Thai King Praises NIH 'Hot War' Against Disease

Speaking at the dedication of the new Division of Biologies Standards Building on June 30, King Bhumibol Adulyadej of Thailand stressed the importance of international cooperation in the fight against disease and paid tribute to the humanitarian objectives of the NIH.

"It is fortunate," he said, "that medical science recognizes no national boundary and human endeavor knows no artificial bounds."

Referring to the role of NIH he said, "The Institutes are in fact waging a war—a hot war and not a cold one—a war against disease waged for the benefit of all mankind."

Termed Noble Struggle

He termed the new building "another powerful arm for use in that noble struggle" and congratulated the Institutes upon "their acquisition of this additional modern weapon."

King Bhumibol, in this country with Queen Sirikit for a brief state visit, was asked to participate in the dedication ceremonies because of his role in promoting health measures in his own country and his interest in the SEATO-NIH Cholera Research Project.

He spoke before an audience of more than 1,000 invited guests, including Congressional and Government leaders and Thai officials.

Congressmen Participate

NIH Director Shannon delivered a brief address of welcome and PHS Surgeon General Burney introduced the guests and speakers.

Senator Hill of Alabama emphasized the role of medical research in promoting international cooperation and understanding.

"Today," he said, "medicine and medical research offer the one great opportunity for cooperation and for understanding among the nations of the world. Medicine speaks a universal language—it speaks to all peoples in all lands—"

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Four Administrators Appointed to New Posts

J. H. Gerber Heads Aging Research

Appointment of Dr. Joseph Hanford Gerber as Director of the Center for Aging Research, NIH, was announced July 13. The appointment was effective July 1.

Dr. Gerber was formerly Medical Officer in Charge of the Indian Health Area Office, Aberdeen, S.D.

In his new post, Dr. Gerber will direct the activities of the Center in its responsibilities for coordinating the NIH programs for research in aging. He succeeds Dr. G. Halsey Hunt, who is now Chief of the Division of General Medical Sciences, of which the Center is a component.

Born in New York City, Dr. Gerber received his M.D. from New York University School of Medicine and his D.P.H. from Yale University School of Medicine.

He served as Assistant Director of the Peter Bent Brigham Hospital, Boston, Mass., from 1948 to 1958.

Kennedy Is Named Assistant to Mider

Dr. Thomas J. Kennedy, Jr., has been appointed Assistant to the Director of Laboratories and Clinics, Office of the Director, NIH. He assumed his new duties July 11.

Dr. Kennedy replaces Dr. Eli M. Nadel, whose new assignment will be announced later.

In addition to his duties as assistant to Dr. Mider, Dr. Kennedy will act as Executive Secretary for the Scientific Directors Group, and the Clinical Directors Group.

A PHS Commissioned Officer, Dr. Kennedy has been at NIH since 1950 in the Section on Kidney and Electrolyte Metabolism, NHI, and also served as attending physician and clinical investigator for that Institute. In addition he is a research associate at the George Washington University School of Medicine.

Dr. Kennedy is a graduate of Catholic University and received his M.D. degree in 1948 from Johns Hopkins University. He is a member of the American Medical Association, the American Society for Clinical Investigation, and the American College of Physicians.

Bobbitt, Yolles Are NIMH 'Associates'

Two newly created positions in the Office of the Director, NIMH, have been filled by the appointments of Drs. Joseph M. Bobbitt and Stanley F. Yolles.

Dr. Bobbitt, formerly Assistant Director of NIMH, took over his new responsibilities as Associate Director for Program Development on July 1.

Dr. Yolles, previously Chief of the Mental Health Study Center, Community Services Branch, NIMH, became Associate Director for Extramural Programs on June 28.

NIH Raises $1,600 For Chilean Relief

The one-day collection on July 6 for the Red Cross Chilean Relief Fund, spearheaded at NIH by NIAMD, resulted in a total contribution of $1,600, according to an announcement by Mr. Richard L. Seggel, NIH Executive Officer.

NIH campaign plans were organized and carried out by the individual institutes and division keymen who conducted the recent Federal Service Joint Campaigns.
The NIH Employee Health Service is launching an all-out campaign to help employees fight the common sight-threatening disease, glaucoma.

Within the next few days every NIH employee over age 36 will receive a card from EHS offering him the opportunity to request a scheduled appointment for a glaucoma detection test. The test is quick and painless.

Glaucoma is an insidious condition of the eye that occurs most frequently in persons over age 40 and, if not detected and treated, can lead to blindness.

Million Losing Sight

It is estimated that nearly a million persons in the United States are slowly losing their sight from glaucoma because of ignorance and neglect.

There are two major kinds of glaucoma—acute, the kind that is usually so painful it sends the patient to a doctor almost immediately; and chronic, the kind that creeps up on people and robs them of their sight without warning, without pain.

This chronic variety of the disease is the kind EHS is equipped to detect. All positive and suspicious cases will be referred to private ophthalmologists.

Hoping for a widespread response to its announcement, EHS has made it as easy as possible for employees to arrange for this important test.

