

the NIH Record

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

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NATIONAL INSTITUTES OF HEALTH
PUBLIC HEALTH SERVICE

300 Physicians Planning To Attend Symposium Here Thursday, May 16

Approximately 300 physicians from the Greater Washington Area will attend the annual Cardiac Symposium, sponsored jointly by the Medical Advisory Committee of the Montgomery County Tuberculosis and Heart Association and the National Heart Institute, to be held Thursday, May 16, in the NIH Clinical Center auditorium. There is no fee for registration, which begins at 9:15 a.m.

Welcome by Fredrickson

Dr. Donald S. Fredrickson, NIH Clinical Director, will deliver the welcoming address and introduction at the morning scientific session, which will be presided over by Dr. Aaron H. Traum, Chairman of the Cardiac Symposium Committee of the Montgomery County Tuberculosis and Heart Association.

Topics of the morning session
(See *CARDIAC SYMPOSIUM*, Page 4)

U.S. Bond Drive Opens Here, Stresses Advantages of Payroll Deduction Plan

The 1963 U. S. Savings Bond Drive was launched at NIH on May 1 under the chairmanship of Dr. Roderick Murray, Director of the Division of Biologics Standards.

Keymen from all Institutes and Divisions, appointed by their Directors, attended a meeting in the DBS assembly room to plan this year's drive, expected to last through the month of May.

The Vice Chairman of the NIH Bond Drive, William Stalters, DBS Administrative Officer, pointed out the many advantages of U. S. Savings Bonds for employees who participate in the payroll deduction plan provided for their convenience.

In addition to the personal gain of 3¾ percent from a safe investment, it was pointed out, the Government gets some of the dollars it



Dr. Murray

73 NIH Employees to Receive \$6,984 At Annual Awards Ceremony May 15

Award winners' pictures will appear in the next issue of the Record.

Seventy-three employees will be the recipients of cash awards totaling \$6,984 in recognition of superior accomplishment or beneficial suggestions at the Twelfth Annual NIH Awards Ceremony, to be held in the Clinical Center auditorium on Wednesday, May 15.

NIH Recruits 50 Applicants At Recent FASEB Meeting

More than 50 well qualified candidates are applying for positions here as a result of NIH activity at the annual meeting of the Federation of American Societies for Experimental Biology held recently in Atlantic City.

NIH Program and Personnel representatives commented on the high interest and caliber of the hundred or so individuals who talked with them about job opportunities here. Plans are being made to increase NIH recruiting activities at next year's Federation meeting.

Dr. David E. Price, Deputy Surgeon General of the Public Health Service, will be the principal speaker at the mid-afternoon ceremony, scheduled to start at 3 p. m.

Dr. Roger K. McDonald, Assistant to the Director of Laboratories and Clinics, OD, and Chairman of the NIH Board on Employee Awards, will deliver the welcoming address. Dr. Robert H. Felix, Director of the National Institute of Mental Health, will present the awards.



Dr. Price

A New Feature

The program for this year's awards ceremony will begin with a new feature—the presentation of Letters of Commendation to two employees, each of whom is celebrating 45 years of Federal service.

The incentive awards, including 16 individual and four group awards, will be distributed as follows.

(See *NIH AWARDS*, Page 2)

List of Latest Arrivals Of Visiting Scientists

4/10—Dr. Costas N. Stefanis, Greece, Intracellular and Extracellular Recording from Hippocampal Nerve Cells. Sponsor, Dr. G. C. Salmoiraghi, NIMH, St. Elizabeths Hospital, William A. White Bldg.

4/12—Dr. F. Peter Woodford, England, Atherosclerosis: Investigating the Lipid Pattern in Atherosclerotic Lesions. Sponsor, Dr. Daniel Steinberg, NHI, Bldg. 10, Rm. 5N309.

4/12—Dr. Yashawant Sathe, India, Biometry. Sponsor, Dr. Marvin Schneiderman, NCI, Robin Bldg., Rm. 3B20.

Senate Hearings Open; House Unit Cuts NIH Budget

BULLETIN

The House passed the DHEW appropriation bill on April 30 without making any further reductions in the \$971.6 million recommended by its Appropriations Committee.

Dr. James A. Shannon, Director of NIH, and Institute Directors and Staff associates were scheduled to begin testimony yesterday (May 6) before the Senate Appropriations Subcommittee in support of the NIH budget request for Fiscal Year 1964.

House consideration of the NIH budget, contained in the Public Health Service portion of the DHEW appropriation bill, was scheduled for last Tuesday, five days after the House Appropriations Committee reported the DHEW bill with a recommended cut of \$18 million in the Administration's budget request of \$989.6 million for NIH.

Exceeds '63 Appropriation

This requested total for NIH exceeded the amount appropriated for the preceding fiscal year. If the House accepts its committee's recommended cut of \$18 million, the total would exceed last year's appropriation by \$90.8 million.

The House Committee's recommended reduction of \$18 million was made entirely in funds requested for operating appropriations. Altogether, the Committee recommended a total of \$971.6 million for NIH for the coming fiscal year. This includes:

Total Itemized

Operating appropriations, \$912.5 million (as compared with the budget request of \$930.5 million); Direct construction at NIH, \$9.1 million; and Health Research Facilities construction grants, \$50 million.

Funds for Direct construction and Health Research Facilities construction grants were approved by the Committee as requested in the budget.

(See *NIH BUDGET*, Page 2)

the NIH Record

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NEWS from PERSONNEL

EQUAL EMPLOYMENT POLICY

The President's Executive Order in March of 1961 set forth the Federal Government's policy: that there will be no discrimination because of race, color, religion or national origin against any person in hiring, or against any employee in the selection for training or promotion, in disciplining and separating.

The order also provided for the establishment of the President's Committee on Equal Employment Opportunity and directed all executive departments and agencies to study practices and set up procedures which would assure that the concept of equality in employment is carried out.

Responsibilities Cited

Employees and supervisors also have responsibilities in implementing this policy.

Employees have a responsibility to develop and utilize their capacities to their fullest extent, regardless of race, color, religion or national origin.

Supervisors have a responsibility to make judgments in the work situation on the basis of individual qualifications and abilities, and not on such factors as race, religion, nationality, sex or age. They must be willing also to discuss practices which employees may feel are discriminatory, and give help and information in these matters.

Any applicant, officer or employee at NIH who believes that he has been discriminated against should feel free to discuss the problem with his Personnel Officer, his supervisor, or with the Deputy Employment Policy Officer or Associate Deputy.

These officials will take all steps possible to resolve the situation.

3 'County High' Pupils Here In Library Week Observance

Three Montgomery County high school students observed and assisted in the operations of the NIH Library on April 26 as part of the County's annual school program for National Library Week.

