trip to the Caribbean area, including stops in South and Central America. He was accompanied by Dr. John L. Cutler, also of OIR.

Purpose of the trip is to conduct negotiations relating to the NIH international fellowship program.

A major element in NIH's overseas training activities, this program was initiated in 1958. It provides support to outstanding young medical scientists from other countries for study in U.S. universities and research institutions.

### To Visit 4 Countries

The NIH officials will visit four countries: the Federation of the West Indies, Venezuela, El Salvador, and Mexico.

First stop will be Kingston, Jamaica, where Drs. Scantlebury and Cutler will resume discussions begun in Barbados last spring during preliminary negotiations on the establishment of a local nominating committee for the program.

Under the chairmanship of one of the participating country's foremost scientists, the nominating committee selects candidates for the NIH research fellowships. Up to four nominees may be chosen from each country.

In Caracas, Venezuela, the NIH representatives will meet with the Minister of Health and leading scientists to discuss the establishment of a fellowship nominating committee in Venezuela.

### To Discuss Appointment

Next stop is San Salvador, El Salvador, to meet with former fellows of the program and discuss the appointment of a new chairman to succeed the former chairman who resigned recently.

In Mexico City, the OIR negotiators will confer with officials of the American Embassy and the Mexican Ministry of Health on various administrative problems associated with the fellowship program in Mexico.

In fiscal year 1961, just ended, some 90 awards totaling approximately \$700,000 were made to foreign nationals from 34 countries participating in the program.

The Labor-HEW appropriations bill, recently passed by Congress, calls for \$920,000 to be invested in the international fellowship program during fiscal year 1962.

## MEXICO HONORS SENATOR CHAVEZ



Senator Dennis Chavez of New Mexico, distinguished Clinical Center patient, was presented recently with The First Class Ribbon and Insignia and Medal of the Order of the Aztec Eagle by the Mexican Ambassador, Sr. Antonio Carrillo Flores, at a ceremony in the medical board room of the Clinical Center. "This presentation is made," the ambassador said, "as a token of the love of the Mexican people for Senator Chavez because of his friendly cooperation and fruitful efforts to foster friendly relations between our neighboring republic during the long period of his public service." The ceremony was attended by the Chavez family, Senator Lister Hill of Alabama, Mrs. Lyndon Johnson, members of the Senator's office staff, and a few other friends. Pictured following the ceremony, left to right, are Mrs. Chavez, Senator Hill, Senator Chavez, Mrs. Johnson, and Ambassador Flores.—Photo by Jerry Hecht.

## PROGRAM

(Continued from Page 1)

ence in order to qualify for senior positions.

Candidates for these awards must have had at least three years of relevant research or other professional experience following the doctoral degree, and must have demonstrated promise for a career in independent research. These awards may be for initial periods of five years, and are renewable for up to five additional years upon adequate justification.

The recipient of an award in either category will be responsible directly to his sponsoring institution which will determine his status, title, and privileges according to its established policies. In any given year an institution may submit to the National Institutes of Health a maximum of four applications for career awards. There is no limit to the number of applications an institution may submit for development awards.

While the new program is designed primarily for scientists in colleges and universities, applications will be accepted from other nonprofit institutions engaged in research in the sciences related to health.

Requests for applications or additional information should be directed to the Chief, Career Development Review Branch, Division of Research Grants, National Institutes of Health, Bethesda, Md.

## 3 Papers Presented at Rome Conference by Dr. Joseph Bunim

Dr. Joseph J. Bunim, Clinical Director, NIAMD, recently delivered three papers at the Rome meetings of the International Conference on Population Studies in Rheumatic Diseases, and the International Congress on Rheumatic Diseases.

The meetings, which received grant support from NIAMD, were held August 28-September 1, and September 3-7.

Dr. Bunim presented a paper co-authored by Dr. Thomas A. Burch, NIAMD, on "Studies on Relatives of Patients with Sjogren's Syndrome," and another entitled, "Inherited Metabolic Disorders as Cause of Degenerative Joint Disease" at the Conference on Population Studies.

His paper before the International Congress on Rheumatic Diseases, "Immunological Reactions in Sjogren's Syndrome (40 cases)", was co-authored by Drs. Kurt Block, Martin Wohl, and Nathan Zwaifler.

Earlier this year at the American Medical Association meeting, Dr. Bunim delivered a report on 12 years of corticosteroid therapy. This paper outlined the strides made in steroid treatment of rheumatic disease patients when compared with the deleterious side-effects of long use of the drugs.