When you receive a card from EHS, all you need to do is indicate with a check mark if there is a history of glaucoma in your family, then return the card. This indicates your interest.

Danger Signals Cited

Here are some of the danger signals of glaucoma: blurred or foggy vision; early morning headaches; glasses which don’t seem to help, even new ones; seeing rainbow-colored rings around lights at night; trouble in getting used to darkened rooms; and, a family history of glaucoma.

Having any of these symptoms does not necessarily mean that a person has glaucoma. Some other less serious eye trouble could be their cause. On the other hand, it is important to remember that there may be no signs at all. This is why the glaucoma detection test is so important.

NIH Provides Summer Training Ground For College Students to Learn, Earn

By Tim Gorman

NIH Summer Employee

A task force of about 400 students has invaded the NIH reservation for the summer months.

Arriving on the scene with relatively little commotion, this year’s crop of summer employees has begun to attack the backlog of work in the labs and the offices.

The program is conducted at NIH as an aid to essential work and to provide students with experience in the hope of interesting them in medical research careers.

Many Become Permanent

The summer program provides these students with an excellent opportunity to gain knowledge and experience in a scientific research organization while earning part of their school expenses. Many return to NIH to gain further experience and will eventually become part of the NIH permanent work force.

As in the previous years, there were many more applicants than available jobs. This summer there was a ratio of four applicants to every one appointed. This year’s appointments number approximately 100 more than in 1959.

Jobs Diversified

About 200 of the present appointees are assigned to work in the laboratories and related areas. Forty-five are serving in the Commissioned Officer Student Training and Extern Program (COSTEP), while more than 150 are working as typists and stenographers in the various offices.

The positions filled by students include statistical clerk, medical biology technician, medical aid, laboratory helper, and laboratory animal caretaker. A few have been placed as student trainees or assistants in biology, chemistry, and statistics.

In the past, the “campaign” of the summer task force has been successful. Judging by the strong beachhead established by the group this year, and the many favorable comments, the campaign will again be a success.
Science Section

Strontium-90 Hazards Stimulate Interest in Ca and Sr Behavior

Possible hazards associated with the ingestion of Strontium-90 from fallout have stimulated interest in the biochemical behavior and metabolism of calcium and strontium in calcified tissue.

Dental investigators at National Institute of Dental Research and the American Dental Association's Research Division, National Bureau of Standards, have now reported on studies of the comparative fixation of Ca and Sr by synthetic hydroxyapatite.

Strontium when taken into the body is a bone-seeker and like calcium becomes incorporated into the bones and teeth. In laboratory experiments devised by Dr. R. C. Likins, Mr. H. G. McCann, and Dr. D. B. Scott, NIDR, and Dr. A. S. Posner, National Bureau of Standards, calcium and strontium were introduced in equal quantities into solutions of calcium phosphate out of which synthetic hydroxyapatite was crystallized. By varying the precipitation conditions a number of "tagged" samples were produced with crystal sizes ranging from 20 to 4000 millimicrons.

Measurements Taken

Geiger counter measurements of the relative amounts of the two radioactive isotopes present showed there was a progressive discrimination against strontium deposition as the crystals increased in size. The smaller, more quickly formed crystals had approximately the same ratio of Sr-89 to Ca-45 as the original precipitating solution. However, experiments to determine the distribution of the respective radioactive isotopes within the crystal showed a preferential concentration of Sr at the surface.

These results on synthetic materials using radioisotopes may lead to a clearer understanding of the comparative uptake of calcium and strontium in the calcified tissue of the human body. Bone crystals, which resemble in size the very small synthetic calcium phosphate mentioned above, have already been shown to show a small but measurable discrimination against the incorporation of Sr-89 as opposed to Ca-45 in a series of experiments on laboratory rats.

Current continuation studies of the differential uptake and retention of Ca and Sr in the mineral portion of the exoskeleton of certain lower animals may provide an even better understanding of the biochemical behavior of these ions.

Parasitic Diseases Studied By New Diagnostic Method

The discovery by two National Institute of Allergy and Infectious Diseases scientists that filarial worms may be visualized by a simple fluorescent method in a patient receiving tetracycline offers new diagnostic and therapeutic possibilities in the campaign against parasitic diseases.

Dr. John E. Tobie, Acting Chief of the Laboratory of Immunology, and co-investigator Dr. Henry E. Boyce of the Laboratory of Clinical Investigation have published a detailed description of the work leading to this finding in the Proceedings of the Society for Experimental Biology and Medicine.

Investigation of the phenomena was based on the knowledge that tetracyclines fluoresce a yellow-gold color when exposed to ultraviolet light, and on their recent study showing that this series of antibiotics is deposited in filarial worms in vitro.

The patient under study was a 15-year-old female with so-called fugitive swellings on both trunk and extremities. Examination of a blood sample confirmed the presence of uncoiled microfilaria of Acanthocheilonema perstans.