The 12th grade students assigned this year to the NIH Library were Don Burrows, Walter Johnson High School, Bethesda; and Carolyn Wetzel and Cathy Southall, both from Richard Montgomery High School, Rockville.

They assisted with photocopying, circulation, interlibrary and reference services, and with procedures in the acquisition and cataloging areas.

EXAMINATION ANNOUNCEMENT

The NIH Board of Civil Service Examiners has issued a new examination announcement for a number of Laboratory and Clinical Aid positions in the Health Sciences in grades GS-2 through GS-4.

The registers of eligibles established as a result of this examination will be used to fill the following positions: GS-404, Biological Laboratory Technician; GS-625, Autopsy Assistant; GS-645, Medical Technician (all options); GS-647, Medical Radiology Technician; GS-649, Electrocardiograph Technician; GS-659, Electroencephalograph Technician; GS-661, Pharmacy Assistant; GS-699, Medical Aid; GS-1311, Physical Science Technician.

Non-status (temporary) employees in these positions who have not already done so, should file immediately to attain eligibility for conversion to a status appointment. Copies of the announcement and further information are available from the Personnel Officers of the Institutes and Divisions.

6th Bio-Med Engineering Seminar Is Tomorrow

"Magnetic Susceptibility and Adsorption of Oxygen on Ice and Its Relation to Magnetic Properties of Tumor Tissue" will be the subject of the sixth and last of this season's series of Biomedical Engineering Seminars conducted by Dr. Fred Alt, Chief of the Instrument Engineering and Development Branch, Division of Research Services.

The seminar, to be held at 8 p.m. tomorrow (May 8) in Building 10, Rm. 1S213, will be presented by Dr. Frank Senftle of the U. S. Geological Survey, National Bureau of Standards.

In his presentation Dr. Senftle will cover the following areas:

A brief survey of the magnetic measurements which have been made on biological specimens and the kind of information which can be obtained by magnetic measurements; techniques used in his laboratory to measure magnetic susceptibility; and current experiments on the effects of adsorbed oxygen on the magnetic susceptibility of frozen tissue.

NIH AWARDS

(Continued from Page 1)

Eleven individuals and two groups will receive awards for Sustained Superior Work Performance; two individuals and two groups will receive Special Act or Service awards; and three individuals will receive Beneficial Suggestion awards.

Additionally, 14 employees will be the recipients of length-of-service certificates and lapel pins honoring their completion of 30 years of service. Another 243 employees will receive certificates and lapel pins for the completion of 20 years of service.

Awards for 10 years' service will be presented to 364 employees at ceremonies to be held later in the various Institutes and Divisions. Names of recipients of all awards will be included in the printed program for the awards ceremony.

Music at the awards ceremony will be provided by the United States Air Force Headquarters Command Band, under the direction of Chief Warrant Officer Fred Kepner.

NIH BUDGET

(Continued from Page 1)

For the entire Public Health Service, the House Committee proposed \$1,546 million, which is \$51.8 million below the budget request.

Overall, the Committee recommended \$5,036 million in appropriations for the Department of Health, Education, and Welfare, or \$265.8 million less than requested by the Administration.

Drs. Newton, Johnson Named Employment Policy Officers Here

Appointment of Dr. Walter L. Newton as NIH Deputy Employment Policy Officer and Dr. David F. Johnson as Associate Deputy has been announced by James M. Quigley, DHEW Employment Policy Officer. Drs. Newton and Johnson will serve in these capacities in addition to their regular duties with NIAID and NIAMD, respectively.

As Deputy Employment Policy Officer, Dr. Newton will serve as representative of the Department Employment Policy Officer "to foster at NIH, in every way possible, a spirit of democracy and fairness in which discrimination of any kind cannot flourish."

He will be available to management and employees for consultation on fair employment policy matters, and will take action on complaints in accordance with Department regulations. Dr. Johnson will assist him in the performance of these functions.

Appointees Experienced

Dr. Newton, who has been with NIH for 25 years, is now Chief of the NIAID Laboratory of Germfree Animal Research. He has served in both technical and supervisory capacities and was recently Special Assistant to the Director of Intramural Research, NIAID. He received his B.S., M.S., and Ph.D. degrees from Georgetown University.

Dr. Johnson has been with NIH for 11 years and is now a research chemist in the Laboratory of Chemistry, NIAMD. He received his B.S. degree from Allegheny College in Meadville, Pa., his Master's degree from Howard University, and his Doctorate from Georgetown University.

Dr. Johnson is a member of the Department's Panel of Grievance Review Officers and has served in this capacity on two prior occasions.

For additional information on Equal Employment Policy see the News from Personnel column.

PSB Requests Gas Cylinders Be Returned If Not in Use

"At the rate we hoard gas cylinders here, it won't be long before NIH exceeds Southern Oxygen's inventory," according to Plant Safety Branch.

This week Southern Oxygen representatives will make a room-by-room search to ascertain the total quantity of each size of cylinders located in the lab areas.

PSB requests that cylinders no longer needed be returned. For pick up service call the NIH Fire Department, Ext. 2372.

New NIAMD Technique Reveals Insulin Effect On Glucose Release

Dr. Glen E. Mortimer of the Clinical Endocrinology Branch, National Institute of Arthritis and Metabolic Diseases, has devised a perfusion method to study the effect of insulin on glucose release from the liver.

Preliminary studies indicate that insulin inhibits glucose and urea release from rat liver.

Direct inhibitory effects of insulin on the release of glucose and urea from isolated livers of fasted and non-fasted rats have been established by use of an improved cyclic perfusion technique *in situ*. This new method appears successful in an area where previous investigators have been unable to produce satisfactory responses.

Early Hypothesis Noted

An early hypothesis of diabetes held that abnormal release of glucose by the liver was one of the causes of high blood-sugar levels. Insulin, it was assumed, inhibited the release of glucose by the liver. Real evidence for this effect has long been lacking because suitable research techniques have not been available.

Part of the trouble may have been that the cellular integrity of liver slices is usually not well sustained. Although perfusing the liver obviates this particular problem, experience has shown that hepatic response to insulin may be strongly affected by trauma resulting from the arrest of blood flow necessary to establish the closed, isolated circulation needed for perfusion.

The previously disturbing effects of operative trauma have been largely obviated by the new technique which reduces to a minimum the time between blocking of the normal, and institution of the experimental, hepatic circulation.

Glucose Release Inhibited

Utilizing the technique in preliminary studies, perfusates containing glucose or an insulin-glucose mixture were pumped into the liver circulations of groups of fasted and non-fasted rats. On analysis, it was found that insulin consistently inhibited glucose and urea release from the liver.

The results suggested that the principal hepatic action of insulin is suppression of conversion of protein to glucose (gluconeogenesis) but also suggested the possibility of a second action, most likely inhibition of degradation of glycogen to glucose.

This investigation is reported in the American Journal of Physiology.