## DGMS Section Raised To Branch Status; 5 Appointments Made

The Division of General Medical Sciences has announced the recent elevation to branch status of its General Clinical Research Center Section, formerly a component of the Division's Research Grants Branch.

Dr. Sam Silbergeld, who headed the section, has been named Branch Chief.

Dr. Gene A. Ward, a Senior Assistant Surgeon in the PHS Commissioned Corps, has been appointed a program specialist in the new branch. A native of Orange, Mass., Dr. Ward received his M.D. degree from Harvard Medical School in 1960.

### Specialists Named

Appointment of three research program specialists to the Research Grants Branch was also announced.

They are Drs. Roger B. Fuson, Assistant Director of the Clinical Laboratory and Associate Director of the Research Laboratory, Montana Deaconess Hospital, Great Falls, Mont.; Charles A. Miller, Assistant Professor of Biology, Wabash College, Crawfordsville, Ind.; and Trygve W. Tuve, a biochemist in the National Institute of Arthritis and Metabolic Diseases.

The General Clinical Research Center Program was established in the fall of 1959 at the direction of the Senate Committee on Appropriations to help meet national needs for an improvement and intensification of clinical research.

### Program Aims Cited

The program is intended to provide an adequate means for precise observations and control of research with patients, and to extend laboratory research in animals into valid correlative studies in human beings.

The program awards grants to institutions such as medical schools and research hospitals for the establishment of special, discrete, research facilities, centers or units.

The grant funds pay for the renovation and equipment of facilities, the costs of the care of research patients (including specialized nursing, diet kitchens, and other services), supporting laboratories, and certain staff salaries. The costs of the research carried on in the centers are met by separate project grants or by funds from sources other than the NIH.

Since the program was begun, 32 General Clinical Research Centers have been established across the Nation at a cost of \$11 million.

## Nervous System, Glands Mobilize Fatty Acids

National Heart Institute scientists reported recently that the mobilization of free fatty acids to meet the increased energy demands imposed by exercise or stress apparently involves the interplay of the pituitary and adrenal glands and the autonomic nervous system.

The common denominator in these control mechanisms and the biochemical key that actually unlocks the body's fat stores appears to be the neurohormone, norepinephrine, according to the NHI scientists, Drs. R. P. Maickel and C. W. Nash.

### Reported at Meeting

They reported their findings August 31 during the Fall Meeting of the American Society for Pharmacology and Experimental Therapeutics in Rochester, N.Y. The studies were carried out in collaboration with Drs. R. Paoletti and R. L. Smith of the Laboratory of Chemical Pharmacology, NHI, under the direction of its Chief, Dr. B. B. Brodie.

This research grew out of earlier studies on the body's biochemical adaptation to stress. The studies showed that when animals were subjected to such stresses as prolonged exposure to cold, pain, or large doses of alcohol, large quantities of free fatty acids were released from adipose tissue.

The pituitary hormone ACTH appeared to be chiefly responsible for this large-scale fat mobilization, since it did not occur in stressed animals whose pituitaries had been removed. However, ACTH did not act directly, but rather by triggering the release from the adrenal cortex of cortisone and perhaps other biochemical middlemen. This was shown by the lack of fat mobilization in stressed animals whose pituitaries were intact, but whose adrenal glands had been removed.

### Finding Causes Surprise

However, a surprising finding was that the stress-induced fat mobilization, which had appeared to be an all-hormone show, could be prevented by drugs which blocked the sympathetic (excitatory) division of the autonomic nervous system, whose two opposing divisions regulate those body functions not consciously controlled. These drugs worked by blocking the action of norepinephrine at sympathetic nerve endings.

Norepinephrine is a neurohormone stored at the terminals of sympathetic nerves. It is liber-

## Howard Students Visit New Dental Building

A group of approximately 60 first-year dental and dental hygienist students from Howard University's School of Dentistry were guests of the National Institute of Dental Research on September 14.

The students, accompanied by several faculty members, represented virtually every State of the Union and several foreign countries.

After a welcoming address by Dr. S. J. Kreshover, NIDR's Associate Director in Charge of Research, the visitors inspected the research facilities of the new Dental Building.

Arrangements for the visit were made by Kenneth R. Lambert, President of the Student Council of the University's School of Dentistry.

ated by nerve impulses to transmit their messages to target organs. Among these target organs are the fat cells of adipose tissue, shown by NHI scientists to contain significant amounts of norepinephrine.