Twenty-four hours after an initial dose of tetracycline (given 1 g. daily by mouth), the patient was placed in a dark room and her skin fluoresced with an ultraviolet hand lamp. Linear, yellow-fluorescent streaks were seen over many parts of the body. When traced at intervals over a 6-hour period, these appeared to migrate in a circular fashion over a 5 to 6-inch area.

From these observations, it seemed evident that the worms had selectively taken up a considerably larger amount of drug than the surrounding tissue, which presented only the usual blue-gray autofluorescence of uninvolved skin areas.

According to the scientists, the selective concentration of tetracyclines by microfilaria and adult worms in host tissues may provide two therapeutic possibilities. For one, these antibiotics may themselves have some antifilarial effect, since the treated microfilaria survived less well under ultraviolet stimulation than did the untreated specimens.

Second, it may be possible to combine active antifilarial compounds with tetracycline to permit a greater and more rapid concentration of antifilarial drug in worms within the host tissues.

Since the tetracyclines can be localized and visualized in worms by fluorescent methods, this might serve as an effective tool in studying the mode of action of these drugs.

Nerve Pathways Role Clarified in Regulation of Cat Eye Pressure

Studies by National Institute of Neurological Diseases and Blindness investigators have shown that certain major nerve pathways do not contribute to the maintenance of normal eye pressure in the cat.

The existence of a neural center which regulates intracocular pressure has previously been assumed, although a functioning reflex pathway has never been demonstrated.

Sensory neurons in the eye which respond to increased intracocular pressure are not involved directly in the maintenance of normal eye pressure in the cat. In addition, NINDB studies have indicated that, over short periods of time, intracocular pressure is not regulated by the central nervous system.

Pathway Not Demonstrated

Although the existence of a neural center which regulates eye pressure has been suggested to explain clinical observations, a reflex pathway has never been demonstrated.

To determine if such pathways exist, investigators recorded the afferent impulses—from the eye to the brain—from the ciliary nerves of the cat, which carry the sensory nerve fibers of the eye as well as its autonomic supply. Experiments were conducted on isolated, perfused cat eyes, and findings were confirmed in intact, unanesthetized animals.

In both types of experiments, no spontaneous neural activity was observed which could be related to normal intracocular pressure levels. Increases in pressure, however, resulted in increased activity of the larger sensory fibers of the long ciliary nerves. The impulses evoked by raising the pressure suggest the authors, may be due to the stretching of nerve fibers in the outer coats of the eyeball.

Indirect Evidence Sought

Indirect evidence for central regulation of intracocular pressure was also sought in intact animals. Stimulation of the third and fifth cranial nerves (which give rise to the ciliary nerves) was found to produce transient changes in eye pressure. However, when the normal pressure was increased by infusion of fluid into the eye's anterior chamber, no changes in the different activity—from the eye—were observed. In addition, blocking the nerves by local anesthetics did nothing to alter eye pressure.

(See EYE PRESSURE, Page 5)
GERMFREE UNIT STERILIZES FOOD

A tray of food is inserted into an autoclave attached to a Reynolds tank in the Laboratory of Germfree Animal Research at the National Institute of Allergy and Infectious Diseases. By this means food for the germfree animals is sterilized before being introduced into the germfree unit.

Research Effort Intensified in Fight Against Eye Disease and Blindness

It has been estimated that blindness costs the United States $500 million a year. However, this is only a small fraction of the temporary or permanent disability resulting from eye diseases. No statistical data can estimate the importance of visual function to the development and welfare of the population.

Complete statistics are not available, but the following facts are known: 245,000 persons are legally blind; 1,500,000 are blind in one eye; millions of Americans have eye defects and need glasses; and an estimated 1,000,000 persons have serious eye defects which make them blind and may lose their sight if untreated and an estimated 9,000,000 school children require eye care.

Blindness a Multiple Problem

In children, blindness means years of special education and training in carefully selected skills to equip them for a place in society. In adults, blindness often means loss of jobs, grave financial problems, and complete emotional and social adjustments. These grave problems concern the individual, the community, the State, and the total economy.

An outstanding development in the cataract program of the National Institute of Neurological and Communicative Diseases and Blindness is the demonstration of minute changes in the structures and fibers of the cataractous lens. Using the electron microscope, investigators have found that cytoplasmic changes also occur early after irradiation, which may lead to cataract formation.

An improved technique for removal of cataracts is now available. The injection of an enzyme (alphachymotrypsin) into the eye leads to a softening of the margins of the hardened lens and greatly facilitates its removal.

New Project Initiated

A new project was initiated this year to evaluate the effectiveness of an enzyme on other parts of the eye. A result of this study has demonstrated the process of cell division in the corneal epithelium. A new and rapid method for predicting experimental cataracts has also been devised by Institute scientists.

Valuable new techniques for diagnosing certain types of glaucoma have been reported in the past year by Institute grantees. The results of an 8-year survey show that the technique of tonography (measurement of intraocular pressure) offers criteria for early diagnosis of primary glaucoma. Another grantee study indicates that certain tissues in the eye and damaged rapidly in the course of glaucoma and that therapy should decrease to a point where these tissues will escape damage. Drug therapy of glaucoma, while not always effective, has tremendously reduced the toll of blindness attributable to this disease.