Computers, Data Processing Equipment To Be Shown at May 14 Open House

The Computation and Data Processing Branch of the Division of Research Services will hold an Open House on May 14 from 1 to 4 p. m. in Building 12 to help familiarize NIH employees with the services and facilities of the NIH Computer Center.

Three equipment areas will be allocated for demonstrations, and a fourth area will be set aside for guests who have specific questions concerning Branch services and possible uses of these services.

Personnel will demonstrate the punch-card equipment, the graph-scanning and plotting equipment, and one of the two H-800 computers.

The punch-card equipment is used to handle fast-changing requirements involving small amounts of data, as well as large amounts of data on which a small number of operations are performed. In the punch-card area, the demonstration will include the sorter, the high speed collator, and the interpreter.

Produces Graphical Record

The graph-scanning and plotting system, consisting of two x-y scanners and plotters, provides the NIH investigator with a means of reducing graphical data to a digital form suitable for computer entry, and conversely, of producing a graphical record of digital data.

The high-speed general purpose computing equipment which will be demonstrated is an extremely versatile tool for the solution of problems in a wide variety of fields.

The system can manipulate efficiently a large volume of internally stored information, and can carry out at high-speed extended sequences of operations on the basis of pre-determined numerical or logical criteria.

This demonstration will include



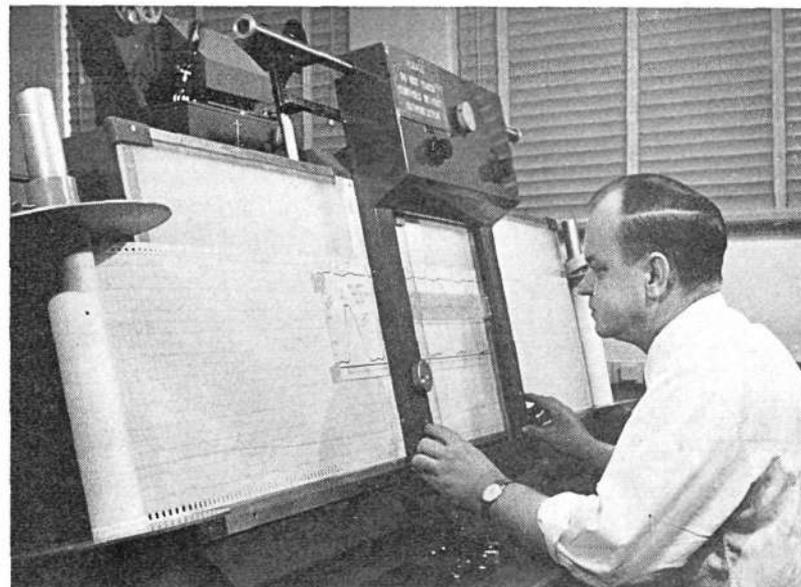
Barry Madia operates one of the 2,000-card-per-minute sorters to arrange payroll time and attendance cards in sequence for tabulation.—Photo by Bob Pumphrey.

the use of one of the computers in actual operation, while the other will be used to show sample computations including the sorting of a file of 5,000 records on magnetic tape and computation of intercorrelations for statistical analysis.

Through the use of a computer program, guests may check their current leave balances against those provided by the computer's search of the master leave file.

H. J. Juenemann, Acting Chief of the Computation and Data Processing Branch, extends a welcome to all NIH personnel to attend the Open House.

(See third picture, Page 4)



Irving Gillispie operates graph-scanning equipment to record a series of x and y coordinates of points along an absorption spectrum curve for later entry into the computer.—Photo by Bob Pumphrey.

Tyrosine Conversion to Norepinephrine Shown In Mammalian Heart

Studies at the National Heart Institute have shown that the mammalian heart contains all of the enzymatic machinery needed to make norepinephrine from the amino acid tyrosine. The observed rate of synthesis appeared to be adequate to maintain the cardiac stores of this amine.

When the heart is taxed with increased circulatory demands imposed by such factors as exercise or stress, the resulting increases in heart output are mediated largely by norepinephrine released in the heart by sympathetic nerve discharges.

Norepinephrine augments heart output by increasing heart rate and also by increasing the vigor and efficiency of heart-muscle contraction.

Heart Terminals 'Charged'

The important role played by norepinephrine in the regulation of cardiac function has prompted numerous studies on the mechanisms whereby the heart keeps its sympathetic terminals fully "charged" with this amine.

Although earlier work had demonstrated that the heart can take up and store norepinephrine released into the blood by the adrenal glands, it appeared unlikely that this was the major mechanism for maintaining cardiac stores of norepinephrine.

Recently Drs. Sidney Spector and Albert Sjoerdsma, of the Experimental Therapeutics Branch, and Drs. Perola Zaltzman-Nirenberg, Morton Levitt, and Sidney Udenfriend, of the Laboratory of Clinical Biochemistry, NHI, have shown that the mammalian heart has all the enzymatic machinery needed to make norepinephrine from tyrosine.

Synthesis Occurs

These scientists perfused isolated guinea pig hearts with tyrosine labeled with carbon-14. After 1½-2 hours of perfusion the hearts were homogenized and their dopamine and norepinephrine extracted for radio-assay. The amount of radioactivity found in norepinephrine and its immediate precursor, dopamine, indicated that considerable norepinephrine synthesis had occurred.

The scientists conclude that the guinea pig heart is probably capable of synthesizing enough norepinephrine to meet its everyday needs, adding that this is probably also the case in other sympathetically innervated organs, such as spleen, brain, and blood vessels.

These findings are reported in Science.

Classic Cholera Vaccine Controls El Tor Virus

In a recent study, Drs. Margaret Pittman and John C. Feeley of the Laboratory of Bacterial Products, Division of Biologics Standards, have shown that vaccines prepared from classic cholera vibrios are capable of protecting mice against El Tor vibrios to the same degree as against the classic cholera vibrios.

The advent of epidemic El Tor cholera in Hong Kong, the Philippines, and other southeastern Asian areas in 1961 raised the question as to whether vaccine prepared from classic cholera strains would afford protection against the El Tor vibrio.

Some Doubt Value

The biochemical and antigenic differences between El Tor and classic cholera strains have led some investigators to doubt the value of cholera vaccine for mass immunization against outbreaks of the El Tor infection.

In a recently developed mouse protection test (Feeley and Pittman, Proc. SEATO Conf. Cholera) in which groups of mice were vaccinated with graded doses of vaccine and challenged with approximately 1,000 LD₅₀ of culture, the protective activity of five commercial vaccines against epidemic El Tor and classic cholera strains was determined.

It was found that the degree of protection of each lot of vaccine was the same against the El Tor challenge as against the classic cholera challenge.

A complete report of this study appears in the Bulletin of the World Health Organization.