### Role Is Important

The observation that sympathetic blockade prevented fat mobilization in stressed animals indicated that norepinephrine might play an important role in the fat-releasing action of ACTH or its hormonal mediators.

Following up this lead, the scientists injected test animals with ACTH suspended in a gelatin that released the hormone into the blood at a slow, steady rate. In control animals the injection almost tripled plasma free fatty acid levels.

### ACTH Injected

The scientists next injected the ACTH suspension into animals whose adipose tissue stores of norepinephrine had been depleted with reserpine. Nothing happened. ACTH could release free fatty acids in these animals only if it was preceded by an injection of norepinephrine.

These studies indicate that the presence of norepinephrine in adipose tissue is an absolute requirement in the fat-mobilizing action of ACTH. The norepinephrine released directly into adipose tissue by sympathetic nerve stimulation appears to be the means by which the autonomic nervous system exercises its share of control over fat mobilization.

Under ordinary circumstances this autonomic release mechanism may provide the "fine adjustment" in the regulation of serum free fatty acid levels. The central nervous system, by regulating the ac-

## Seven Members of NINDB Receive Awards for Superior Performance

Seven members of the National Institute of Neurological Diseases and Blindness received awards for superior work performance at a ceremony held August 23 in the office of Dr. Richard L. Masland, the Institute's Director. Dr. Masland made the presentations.

Patricia A. Grimes, chemist, Ophthalmology Branch, received \$210 for her superior performance in providing "essential and original contributions, understanding, and the unusual ability to learn and apply new, difficult, technical procedures."

### Citations Quoted

A check for \$200 was presented to Mary Ann Beggy, biologist, Ophthalmology Branch, who was cited for her "continuous interest, diligence, and ingenuity in the field of electron microscopy and excellence in every requirement of her job description."

Eleanor M. Collins, histopathological technician, Ophthalmology Branch, whose cooperation made possible a number of published studies, received a check for \$175. Miss Collins' citation stated that through her "extensive knowledge and skill, her work performance for the past 4½ years has exceeded

tivity of sympathetic nerves, could dole out just those amounts of norepinephrine needed to enable ACTH to maintain serum free fatty acid levels commensurate with immediate energy requirements.

When stress or vigorous exercise sharply increased these requirements, more norepinephrine would be liberated in adipose tissue by stepped-up sympathetic activity. This would be reinforced by catechol amines released in large amounts from the adrenal glands and arriving in adipose tissue with its blood supply. ACTH, also released in larger amounts under these circumstances, would liberate more of its hormonal mediators from the adrenal cortex. These would act in concert with norepinephrine to bring about the large-scale mobilization of depot fat.

### Seen as Key

The studies cited provide evidence that norepinephrine is the key to the integration of pituitary, adrenal, and autonomic mechanisms that regulate fat mobilization. ACTH or its hormonal mediators will not release depot lipid unless norepinephrine is present. Studies now in progress are aimed at identifying these mediators and clarifying the "cooperative" role apparently played by norepinephrine in their actions.

by any measure, the requirements outlined in her job description."

Joseph G. Brown, research technician, Ophthalmology Branch, received \$150 for his "outstanding work performance as a technician by which he has increased the output of the laboratory far beyond that which would ordinarily be expected."

### Others Named

A check for \$75 was presented to Constance R. Jones, clerk-stenographer, Medical Neurology Branch, for "talent and aptness in the methodic and systematic type of work of the Neuroradiological Section."

At the same ceremony, William T. King, passenger traffic clerk, Office of the Director, received \$50 for his suggestion for the improvement of communications between the Administrative Office and the persons responsible for preparation of travel orders and vouchers.

Leo L. Caravaggio, physiologist, Ophthalmology Branch, who was not present at the ceremony, will receive \$205 for his successful modification and development of new techniques for cytological examination of the lens epithelium and corneal endothelium.

Stressing the importance of the individual's contributions to government service, Dr. Masland noted that "the Institute, NIH, and the Federal Government can be very proud of the accomplishments of this group."

## Diabetes, Hypertension To Be Discussed on TV

The topics of the next two programs in the weekly television series, *The Doctor Reports*, with Dr. James Watt in the title role, will be diabetes and high blood pressure.

On September 30 Dr. Watt, until recently Director of the National Heart Institute and now Chief of the PHS Division of International Health, will discuss the etiology of diabetes, the discovery of insulin, and modern methods of treatment.

In the October 7 program Dr. Watt will describe the known causes of high blood pressure, the role of the arteries and arterioles in the disease, and the use of hypotensive drugs.