A new method of sealing retinal detachment has been devised whereby an intense light is focused on the retinal surface. The scarring thus produced, without surgical intervention, may seal the retina to the choroid and prevent further detachment. The new technique of photocoagulation is also bringing useful vision to many people whose lives otherwise would have been spent in darkness.

Uveitis Records Studied

Records of a large group of patients with uveitis and positive toxoplasma dye tests admitted in the past five years to the Institute, have been studied with emphasis on certain diagnostic and therapeutic aspects. Investigations have shown that early onset of the uveitis under the age of 20 years and an acute or subacute course can be considered favorable for a therapeutic success, whereas in a chronic course the prognosis is less good.

Also under investigation has been a group of children suffering from Tay-Sachs' disease, an inherited form of blindness. Investigators have developed a highly responsive technique of electronmicroscopy which promises to be one of the most sensitive indices of progression of this tragic disease.

During the past year there has been a continued shift of emphasis in the total research grants program, particularly in the area of sensory disorders, with a rapid growth in grants relating to vision. This rapid increase, in not only quantity but quality of research projects, is a direct result of the Institute's training program.

Glaucoma Detection Studied

The Institute, in cooperation with the Bureau of State Services, has begun a five-year cooperative study to evaluate techniques currently used to detect and identify glaucoma. The four participating institutions will concentrate their efforts on developing methods of diagnosing glaucoma earlier than present methods permit.

Among the most tragic forms of blindness are those which are associated with congenital defects, hereditary diseases, or "inborn errors of metabolism"—peculiarities (See EYE DISEASES, Page 5).
Improved Oral Surface Anesthetic Developed by NIDR Investigators

The search for a better surface anesthetic for patients with severe, acute, and chronic ulcers of the oral soft tissue has been continuous, because eating, speaking, and overall comfort are severely compromised in these patients.

During the course of studying the anesthetic properties of certain antihistamine compounds, Drs. John F. Potter, of the Clinical Investigations Branch, National Institute of Dental Research, Dr. A. F. Williams, Dental Disease Center, and Mr. B. J. Osheroff, Pharmacy Department, Clinical Center, found highly suggestive evidence that a combination of the pharmacologic effects of dyclonine hydrochloride and diphenhydramine hydrochloride would produce an anesthetic agent with low toxicity and low sensitization, rapid onset with favorable depth and duration, and favorable accessory properties, such as taste and smell.

Dyclonine hydrochloride is made by Pitman-Moore Company and diphenhydramine hydrochloride is made by Chiba Pharmaceutical Products, Inc.

To obtain confirmatory data on the effectiveness of this experimental agent, an isotonic solution containing 0.5 percent of each drug was studied for anesthetic potency.

NCI Scientists Report On Cancer Cell Work

National Cancer Institute scientists have reported the latest results of a continuing study of the significance of cancer cells in blood. Blood from 376 cancer patients provided the source material for the study. Specimens of peripheral blood or venous blood draining the tumor site at the time of operation were examined by quantitative techniques described by NCI scientists about two years ago for processing human whole blood so that it can be studied microscopically for the presence of malignant cells.

Malignant cells were found in the peripheral blood in 28 percent of 256 patients and in local blood (at the tumor site) in 43 percent of 91 patients. There was a significantly greater frequency of cancer cells in both peripheral and local blood of patients with non-resectable cancers than in those in the resectable group.

The work is reported in a recent issue of Surgery, Gynecology & Obstetrics by Drs. John F. Potter, George Longenbaugh, John Dillion, and Marvin Romsdahl, of the Surgery Branch; and Elizabeth Chu and Richard A. Malmgren, of the Pathologic Anatomy Branch.

New Technique Devised for Slide Preparation

Scientists of the National Cancer Institute's Laboratory of Biology have reported a simplified method of staining thin sections of biological material with lead hydroxide for electron microscope studies.

Essentially the technique consists of staining specimens with lead acetate in solution and then exposing them briefly to ammonium hydroxide vapors. Drs. Albert J. Dalton and Robert F. Zeigler, who reported this work found that electron micrographs taken of specimens prepared in this way were at least equal in resolution and contrast to those obtained by the more involved procedure of staining with a solution of lead hydroxide, described about two years ago in the scientific literature.

The work is reported in a recent issue of The Journal of Biophysical and Biochemical Cytology.

EYE PRESSURE

Physical anesthesia did not affect the normal pressure or the response to small imposed changes of pressure. In view of these findings and of the small amount of activity evoked by pressure changes, the authors conclude that short term regulation of intracranial pressure in the cat is probably not a function of the central nervous system.

However, the study does not exclude the role of neural activity in regulating normal eye pressure, since the techniques used did not permit the study of the activity of small fibers or of long-term changes in pressure.