CARDIAC SYMPOSIUM

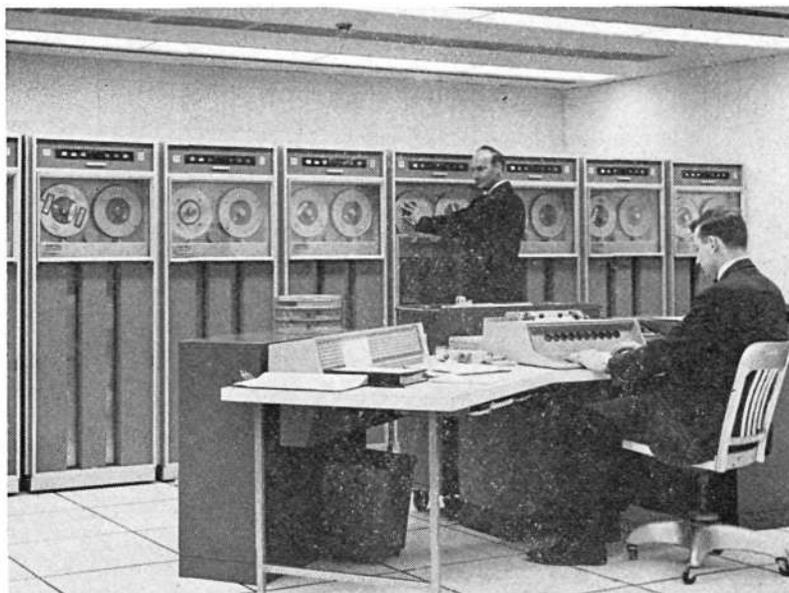
(Continued from Page 1)

will be "A Practical Approach to Diagnosis of Congenital Heart Disease" and "Pulmonary and Cardiac Resuscitation."

Dr. Louis Gillespie, Jr., Clinical Investigator in NHI's Experimental Therapeutics Branch, will preside over the afternoon session, which will open with a panel discussion on "Pulmonary Diseases and the Heart."

"Surgical Treatment of Mitral Valve Disease" will be the subject of an NHI symposium in the afternoon session. Dr. Andrew G. Morrow, NHI Surgery Branch Chief, will preside.

Other NHI members participating in the symposium will include Dr. Donald C. Harrison, Research Associate, Cardiology Branch; Dr. John Ross, Jr., Head, Section on Cardiovascular Diagnosis, Cardiology Branch; Dr. Nina S. Braunwald, Surgery Branch; and Dr. W. Douglas Clark, Surgical Associate, Surgery Branch.



Tapes are mounted on one of the Computer Center's high-speed digital computers. As soon as the mounting is completed the operator seated at the console will begin the computer run.—Photo by Ed Hubbard. (See story, Page 3).

NIMH Study Shows Married Couples Have Less Need for Psychiatric Care

An adult living with a spouse is less likely to seek treatment in a psychiatric outpatient clinic than is an adult living alone, according to a recent study by the National Institute of Mental Health.

Beatrice Rosen, statistician, Biometrics Branch, NIMH, reported this finding among characteristics of patients treated in outpatient psychiatric clinics in the United States in 1961.

Co-authors of the paper were Dr. Morton Kramer, Chief of the Biometrics Branch, and Dr. Anita K. Bahn, Chief of the Outpatient Studies Section.

Findings of the study indicate that the highest rate of utilization of the mental health clinics, by persons according to marital status, was among persons separated. Then followed, in order, persons divorced, single, widowed and married.

350,000 Cases Analyzed

The study was based on an analysis of 350,000 patients whose treatment was terminated in 1961, a rate of 192 per hundred thousand.

Nearly twice as many boys as girls were treated in clinics, the study showed. Rates were highest for boys age 10 to 14, and for girls 15 to 17.

More adult males received treatment than did females, although the rate was higher for young women than for young men. After 35 years of age, male rates were generally higher.

Peak admission for women was reported between the ages 25 to 34, for men 35 to 44 years of age, followed by a continual decline to old age.

Women patients treated in the clinics had higher rates for psychoneuroses; men had higher rates for personality disorders.

These findings do not necessarily reflect the actual incidence of these illnesses, Mrs. Rosen said. Additional research is needed to learn more about biological, psychological and social factors, as well as variations between the sexes in receptiveness to psychiatric care, to determine whether these comparisons reflect true differences.

Outpatient Care Grows

The increasing use of mental health clinics emphasizes the trend toward more intensive use of outpatient psychiatric services. Both the number of clinics, and persons treated, have risen notably in recent years.

A total of 665,000 persons were treated in the 1,600 clinics in this country in 1961, as compared to 500,000 treated in 1,429 clinics in 1959.

With the growing emphasis on treatment in the community as an alternative to fulltime hospitalization, an even larger number of patients may be expected to use clinic services.

The study of population groups receiving treatment in such facilities, Mrs. Rosen said, is important as a basis for future planning for intensified community care of the mentally disabled.

One hundred years ago Abraham Lincoln appointed 44-year-old Massachusetts lawyer George S. Boutwell as first Commissioner of Internal Revenue.

NCI Publishes Pamphlet On Leukemic Children

"Childhood Leukemia—A Pamphlet for Parents" was published recently by the National Cancer Institute for distribution by physicians to parents of leukemic children.

The pamphlet, co-authored by NCI and National Institute of Mental Health investigators, is intended to contribute to parents' understanding of leukemia and its treatment.

Material for the pamphlet was drawn from a 2-year joint project of NCI and NIMH involving the study of the psychological and physiological adaptations to chronic stress of parents of children hospitalized for leukemia at the Clinical Center.

Authors Listed

Dr. Stanford Friedman, former Clinical Associate, Adult Psychiatry Branch, NIMH (presently Instructor in Pediatrics and Psychiatry, University of Rochester); Dr. Myron Karon, Senior Investigator, Medicine Branch, NCI; and Gary Goldsmith, Research Assistant, Adult Psychiatry Branch, NIMH, collaborated in the preparation of "Childhood Leukemia."

Organized in three parts, the pamphlet includes information about the normal blood and its proper functioning; the symptoms, complications, and treatment of leukemia; and some of the problems children face during hospitalization.

A glossary defines medical terms frequently used in discussing leukemia.

Copies are available to physicians only, free of charge, from the Office of Information and Publications, National Cancer Institute, Bethesda 14, Md.

NIAMD Initiates Project At Univ. of Djakarta

Dr. Chester W. Emmons, Chief of the Medical Mycology Section of the Laboratory of Infectious Diseases, National Institute of Allergy and Infectious Diseases, returned recently from a month-long visit to Indonesia where he initiated a collaborative research project at the University of Djakarta.

He is participating in field studies of fungi endemic to Indonesia with mycologists at the University.