The program is seen on WRC-TV (Channel 4) Saturdays at 7:25 p.m.

Special material for the programs was prepared by the National Institute of Arthritis and Metabolic Diseases and the Heart Information Center.

## Miss Roberts Resigns As Translating Chief To Take Geneva Post

Rosemary Roberts, Chief of the Translating Section of the Library Branch, Division of Research Services, has accepted appointment to a position with the World Council of Churches in Geneva, Switzerland.

Beginning October 1, she will be Special Assistant to the Director of the Council's scholarship program.

Miss Roberts came to NIH in June 1942, after graduation from Bethany College, West Virginia.



Miss Roberts

At that time Hope Norris, Chief of the Translation Unit, was seeking a translator with the precise qualifications that Miss Roberts possessed— young college graduate with a background of travel, a flair for management, conversational facility in one or two languages, reading facility in other languages, and a potential for acquiring new languages and new friends.

Credit for increasing the range of languages and translation services available to the scientific staff at NIH goes not only to Mrs. Norris, who retired in 1953, but to Miss Roberts, who succeeded her as Chief of the Translating Unit.

### Unit Transfers

Earlier the unit had been transferred from the Office of the Director to the Library. The transfer took place during the tenure of Scott Adams, former NIH Librarian.

The Translating Unit became a section in April 1960 when the Library received Branch status within the Division of Research Services.

The present staff includes four editorial clerks and 10 translators who specialize in 20 languages, including Latin when the need arises.

The recent addition of portable dictating equipment has expanded the Section's versatility in producing oral translations. Permanent recordings are now available to the scientist for repeated use.

Miss Roberts is responsible for inaugurating the Library's translation loan service, which the Section administers. Permanent copies of written translation are available to NIH staff and loan copies are available to others on a two-week circulating basis.

A monthly listing of recent translations, with a distribution of 1,000 or more, has greatly in-

## Lipid Advisory Committee Established To Stimulate Production of Compounds

A Lipid Advisory Committee has been formed by the combined efforts of the National Heart Institute and the Metabolism Study Section of the Division of Research Grants to stimulate private laboratories to produce more and purer compounds for lipid research.

The Committee was established as a subcommittee of the metabolism study section, following recognition by the National Advisory Heart Council of the growing needs for pure compounds in kilogram quantities, pure radioactive compounds of high specific activity, and reference standards for gas chromatography and other laboratory purposes.

The goal of the Committee is to meet the needs of investigators for whom lipid research materials are not available in sufficient quantity or purity, or are not obtainable at a price consistent with reasonable economic research.

Through contractual arrange-

### CC Brochure Explains Volunteer Program

A new PHS publication, The Normal Volunteer Program of the NIH Clinical Center, is now being distributed by the CC Information Office.

It explains what is expected of persons who wish to join the corps of dedicated people who, for the past seven years, have been doing something positive to help bring the blessing of good health to others.

Designed primarily for prospective volunteers, the brochure (PHS Pub. No. 866) explains why NIH cannot contract with individuals for this service. Instead, each person must enter the program under the auspices of an approved sponsoring agency.

It tells in detail what kinds of research projects the volunteers participate in during their stay at the Clinical Center; what their restrictions and privileges are; what recreation is available to them, and what official recognition is given them upon discharge.

increased the scope of the translation loan program, extending it not only to other government agencies but to libraries throughout the United States.

This past summer, the Translating Section expanded its circulation service by sending a courtesy copy of each translation to the author or authors of the paper.

The World Council of Churches' Geneva address is 17 Route de Malagnou.

ments with private laboratories to produce and distribute the compounds, the Committee hopes to make much-needed substances more easily available to qualified scientists in the field and eventually to bring production to the point where it will be commercially self-sustaining.

Already the Committee and the National Heart Institute have succeeded in making available to investigators in the lipid field mixtures of pure fatty acid methyl esters and pure unsaturated fatty acid methyl esters which can be used as reference standards in techniques of lipid analysis. At the present time, the Committee is also studying the adequacy of current supplies of radioactive lipid materials.

### Members Listed

Members serving on the Committee are Drs. E. H. Ahrens, Jr., Rockefeller Institute for Medical Research; E. C. Horning, Baylor University College of Medicine; S. R. Lipsky, Yale University School of Medicine; F. H. Mattson, Miami Valley Laboratories, Proctor & Gamble Co.; J. F. Mead, University of California Medical Center; D. A. Turner, Sinai Hospital, Baltimore; and W. H. Goldwater, Division of Research Grants, NIH, project officer for the Committee.