The study was conducted by Dr. P. F. Lele, formerly of the NINDS Ophthalmology Branch, and now at Massachusetts General Hospital, and Patricia Grimes, Ophthalmology Branch, and is reported in a recent issue of Experimental Neurology.

EYE DISEASES

More than 10,800 cases of leprosy have been reported in Kenya Colony within the last 10 years. Thirty percent of the lepers have recovered naturally.
New Method Will Speed Research On Drug Action

Research into the action of antidepressant drugs and their effect on body mechanisms will be speeded up by a new chemical assay developed by scientists at the National Institutes of Health.

An unusual chemical substance, kynuramine, synthesized by a new and rapid route by NIH scientists and made available to researchers through a contract negotiated by National Institute of Mental Health's Psychopharmacology Service Center, has been put to use for measuring the activity of the enzyme monoamine oxidase which plays a significant role in body metabolism. This enzyme acts upon pharmacologically active amines and exercises a regulatory function peripherally as well as within the central nervous system.

Interest in MAO Inhibitors

Some of the drugs that have proved to be useful in the treatment of depressed patients are also known to have an inhibiting effect on the action of monoamine oxidase. It is not known whether there is a relationship between the inhibiting effect of these drugs on monoamine oxidase and their effectiveness in the treatment of depression. This is an area of research, however, in which there is great interest and vigorous investigation at the present time.

The new technique will greatly facilitate research efforts. Procedures previously used for measuring monoamine oxidase enzyme activity depended upon difficult and somewhat tedious measurements of the oxygen uptake or substrate amine disappearance. Cumbersome analytical methods are involved in the measurement of amine disappearance. The measurement of oxygen uptake requires nanometric assay procedures which also have certain limitations.

New Method Is Rapid

The new assay using kynuramine utilizes a spectrophotometric method which makes it possible to determine rapidly and accurately the disappearance of kynuramine or the formation of 4-hydroxykynuramine (to which kynuramine is converted as a result of monoamine oxidase activity).

The new method can be applied to crude tissue extracts and appears to be a highly suitable tool for the assay of monoamine oxidase activity.

The new method was developed by Dr. Herbert Weissbach, Thomas E. Smith and Sidney Udenfriend of the National Institute of Mental Health through its Psychopharmacology Service Center. Dr. Carl J. Witkop, Jr., Chief of the Human Genetics Section, Clinical Investigations Branch, National Institute of Dental Research, served as dental investigator on the special team composed of 14 American scientists and 14 Chilean health officers.

During the period of study (punctuated by destructive earthquakes in Chile) approximately 18 locations were visited, where food habits, dietary histories, and blood and urine samples were collected for analysis. In addition, a total of 1900 dental and 10,000 medical examinations were made. Data collected from dental-medical examinations were used to construct local dietary histories, which those recently obtained from similar epidemiological studies in India, Alaska, Ethiopia, Ecuador, Peru, and Vietnam, where ethnic, geographic, and climatic conditions as well as dietary habits vary widely and are in marked contrast with those seen in this country.

Findings Vary

Significant among the findings in Southern and Central Chile was the relatively high incidence of both caries and periodontal disease, the latter being associated with the prevalence of heavy calculus deposits. In contrast, it was noted from examinations made in North-Central Chile, including the City of La Serena, that caries and periodontal disease were not as prevalent, the former being associated with a high incidence of dental fluorosis confined to that area.

In observations of oral congenital anomalies it was found that non-fluoride white opacities of the teeth occurred less frequently in the Chilean population than in comparable U.S. population groups.

In addition, Torres Mandilduras, a bony outgrowth on the inside of the mandible, seen in about 15 percent of U.S. population, was found in only one individual in those examined in Chile. Torres Palatinus, a bony overgrowth of the hard palate, common in this country, was rarely seen in Chile.

The Interdepartmental Committee on Nutrition for National Defense conducted a nutrition survey in Chile from March 26 to June 1, 1960. Dr. Carl J. Witkop, Jr., Chief of the Human Genetics Section, Clinical Investigations Branch, National Institute of Dental Research, served as dental investigator on the special team composed of 14 American scientists and 14 Chilean health officers.

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Hormone Mechanisms Studied In Relation to UFA Release

Recent studies at the National Heart Institute have explored the mechanisms whereby fatty acids are stored in the body's fat depots as triglycerides (neutral fat) or are released from these depots as free fatty acids, and how they meet the body's energy requirements. The studies sought to clarify the mechanism or mechanisms by which four hormones—epinephrine, norepinephrine, ACTH, and glucagon—stimulate UFA release from adipose tissue.

Triglycerides, the form in which most fats are stored in the body, are neutral esters formed by the combination of three molecules of fatty acid with one molecule of glycerol. The triglyceride can in turn be broken down to yield three molecules of UFA, an important metabolic fuel during the fasting state. This process is known to be subject to a number of hormonal controls.