Dr. Emmons also visited mycology laboratories in Delhi, Bombay and Poona, India. In Delhi he also participated in the International Congress on Diseases of the Chest.

Returning from Djakarta he attended an International Symposium on Factors Determining the Behavior of Plant Pathogens in Soil, at Berkeley, Calif.

Construction Grants for F.Y. '62, Tabulated by States, Are Available

Public Health Service grants for construction of research, hospital and related health facilities during Fiscal Year 1962 totaled \$207,653,129, according to a State-by-State tabulation released April 24.

The tabulation contains a brief description of each project, the amount of the Federal grant, and the grant totals for each State.

Of the total amount, \$170,893,228 was granted for the construction of hospital and related medical facilities. This brought the total of Federal grants under the Hill-Burton program since 1948, when it first went into operation, to about \$1.2 billion.

Localities Spend \$3 Billion

These grants resulted in local expenditure of an additional \$3 billion for the same projects in the 15-year period.

Dr. Luther L. Terry, PHS Surgeon General, in a preface to the report, credits these grants with "a major role in the massive effort to catch up after the virtual halt in hospital construction during the depression and World War II."

The remainder of the more than \$207 million in grants—\$36,759,841—went toward the expansion of laboratory space in universities and other institutions sponsoring biomedical research, bringing the total amount granted for this purpose since World War II to \$212 million.

These grants also were supplemented by non-Federal funds and resulted in the construction of over \$900 million worth of buildings containing research laboratories.

Part III of Series

The State-by-State breakdown of the grants awarded in Fiscal Year 1962, in booklet form, is Part III of a 5-part series.

Part I, listing Public Health Service research grants, and Part IV, listing grants for health services, were published earlier. Part II, listing training grants, and Part V, summarizing the other four tabulations, will be published later this year.

Copies of the booklet—PHS Publication No. 964—may be obtained from the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C., at a cost of 25 cents per copy.

Single free copies are available from the Information Office, Division of Research Grants, National Institutes of Health, Bethesda 14, Md.

Civilization is just a slow process of learning to be kind.—C. L. Lukas in Reader's Digest.

Medical Team Wins Gratitude For Service in Upper Volta

Because it reveals the very real gratitude of a West African nation for the large-scale measles immunization program recently conducted there, the RECORD is publishing this condensed transcription of a speech by Dr. Paul Lambin, Minister of Public Health of the Republic of Upper Volta, delivered at a Government reception honoring the 3-member medical team of the Division of Biologics Standards on the eve of departure for the United States. The transcript of Dr. Lambin's speech was sent to Dr. Joseph E. Smadel, Chief of the Laboratory of Virology and Rickettisiology, DBS, by Thomas S. Estes, American Ambassador to Upper Volta, with a letter in which he praised the work of the medical team consisting of Dr. Harry M. Meyer, Jr., Dr. Daniel D. Hostetler and Barbara Bernheim. Mr. Estes said, "They have made a major contribution in bringing America to the people of Upper Volta in every town and village, thereby helping us achieve one of our basic foreign policy objectives."

IT IS ALWAYS a great pleasure to mark the peak of an accomplishment just as it is reached and when everything has happened according to plan without false starts and mistakes.

Now, this is precisely the reason for our meeting tonight: to take note of the success of the mass vaccination campaign against measles of Upper Volta children, started on November 5 and ending on March 6.

You will allow me first to mention a figure, just one, and still I will round it off to the thousand: 731,000 children were vaccinated against measles within four months!

Sees Future Protection

Everything leads us to believe that, for several years, they are going to be protected against this disease which, until now, killed one out of five children it attacked.

We are making the necessary arrangements so that in the coming years, the children who were not vaccinated because they are too young at the present time, or the children to come into the world will be protected in turn against that terrifying disease.

Tonight, Excellency, Madame (Mrs. Bernheim), my dear collea-

gues Meyer and Hostetler, permit us to receive you in turn; let Upper Volta use my voice to say how she feels about you and your action.

Madame, my dear colleagues, you went through our country from North to South and from East to West for five months, and always with the same unselfish and humanitarian goal.

Commends Team's Spirit

Nevertheless, you accomplished with a smile your task which was often difficult and became increasingly hard as days added more fatigue on your shoulders.

This smile, this even character were, I believe, what impressed us most about you amid the worst annoyances, such as the illness which affected—not too seriously, fortu-

(See MEDICAL TEAM, Page 6)



Dr. Paul Lambin, Minister of Public Health of the Republic of Upper Volta (right), discusses plans for the immunization of West African children against measles with members of the DBS medical team (L to R) Dr. Daniel D. Hostetler, Barbara Bernheim, and Dr. Harry M. Meyer, Jr., during an interview in the offices of the Voice of America. More than 731,000 Voltan children were vaccinated during the recently completed program.—USIA Photo.

Cryptococcal Meningitis Successfully Treated With Amphotericin B

National Institute of Allergy and Infectious Diseases clinicians have treated 30 cryptococcal meningitis patients with amphotericin B. Fifty-three percent of cases were apparently cured after one course of therapy, 30 percent relapsed and were retreated successfully, and 17 percent failed to respond to therapy.

Cryptococcal meningitis is the most frequent cause of mycotic meningitis in man, accounting for about 10 percent of the 300 to 400 fatal mycoses reported annually in the United States. Prior to the discovery of amphotericin B, no chemical or physical agent had been able to prevent the universally fatal outcome of this disease.

30 Patients Treated

The results of treatment of 30 patients with cryptococcal meningitis is described in *Annals of Internal Medicine* by Drs. Anderson Spickard, William T. Butler, Vincent Andriole, and John P. Utz, of the Laboratory of Clinical Investigation, NIAID.

Amphotericin B was administered both intravenously and intrathecally. However, of the nine patients who were treated successfully after initial relapse, some experienced subsequent multiple relapses in spite of treatment. Of the 22 patients still living, 15 have been followed for longer than one year and six for longer than three years.

Because of the high incidence of side reactions with intrathecal administration of amphotericin B, this method is reserved for these patients who fail to respond to intravenous therapy. Coexisting disease, of which Hodgkin's disease and diabetes mellitus were the most frequent, was observed in 15 of the 30 patients.

Montgomery County Sentinel Will Publish Section on NIH

The May 9 issue of the Montgomery County Sentinel, the county's oldest weekly newspaper, will feature the National Institutes of Health in a special 8-page tabloid section. Background stories and pictures on the nine Institutes, four Divisions, and Clinical Center will be included.

Reflecting an interest in the scientific community by the Sentinel's new publishers, the newspaper has assigned a staff reporter to cover NIH. Articles on developments in the various Institutes will appear each week in the regular pages of the paper.

Medical Team Wins Gratitude

(Continued from Page 5)

nately—all three of you.

In spite of language barriers you were able to forge ahead with energy; you never lost your calmness, you never despaired of the ultimate goal.