The Division of Research Grants will act as a continuing intermediate contact between the Committee, the National Heart Institute, investigators, and distributors.

## Dr. Horning Will Head New Research Center At Baylor University

Dr. Evan C. Horning, Chief of the NHI Laboratory of Chemistry of Natural Products, left NIH August 12 to develop a new research center for work on lipids and atherosclerosis at the Baylor University College of Medicine, Houston, Texas. He will be Professor of Chemistry and Director of the Lipid Research Center.

### Wife Is Scientist

Dr. Horning's wife, a biochemist in the NHI Laboratory of Cellular Physiology and Metabolism since 1951, has also accepted a faculty position at Baylor University College of Medicine as Research Associate Professor of Chemistry.

Dr. Marjorie Horning's work in the NHI Laboratory (since 1956 in the Section on Enzymes) included the study of lipid metabolism in animal tissues, methods of lipid separation, and the effects of various pharmacological agents on lipid metabolism.

### Appointed in 1950

Dr. Evan Horning was appointed Chief of the Natural Products Laboratory upon its establishment in July 1950. During his eleven years in that post, he made many important contributions to natural products research and to the progress of lipid chemistry.

He is responsible for significant achievements in the development of gas chromatography. In his new position he will continue his investigations in this area with particular interest in high molecular weight compounds.

## Russian Science Translation Program At NIH Merges With NLM Project

The Russian Scientific Translation Program, under the direction of NIH since 1956, and the National Library of Medicine's program for the selection and distribution of biomedical translations of Eastern European works have been merged into one program.

Now known as the Scientific Translation Program, it will be administered by the National Library of Medicine as part of the Library's new extramural program.

The former NIH translation program, administered in turn by DRS, DRG, and DGMS, was responsible for the publication and distribution to scientific libraries and institutions of cover-to-cover translations of nine Russian journals.

The program also provided

translations of Russian monographs and arranged for the publication of key Russian articles in English language journals. In addition, it obtained reviews of Russian literature on specific biomedical subjects.

These functions will be incorporated into the new program.

NLM's former translation program, now combined with the former NIH program, was authorized under Public Law 480 and operated through the National Science Foundation. It uses U.S.-owned special foreign currencies in Poland, Yugoslavia, and Israel to purchase the original works.

Inquiries concerning the Scientific Translation Program should be directed to Scott Adams, Deputy Director, National Library of Medicine, Washington 25, D.C.

## BUILDING

(Continued from Page 1)

Wing A, which faces Center Drive. The Division of Research Grants will occupy a portion of the smaller Wing B.

A partial list of the groups now scheduled to move includes the Center for Aging Research (DGMS), the Office of Research Information, and the Management Policy and Office Services Branches of the Office of Administrative Management.

Off-reservation employees will come from five Bethesda office buildings and the Robin Building in Silver Spring. Other personnel will be shifted to replace those leaving. The Office Services Branch is now completing scheduling of the moves with the units involved.

### Credit Union to Move

Wing A contains 11 stories and a B-1 level. In addition to Institute Directors' and Extramural Programs' offices, it will contain the offices of the NIH Credit Union and the R&W Association, to be located on the first floor at the left of the main lobby. The R&W Film Desk and Post Office Substation will occupy the former Credit Union office in the Clinical Center.

Among the facilities in the B-1 level of Wing A will be an NIH Printing and Reproduction Plant that will include and expand the former DRG duplicating services.

In addition to DRG and other personnel, the five stories and two basements of Wing B will house an employee health unit and a vending stand run by the Maryland Workshop for the Blind.

This wing will contain a reversible escalator that will run from the B-2 level entrance, near the parking lot, to the first floor. This will provide a direct line of travel from Wing B entrances through the north-south connecting wing to Wing A.

### Escalator Is Reversible

The escalator is presently planned to run upward during the morning and downward during the evening to expedite traffic flow during peak periods.

The first floor of the connecting wing will contain a cafeteria with a seating capacity of 450 and two hot lunch lines operated by Government Services Incorporated. A short-order service will be located at one side of the cafeteria.

The B-1 level of the Corridor will contain a central mail and tube room and a dining room seating about 60, adjacent to an executive conference room.

The mail room now in Building I will be maintained only as a satellite.