Effects on Tissue Studied

Seeking to clarify the nature of these hormonal controls, Dr. Martha Vaughan, of the Laboratory of Cellular Physiology and Metabolism, studied the effects on adipose tissue of four hormones shown by others to stimulate the release of UFA: epinephrine, norepinephrine, ACTH, and glucagon. Using rat adipose tissue incubated in a medium containing albumin and glucose, Dr. Vaughan found that hormonal stimulation of UFA release was accompanied by increased uptake of glucose by the tissue and by stepped up phosphorylase activity.

Phosphorylase is an enzyme which breaks down glycogen, the form in which carbohydrates are stored in the body, to yield glucose, an important energy source. In the liver, the resulting glucose can be released into the blood by action of the enzyme phosphorylase. However, phosphorylase is not present in adipose tissue, so that the small amounts of glucose resulting from phosphorylase activity must be used locally, either as a source of energy or for conversion into fatty acids and triglycerides.

The fact that all four hormones stimulated phosphorylase activity at the same time that they stimulated UFA release suggested that the hormones might control UFA release by a common mechanism. Phosphorylase is not the common denominator, however, since previous work at this laboratory had shown that serotonin, a hormone whose increased phosphorylase activity, did not stimulate UFA release.

But the increased phosphorylase activity produced by ACTH in adrenal tissue and by epinephrine and glucagon in liver does have a common denominator—cyclic 3,5 adenylic monophosphoric acid. The hormone is known by others to stimulate the accumulation of this compound, which in turn increases active phosphorylase. It is probable that the compound may play a similar role in adipose tissue in the intact animal, even though the compound produced no demonstrable effects on phosphorylase in the in vitro studies.

These findings were reported at the last meeting of the American Society of Biological Chemists—W.E.S.

POLIO VIRUS

(Continued from Page 4)

inoculated muscle was the only way is could be prevented.

An additional requisite for virus strains to be used in live poliomyelitis vaccine is stability of low neurovirulence characteristics during vaccine production and human passage. Dr. Baron reported on current DBS studies of such stability during virus strain production and human passage of vaccine strains.

The results to date of these continuing studies indicate that 1) the temperature character as determined by plaque size is very often correlated with monkey neurovirulence; 2) minor laboratory manipulation of the vaccine strains often results in marked alteration of the virulence characteristics; 3) virus obtained from stool examinations of persons fed vaccine virus exhibited a high frequency of increased monkey neurovirulence.

Results of these studies might be applied as additional criteria for selection of strains for oral vaccine.
Dr. Fremont E. Kelsey Named to DGMS Post

Dr. Fremont E. Kelsey, formerly professor of pharmacology and Chairman of the Department of Physiology and Pharmacology at the University of South Dakota School of Medicine, has been appointed to a staff position in the Research Branch of DGMS. Dr. Kelsey has published a number of papers on lipid metabolism, chemotherapy, drug metabolism, biosynthesis of radioactive drugs, the use of radioactive isotopes in medical diagnosis and therapy, and a textbook of pharmacology, now in its fourth edition.

He received his B.S. degree from the University of Pittsburgh in 1938 and his Ph.D. in biochemistry at the University of Rochester in 1939.

DEDICATION

(Continued from Page 1)

and a victory in medicine by any nation is a victory shared by all nations and by all mankind.

"I am convinced," he said, "that medicine, with its resources and influences fully mobilized, can do more for permanent peace than all the billions of dollars being poured into the armaments race."

Representative Fogarty of Rhode Island, Chairman of the House Subcommittee on Appropriations, recalled his first appearance as NIH Director before that committee four years ago.

At that time, Representative Fogarty said, Dr. Shannon "brought to the attention of the committee the accomplishments and expanding responsibilities of the newly formed Division of Biological Standards."

Accomplishments Praised

"I was particularly impressed," he said, "with the explanation of the ever-expanding range of diseases to which biological products may be applicable and of the kinds of new biological products—particularly in the field of virology—that seem to be destined to emerge in the future."

Representative Fogarty termed it "almost prophetic that Dr. Shannon should have pointed out the off-times unrecognized function—the research function—of the Division of Biological Standards."

He praised the accomplishments of DDBS during the intervening period, when the new building was being planned and constructed.

"The Division," he said, "despite its cramped quarters and limited laboratory facilities, has not only continued to meet its responsibilities for safe and pure vaccines and other biologicals, but has brought into being a basic and developmental research program that has produced many significant results."

Representative Laird of Wisconsin called attention to the task that DDBS, since its establishment five years ago, "has had tremendous and increasing responsibility in the health protection field. It is gratifying to me, as I am sure it is to the American people," he said, "to note how well this responsibility has been fulfilled."

"Thanks to the dedicated work of the staff and personnel of this division," he continued, "we and our physicians know that the 'shots' given to our children against diphtheria, whooping cough, tetanus and polio, and the blood that may be used to pull any of us through a life-threatening emergency, are both safe and effective."

In his address, Dr. Roderick Murray, Director of DDBS, reminded his hearers that, "It was just 58 years ago that the United States Government assumed the responsibility for the control of biological products in this country," with passage of the Biologics Control Act on July 1, 1902.