You won our admiration during those months, just as you kept our friendship during the first pilot experience in 1961.

In this big mass vaccination project you have borne all the technical responsibility, and a good part of the material responsibility.

In Bethesda it was you who took care of the crating and shipping of the technical material and the vaccines, the camping material, the vehicles.

Cooperation Praised

In a close intercommunication with my collaborators, you determined what would be necessary to you; you got it or you got somebody to get it, and then had it sent and set up.

On its arrival here, and after my office had assured the reception and temporary storing—thanks to the promptness of the local customs—you carried out its distribution.

During the second pilot experiment in October, you instructed your personnel who had never used the hyperpressure injection means, and Dr. Hostetler familiarized the drivers with the mechanical material that would have to be used—the vehicles, generators, refrigerators.

Meanwhile, you did not stop being doctors. You carried out preliminary examinations and came into contact with your colleagues in order to gather documentary evidence about local pathology matters that could be important in your future task.

No Ivory Tower

Finally, the campaign being launched and developing, thanks to the constant and very important logistical support of the Endemic Diseases Service, you did not want to contemplate its operation from the top of an ivory tower like people satisfied with a work perfectly launched.

On the contrary, you went down into the arena, and during four months in contact with vaccination teams, you have, in close collaboration with the medical sector chiefs, caused that big experiment to function always better.

Should I dare to say, now that this success is obtained, that when you established that project, the venture seemed almost too ambitious? Now success has crowned what was called audacity at that time, and we owe it, Madame, my dear colleagues, essentially to you.

The third characteristic of your action and your feelings, which particularly caught our attention, is your sense of close collaboration with all those who worked in the same direction as you did.

This was for us, at the Public Health and Population Ministry here in Ouagadougou, as well as in all the stations my Department is creating in the bush, a real pleasure: to see how much you cared for the principles, ideas and views of those who, working already in the country, be they native or not, might have something to point out or to reveal to you.

Notes Competence

Being competent virologists and, particularly, measles technicians, you wanted to have our doctors' opinions, see their patients, discuss with them epidemiology, clinical matters, the best way to approach children to be vaccinated and their mothers, the state of roads, the driving habits of the drivers, and so many other things.

You never wanted to cut short or to impose; you always tried to succeed through calmness, clearness, exactness—and you did succeed.

From all those who approached you during those long months spent together, I think no one ever felt demeaned or misunderstood. This is a rare thing and we are particularly grateful to you for it.

These three dominant elements—joy, efficiency, and spirit of collaboration with everybody—were the characteristics we particularly appreciated in you. I believe that, being in harmony with the very characteristics of your people, they explained largely the success of the campaign you have just led for us in our country.

Thanks Others

In closing, permit me first to thank those to whom we are indebted for your presence here: Dr. Smadel, who was willing to be separated from his researchers to allow them to lead this mass vaccination campaign against measles; and Dr. Enders (Dr. John F. Enders, Children's Hospital Medical Center, Boston) who discovered and perfected the attenuated living vaccine against measles through his patient and learned researches.

Permit me to thank the whole personnel of the National Institutes of Health and also the Health, Education, and Welfare Department which presented and defended the program, while the officials of AID here, just as in Washington, established and carried it out.

At last, permit me, Excellency, to ask you to transmit to the Senate and to the House of Represent-

LAMSON HONORED



Dr. Kerr L. White, Chairman of the Health Services Study Section, DRG (left), presents a Certificate of Commendation to Glenn G. Lamson, Jr., Executive Secretary of the Section, as a measure of the group's "personal and professional esteem." Members of the Section also gave Mr. Lamson a Webster's unabridged dictionary.—Photo by Sam Silverman.

NFFE Invites Employees To Join World Tour

Around-the-World in 37 days is the theme of a jet-flight tour which the National Federation of Federal Employees, Local 1317, is sponsoring early this fall.

The tour departs September 14 from Dulles International Airport. From there the group will fly to Greece, Turkey, Lebanon, Jordan, Egypt, India, Thailand, Hong Kong, Japan, and Honolulu before returning October 22 to Baltimore's Friendship International Airport.

Cost of the 37-day tour is \$1,855 per person. This price includes regular Around-the-World air fares, making it possible for persons from the West Coast to join the group for the regular tour fare.

The tour is open to all interested persons. Applications and further information can be obtained by calling ST 3-0074 on weekdays, AL 7-2389 on evenings and weekends, or by writing to Mrs. Ruby D. Langston, Box 7, Star Route No. 1, Chesapeake Beach, Md.

atives, to President Kennedy, and through them and him, to the whole American people, my personal thanks, those of my Department, those of all Upper Volta mothers and children who now see the slackening of the serious and too often deadly grasp that measles, which may be considered as the most relentless killer known in our country during these last years, represented to them.

Tomorrow, Drs. Meyer and Hostetler, and you Madame Bernheim—you will leave our airport to re-

NIMH Scientists Find Thyroxine Stimulates Protein Synthesis

Scientists at the National Institute of Mental Health have found that L-thyroxine administered in vivo stimulates amino acid incorporation into protein in living animals.

Dr. Robert Michels, John Cason, and Dr. Louis Sokoloff, of the Laboratory of Clinical Science, NIMH, reported their findings at the Federation of American Societies for Experimental Biology meeting in Atlantic City last week.

Previous studies of the effects of thyroxine on protein biosynthesis in vitro by these scientists led them to investigate thyroxine stimulation of protein synthesis in vivo. The results of this recent study also point to a physiological action of thyroxine in protein biosynthesis.

40 Pairs Studied

In the study, forty pairs of male albino rats were matched for age and weight. One member of each pair received daily intraperitoneal injections of Na-L-thyroxine for two or three days; the other animal, equal amounts of solvent.

One day following the last injection, a radioactive amino acid (L-leucine-1-C¹⁴) was administered intravenously or intraperitoneally.

The investigators measured the amount of labeled amino acid incorporated into the proteins of six organs. In the hyperthyroid animals, increased amino-acid incorporation was found in the liver, kidney, and heart, indicating stimulation of protein synthesis in these three organs.

The amino-acid incorporation in the brain, testis, and spleen indicated neither inhibition nor stimulation of protein synthesis. These findings are consistent with the known thyroxine effect on oxidative metabolism in these same tissues.

It is hoped that elucidation of the mechanism of thyroxine action may lead to a better understanding of the chemical pathogenesis of several types of mental deficiency and psychoses.

A paper on these findings will appear in abstract form in Federation Proceedings.

turn to the United States.

Thanking you again for myself and on behalf of all my collaborators, allow me to finish by wishing you a happy trip back to your families and friends. Let me remind you, however, that you are also leaving here many faithful friends, and that they all hope, someday and as soon as possible, to have the pleasure of seeing you back among us for the good of all and for the friendship and fraternity of all the people of the world.