White is the keynote for both



This is the face of the new 11-story office building, fronting on Center Drive.—Photo September 18 by Norman MacVicar.

exterior and interior decoration of the building. White cast stone facing on the concrete columns between the windows, and Antique Lorraine brick form the light-colored exterior ends of the building. The light decor is extended to the eggshell-white office walls and ceilings and the grey and white tiling.

Natural colored casement draperies will cover the glass window panels in the main entrance lobby on the first floor of Wing A.

The walnut panelling which flanks the elevators at one end of the lobby will also be used for first floor doors, the Credit Union counter, and the conference and dining rooms in the connecting wing. Office doors on upper floors are blond birch veneer.

Another "first" for NIH is the underfloor duct system to contain telephone, intercom, and electrical wires with the possibility of outlets every two feet along the length of the building. Electric typewriters can be powered from these floor outlets. Although the Clinical Center has some underfloor ducts, the new building is the first entirely equipped with the duct system.

Like the Clinical Center, the inter-office walls of the new building are two-inch movable steel partitions that can be dismantled and shifted to allow flexibility of office size within the fixed corridor walls. Working space within some of the executive conference rooms can also be altered by floor-to-ceiling folding screens.

Furniture and equipment for most offices will be moved from present locations.

A bank of five passenger elevators and one freight elevator will service Wing A. Wing B will have three passenger elevators in addition to the escalator.

Fluorescent fixtures with rectangular plastic shields will light the new offices. Air conditioning

### NINDB Offers 2 Films On Neurological Tests

Two training films, produced for the National Institute of Neurological Diseases and Blindness and available on loan, illustrate techniques for conducting neurological examinations of the newborn infant and the one-year-old child.

They are available on loan from the Information Office, NINDB, Bethesda, Md. Copies may also be obtained from the American Medical Association, Film Library, 535 North Dearborn Street, Chicago, Ill., and the Audio Visual Section, Communicable Disease Center, PHS, Atlanta, Ga.

### BUDGET

(Continued from Page 1)

distributed as follows: direct research, \$69,674,000; biologics standards, \$3,050,000; review and approval, \$12,799,000; training, \$475,000; professional and technical assistance, \$22,722,000; chemotherapy contracts, \$25,088,000; administration, \$3,779,000; modernization of Rocky Mountain Laboratory, \$750,000; and planning for a gerontology research building, \$1,000,000.

Funds for grants are distributed as follows: research, \$433,662,000; fellowships, \$29,080,000; training, \$118,506,000; state control, \$15,250,000; and community demonstrations, \$2,500,000.

and heating units will be located under windows about two feet from the floor.

The Norair Engineering Corporation, Washington, D.C., is the contractor for Building 31. The architects are two firms: Keyes, Lethbridge and Condon, and Richard Collins and Associates.

Parking areas will be located in the northeast vicinity of Wing B. Approximately 1,100 parking spaces will be available.

## LSU Awarded Grant For Medical Center At Univ. of Costa Rica

A PHS grant to establish an International Center for Medical Research and Training at the University of Costa Rica in San José has been made to Louisiana State University according to a recent announcement by DHEW Secretary Ribicoff.

LSU is the fifth American University to participate in the international program authorized by Congress last year and administered by NIH.

### Benefits Are Reciprocal

"Establishment of a medical research and training facility in a foreign country is a two-way street that represents the best in medical international relations," Secretary Ribicoff said.

"It makes available in the host country," he added, "resources and facilities for the training of physicians and other scientific personnel to enhance its own supply of scientists and technicians. At the same time, American physicians and scientists are able to work and study in a kind of environment which is not available to them in this country."

The grant to LSU is approximately \$400,000 a year for five years. Although based in Costa Rica, the Center's program will also include cooperative scientific activities with other Central American countries.

### Varied Studies Planned

Research to be conducted at the Costa Rica Center will include investigation into the natural history of amebiasis, a widely prevalent dysenteric disease in many parts of the world; studies on the control of industrial parasites through evaluation of sanitation; therapy and soil management; studies of transmittal and environmental factors in viral and bacterial diarrhea common to Central America; laboratory and field investigations of fungal diseases; geographic studies of cardiovascular diseases; and studies of unusual aspects of cancer in Central America.

The four other participating American universities and their collaborating foreign institutions are: The University of California and the Institute of Medical Research, Kuala Lumpur, Malaya; Johns Hopkins University and both the Calcutta School of Tropical Medicine and the All-India Institute of Hygiene, India; the University of Maryland and several institutions in Lahore, Pakistan; Tulane University and the Universidad del Valle in Cali, Colombia.