"The complexity of today's roster of vaccines, sera, and anti- toxins," he said, "makes it difficult for us to realize that the 'germ theory' of disease is scarcely more than 100 years old."

He pointed out that, "Today there are 285 specific biological products licensed for commercial use," and that "one of these is whole blood for which 124 establishments hold U.S. licenses."

Continuing Research Essential

"It has long been recognized," Dr. Murray said, "that effective control of these products is possible without continuing research."

He pointed out that the Division is presently engaged in research in the fields of bacteriology, virology, rickettsiology, immunology, hematology, and biochemistry.

"Occupancy of these new laboratories," he said, "will permit close integration of these activities and give greater scope to the entire program."

Dr. Murray added, "As we strive to deal ever more effectively with the diseases of man, we look to a future horizon of well-being for all peoples of the earth, for I can think of no field which presents a better opportunity to promote harmony among men."

Dr. Wagner Appointed DBS Staff Assistant

Dr. John C. Wagner, formerly with the International Cooperation Administration, was recently appointed staff assistant to Dr. Roderick Murray, Director, DDBS. He fills the vacancy left by Dr. Sam SILBERT, who transferred to ICA.

Dr. Wagner, a PHS Commissioned Officer, comes to NIH from ICA's Division of International Health where he had been on assignment and reassignment in Lima, Peru, as Director of the Instituto Nacional de Salud Publica under the Peruvian Ministry of Health.

Dr. Wagner received his B.S. degree in bacteriology from Pennsylvania State University and a Sc.D. degree in immunology and virology from Johns Hopkins University School of Hygiene and Public Health.

Commissioned in the U.S. Army Sanitary Corps during World War II, Dr. Wagner was assigned to the Biological Warfare Program at Ft. Detrick, Md.

Dr. Keshover Honored

Dr. Seymour J. Keshover, Associate Director of the National Institute of Dental Research, recently received the Tufts University School of Dental Medicine Award for Leadership in Oral Pathology.

Dr. John W. Hein, Dean of the school, presented the award to Dr. Keshover at the Eleventh Annual Berkshire Conference, at Lenox, Mass., June 19.

Dr. Coatney to Attend WHO Malaria Meeting

Dr. G. Robert Coatney, Chief of the Laboratory of Parasite chemotherapy, NIAID, will attend the meeting of the WHO Expert Committee on Malaria in Geneva, Switzerland, as American Representative.

The meeting will be held from July 25 through July 30.

Dr. Hertz, NCI, Elected Endocrine Society V.P.

Dr. Roy Hertz, Chief, Endocrinology Branch, NCI, was elected Vice-President of the Endocrine Society at the Society's recent annual meeting in Miami Beach, Fla.

Dr. Hertz has been in the NIH since 1941 and is the author or co-author of over 90 published papers.

Members of the Medical Affairs Section of the American College Public Relations Association attending their annual convention in Washington, visited NIH July 12 as guests of the NIH Information Officers. Meeting in Wilson Hall in morning and afternoon sessions, they were addressed by NIH administrators. Leon E. Martin, Acting Chief, ORI, shown with a portion of the group, was moderator for the sessions.

Dr. Wagner Appointed DBS Staff Assistant

Dr. John C. Wagner, formerly with the International Cooperation Administration, was recently appointed staff assistant to Dr. Roderick Murray, Director, DDBS. He fills the vacancy left by Dr. Sam SILBERT, who transferred to ICA.

Dr. Wagner, a PHS Commissioned Officer, comes to NIH from ICA's Division of International Health where he had been on assignment and reassignment in Lima, Peru, as Director of the Instituto Nacional de Salud Publica under the Peruvian Ministry of Health.

Dr. Wagner received his B.S. degree in bacteriology from Pennsylvania State University and a Sc.D. degree in immunology and virology from Johns Hopkins University School of Hygiene and Public Health.

Commissioned in the U.S. Army Sanitary Corps during World War II, Dr. Wagner was assigned to the Biological Warfare Program at Ft. Detrick, Md.

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T. A. Gates to Retire; Developed New System Of Property Control

Theodore A. Gates, Head of the Property Supply Section, SMB, has for the past two years served in the U.S. Army as Medical Officer for five years; the Office of Vocational Rehabilitation, where he served as Chief of the Division of Chiropractic Medicine for 15 years at NIH, will retire July 29 after 32 years of Federal Government service.

When Mr. Gates came here in 1948 from the Federal Security Agency, NIH was relatively small but on the verge of rapid expansion, requiring the development of a more modern and effective system of property management.

James R. Davis, SMB Chief, credits Mr. Gates with a high degree of resourcefulness and initiative in obtaining and utilizing a variety of information essential to this undertaking.

Mr. Gates, he said, subscribed to and kept up with the more important trade journals, and visited factories and other industries around the country, discovering and bringing back to NIH new and improved warehouse techniques and methods of operation.

Largely as a result of his leadership in this field, the NIH Property Control System became recognized as a model of efficiency and has served as a pattern for other Government agencies as well as other segments of the PHS.