Ferret Is Useful Model For RS Virus Studies

Scientists at the National Institute of Allergy and Infectious Diseases have found the ferret is a useful model for studying the course of infection with respiratory syncytial (RS) virus, and a suitable animal in which to study antigenic composition of RS virus because of the animal's susceptibility to infection.

Drs. H. V. Coates and R. M. Chanock of the Laboratory of Infectious Diseases, NIAID, reported experimental infection of ferrets with three strains of RS virus. The virus grew to high level in the nasal tissues of the ferret and induced coalescence of epithelial cells, a change similar to that seen in tissue cultures.

Causes Respiratory Disease

Recent studies have shown that the RS virus is the single most important cause of severe disease of the lower respiratory tract in infancy and early childhood.

Unlike the infection in children, the virus was rarely recovered from the lungs of the ferret, and pneumonia was not observed. No change in virulence for the ferret occurred when the virus was passed from ferret to ferret a number of times.

These findings were reported in the *American Journal of Hygiene*.

New Dual-Purpose Form Is Distributed by DRG

Specific instructions for using a new form to reserve conference rooms at NIH and for notifying the Grants Administration Section, Division of Research Grants, of extramural meetings on or off the reservation are being circulated to grants assistants and clerks in DRG and the Institutes.

The new dual-purpose form is titled "Notification of Extramural Meeting," PHS-4330. It replaces two test forms entitled "Request for Conference Room" and "Notice of Extramural Meeting To Be Held off the Reservation."

Send Forms to DRG

All requests for the use of conference rooms during the periods when preliminary review groups meet here, prior to Council meetings, should be made on the new forms and sent to the Grants Administration Section, DRG. The Office Services Branch, Office of the Director, will continue to make final reservations for such meetings.

Copies and further information on the use of the new form may be obtained from the Grants Administration Section, DRG, Bldg. 31, Rm. 3B06, Ext. 5631.



Clinical Center patient Joyce Irvin of South Carolina (right) receives a prize for creating the "most original Easter hat" from Hilde Cherney who modeled Miss Irvin's creation during the Spring Fashion Show held recently in the CC. Miss Cherney and Pat Lewis (left), whose hat was designed by another CC patient, were among several professional models from Models Guild, Inc., Washington, who participated in the show. Patients Joyce Sippel of South Carolina and Rosemary Mench of New Jersey won prizes for designing the "funniest" and "prettiest" hats, respectively.—Photo by Sam Silverman.

NIMH Scientists Find Close Relationship Between Psychoses and Thyroid Activity

National Institute of Mental Health scientists have found in certain patients a close relationship between changes in thyroid function and the occurrence of certain psychiatric illnesses.

The investigators, Drs. Leslie S. Libow and Jack Durell, NIMH Laboratory of Clinical Science, presented their findings at the meeting of the Federation of American Societies for Experimental Biology in Atlantic City, April 19.

Interrelationship Demonstrated

They reported that the interrelationship had been demonstrated in two patients with different psychotic manifestations who were studied intensively both from the psychiatric point of view as well as that of thyroid function.

In the first patient, a chronic schizophrenic, evidence suggests a common mechanism responsible for the changes in thyroid gland function and in psychosis.

Thyroid activity was measured by assessing the capacity of the gland to take up a tracer dose of radioactive iodine from the blood. Evidence was obtained that abrupt changes of the gland's capacity to take up radioactive iodine accompanied the behavioral transitions.

In the second patient, who had received a partial thyroidectomy and later developed a psychosis, it was possible to influence the psychotic symptoms by administration and withdrawal of triiodothyronine, a rapidly acting thyroid hormone.

The patient gradually improved

with the thyroid treatment, but the most striking finding, the scientists noted, was the almost immediate return of psychotic behavior following withdrawal of triiodothyronine. When thyroid therapy was resumed, the psychosis again abated.

The rapid onset of psychosis suggests that thyroid deprivation was not the direct cause of the behavioral disturbance, as is postulated for myxedema madness, a thyroid hormone disorder, but suggests a coupling of those brain mechanisms involved in the abrupt change in thyrotrophic hormone secretion and those involved in the exacerbation of the psychosis.

Nearby School Displays Million Dollar Exhibit

More than a million dollars worth of exhibits dealing with the constructive uses of scientific research were displayed at the Walt Whitman Senior High School's Field House in Bethesda, Md., April 30 to May 4.

The school's Parent-Teacher Association sponsored the "Atoms to Space Science Progress" display which was the first major exhibit of its kind to be held in a high school in the Washington Metropolitan area. More than 2,000 students from as far as 50 miles away were scheduled to view the exhibit.

Over 20 private firms, government agencies, and research foundations contributed 38 profession-

Scientists Find Possible Recurrence Mechanism Of Aphthous Stomatitis

A possible mechanism of recurrence of aphthous stomatitis has been described by NIH scientists.

Aphthous stomatitis, commonly known as "canker sores," and characterized by extremely painful and recurrent oral ulcerations, has no known etiology and no specific therapy.

Speaking before the International Association for Dental Research in Pittsburgh, Pa., recently, Dr. Edward A. Graykowski of the Clinical Investigations Branch, National Institute of Dental Research, and Dr. Michael F. Barile of the Laboratory of Bacterial Products, Division of Biologics Standards, reported the isolation of an unusual organism (a transitional L-form of bacteria) from oral aphthous lesions of five patients.

Organism Isolated

From recurring lesions of one of the patients the organism was isolated in pure culture on six examinations over a seven-month period and from the blood during three acute phases of the infection. The stable filterable phase was also recovered from tissue at the site of previous lesions during remission.

This, the investigators feel, suggests that a phase of this organism can remain dormant and may be responsible for the recurrence of lesions at the same site.

The L-form of bacteria is related to but not identical with another group of microorganisms—the pleuropneumonia-like organism—which has recently been shown to cause some cases of atypical pneumonia in man. The L-form is a filterable, virus-like variant of a particular bacterium.

Exists in Phases

It may exist independently or together with its bacterial parent and the two vastly different phases of the same organism can transform from one type to the other with many intermediate transitional stages in a cyclic manner.

The presence of transitional L-forms in pure culture from numerous lesions, their persistence in one patient for at least seven months, the associated bacteremia during exacerbation, and the recovery of L-form colonies from tissue during quiescence are significant.

These findings suggest a relationship between the L-form group of bacteria and the pathogenesis of this disease and that at least some cases of this disease are infectious.

ally constructed displays illustrating modern scientific accomplishments in fields ranging from medicine to aerospace and computer technology.

NIAMD Studies Suggest Peptide B May Regulate Circulation in Capillaries

Studies by scientists at the National Institute of Arthritis and Metabolic Diseases suggest that peptide B, a chain of amino acids (polypeptide) released during the blood-clotting process, may play a vital role in the regulation of microcirculation.