Mr. Gates' previous Government service also included positions with the Department of Labor, the Civil Service Commission, the Department of Justice, and the Federal Communications Commission.

Mr. Gates

Dr. Briggs Leaves NIH For California Position

Dr. George M. Briggs, Executive Secretary of the Biochemistry and Pharmacology Training Committee, DGMS, left NIH on July 13 to become Chairman of the Department of Pharmacology and Toxicology at the University of California at Berkeley.

Dr. Briggs came to NIH in 1951 as Chief of the Nutrition Unit of the Laboratory of Nutrition and Endocrinology, NIAID, and was appointed Executive Secretary of the two training committees in 1958.

That same year he won the Borden Award ($1,000 and a gold medal) sponsored by the Poultry Science Association, of which he is a member.

Dr. Briggs is the author or co-author of over 100 scientific publications on fundamental nutrition. He is a member of various scientific societies and served as Secretary of the American Institute of Nutrition from 1957 to June of this year.

William R. Lay Retires; Headed Elevator Unit

William R. Lay, Head of the Elevator Operating Unit, Plant Engineering Branch, retired June 30. He had been employed at NIH since 1951 with the exception of three months in 1952, when he was working at Doctor's Hospital.

Windsor S. Day Retires; 1,000-Hr. Club Member

Windsor S. Day, a cabinet maker in the Carpenter Shop, Plant Engineering Branch, retired June 30 after 15 years at NIH.

A highly skilled woodworker, Mr. Day made laboratory and office furnishings for NIH. He also made special display cases for use in the medical exhibit at the Brussels World's Fair in 1958.

While at NIH, he was a member of the "1000-Hour-Club," with over 1,000 hours of sick leave to his credit.

Mr. Day plans to spend his retirement years on his 116 acre farm at Boys, Md., which he purchased 41 years ago.

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Dr. Smith to Succeed Dr. Anderson as Chief Of CDC in Atlanta

PHS Surgeon General Burney announced the appointment of Dr. Clarence A. Smith as Chief of the Service's Communicable Disease Center in Atlanta, Ga., effective July 1.

Dr. Smith has been Deputy Chief of the Center since 1957. His rank is Assistant Surgeon General. He succeeds Dr. Robert J. Anderson, whose appointment as Deputy Chief of the Bureau of State Services was announced earlier.

Dr. Smith's entire professional career has been spent in the Public Health Service. Following his internship in the Service's Norfolk, Va., and Stapleton, N.Y., hospitals, he became a Commissioned Officer of the Public Health Service in 1937.

In the ensuing years he has served at medical posts in Montgomery, Ala.; Columbia, S.C.; Savannah, Ga.; Ann Arbor, Mich.; and New Orleans, La.

Dr. Smith was Venerable Disease Control Officer for the Chicago Health Department from 1950 to 1952 before coming to Washington as Assistant Chief of the Service's Venerable Disease Control Division.

He was promoted to Chief of the Division in 1953 and remained in the post for three years before his appointment to the CDC.

PMB suggests that employees save this table for future reference.

**TABLE OF PERMISSIBLE CHANGES IN ENROLLMENT**

<table>
<thead>
<tr>
<th>EVENT</th>
<th>FROM</th>
<th>&quot;NOT Enrolled To &quot;Enrolled&quot;</th>
<th>CHANGE PERMITTED</th>
<th>TIME LIMIT IN WHICH REGISTRATION FORM MUST BE FILED WITH EMPLOYING OFFICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
<td>YES</td>
<td>October 1 to 15 of 1964 and at least once every 3 years thereafter.</td>
</tr>
<tr>
<td>2.</td>
<td>YES</td>
<td></td>
<td>NO</td>
<td>Within 31 days before to 60 days after change in marital status.</td>
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<tr>
<td>3.</td>
<td>NO</td>
<td></td>
<td>YES</td>
<td>Within 31 days after change in family status.</td>
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<tr>
<td>4.</td>
<td></td>
<td></td>
<td>YES</td>
<td>Within 31 days after termination of enrollment in plan.</td>
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<tr>
<td>5.</td>
<td></td>
<td></td>
<td>YES</td>
<td>Within 31 days after termination of enrollment in plan.</td>
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<tr>
<td>6.</td>
<td>YES</td>
<td></td>
<td>YES</td>
<td>Within 60 days after expiration of enrollment, if by death.</td>
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<td>7.</td>
<td>YES</td>
<td></td>
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<td>Within 31 days before or after move.</td>
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<tr>
<td>8.</td>
<td>YES</td>
<td></td>
<td></td>
<td>Within 31 days after marriage or attainment of age 19.</td>
</tr>
<tr>
<td>9.</td>
<td></td>
<td></td>
<td>YES</td>
<td>Within 31 days after termination of plan.</td>
</tr>
</tbody>
</table>

A change from "Not Enrolled" to "Enrolled" is permitted where indicated, provided employee is otherwise eligible to enroll.