The studies have provided evidence that peptide B, the role of which has hitherto been unclear, is a physiologically active peptide which may take its place among such well-known active peptides affecting circulation as angiotonin, vasopressin and oxytocin.

The flow of blood through the capillaries serves the primary purpose of the circulatory system, to convey to the body cells the substances needed for metabolism and to remove accumulating waste products. Yet the agent or agents which control this phenomenon are not yet known.

Postulation Cited

One investigator has postulated that the smooth muscle cells in the capillary walls are regulated not only by the substances that act on them directly to contract and relax, but also by other substances which modify the capacity of these cells to react to other stimuli.

In order to clarify the control mechanisms of microcirculation and the related phenomenon of blood-clotting, the NIAMD scientists studied the possible role of peptide B, known to be released during the conversion of fibrinogen to the clot-forming blood protein, fibrin.

To test its action on smooth muscle such as is found in capillary walls, the scientists used rat uterus muscle in an experimental system capable of measuring muscle contraction.

Peptide B Induces Bradykinin

They found that peptide B of bovine origin acts as a strong potentiator of bradykinin, a naturally-occurring peptide capable of inducing smooth muscle contraction.

Smooth muscle suspended in a physiological solution showed a marked increase in bradykinin-induced contractility after prior incubation with peptide B.

During preliminary experiments, the NIAMD investigators found that segmenting the peptide B molecule into two pieces did not impair its pharmacological activity.

They also succeeded in isolating a human counterpart of peptide B, and have found that it is three times more active than the bovine substance in the same test system. Tests are underway to locate the amino acid groups responsible for

NIH Participation Sets Joint Campaign Record

NIH set an all-time high in the National Health Agencies-Federal Service Joint Crusade Campaign which ended April 26.

Betty Wiehle of NHI, who served as campaign manager, reported overall participation totals of 68.2 percent in the NHA and 66.6 percent in the FSJC, with 6,262 and 6,113 contributions in the two drives, respectively.

Previous high year for participation was 1961, which showed 58.6 and 57.3 percent participation. Last year's figures were 50.6 and 48.2 percent.

Three reporting units finished with 100 percent: the NIH Federal Credit Union, the National Institute of Child Health and Human Development, and the Division of Research Facilities and Resources.

NHI closed with 93.1 and 91.8, while the Office of the Director had 91.6 and 88.4. The National Institute of General Medical Sciences totaled 89.5 and 86.8, and the National Library of Medicine, 82.9 and 77.

Only two Institutes—the National Institute of Mental Health and the National Institute of Allergy and Infectious Diseases—finished under 50 percent.

Well pleased with the results of the campaign, Dr. Ralph E. Knutti, NHI Director and Campaign Chairman, said, "Everyone who participated in the campaign—the campaign manager, keymen, publicity staff, and contributors, can well be proud of the record we have made this year at NIH. I want to express my thanks to all."

the activity of both the human and bovine molecules.

These studies by Drs. Jules A. Gladner, Albert J. Osbahr, Kolo-man Laki and associates, have indicated that peptide B is a true physiologically active peptide, released by enzymatic cleavage from a normal blood constituent, fibrinogen, during its conversion to fibrin. Dr. J. E. Folk of the National Institute of Dental Research collaborated with the NIAMD investigators in a portion of this research.

The enzyme catalyzing this reaction is thrombin. The physiological advantage of capillary constriction to assist blood clotting is evident, but the NIAMD scientists also postulate that since the fibrinogen-fibrin transformation is constantly going on in the body, to some extent, the reaction may have some relation to continuous control of the smooth muscle in capillary walls.

Their work was reported at the Ninth International Congress of Hematology, and appears in the February 4 issue of the *Annals of the New York Academy of Science*.



Richard L. Seggel, NIH Executive Officer, addresses the opening session of "An Orientation Course in Supply Procedures," developed and presented by the Supply Management Branch. The 7-day course was attended by 80 NIH employees. Mr. Seggel commended SMB for its development of this comprehensive training program.—Photo by Sam Silverman.

Three Major Changes In Traffic and Parking Announced by PSB

The Plant Safety Branch has announced three major changes affecting traffic and parking for NIH employees.

Effective Thursday (May 9), Wilson Drive will be one-way for outgoing vehicles between 4:30 and 6 p. m., from Center Drive to Wisconsin Avenue. This adjustment is expected to ease congestion which normally causes traffic back-ups on Center Drive.

The PSB points out that during this 90-minute period, cars leaving the Building 21 parking area may not turn left onto Wilson Drive and that cars traveling south on East Drive will not be allowed to turn right onto Wilson Drive.

To Question Drivers

It was also announced that, beginning May 13, members of the guard force will question the drivers of cars attempting to park on the reservation, if their cars do not bear NIH parking stickers. This results from the use of NIH parking lots by non-NIH employees for fringe parking.

PSB reminds employees they should obtain the proper decals for their cars by contacting the Building 31 Guard Office, Ext. 5685.

Employees stationed at the North Bethesda Office Center are requested to use the parking facilities near their buildings rather than park along the shoulder of Rockville Pike.

The number of cars now being parked along the Pike is creating a serious traffic hazard. State Police have warned PSB officials that the State may have to take action to prevent parking along the Pike if this situation is not corrected promptly.

Cystic Fibrosis Patients Have Great Sensitivity Of Taste and Smell

Investigators of the National Institute of Mental Health and the National Institute of Arthritis and Metabolic Diseases have demonstrated that persons with cystic fibrosis have the ability to taste and smell salt, sweet, sour, and bitter substances in solution at concentrations much more dilute than those at which the substances are detectable by persons without the disease.

Previous investigation had revealed that patients with adrenal insufficiency (Addison's disease) exhibit an increased sensitivity for the basic modalities of taste. Because the concentration of sweat electrolytes is abnormally high in adrenal insufficiency and in cystic fibrosis, the study of sensory thresholds in cystic fibrosis was undertaken.

Sensory Threshold Determined

In a study of eleven patients with cystic fibrosis, the sensory threshold was determined by a technique in which patients compared the test substance in solution with an equal sample of glass-distilled water.

Sensitivity of taste in the patients with cystic fibrosis was found to be roughly 100 times greater than the sensitivity of a control group of normal subjects. The sensitivity of smell was 10,000 times greater than that in normal subjects.

The mechanisms by which these sensory phenomena occur are not clear. The underlying defect may reside in the taste bud or olfactory hair cell, in the cranial nerves that conduct the impulse, or in the brain itself.

Abnormality Site Suggested

Preliminary data suggest no consistent gross abnormalities in the electroencephalographic responses or in the ulnar nerve conduction velocities of patients with cystic fibrosis, but these responses are abnormal in animals and in patients with adrenal insufficiency. Thus, the taste bud or olfactory hair cell may be the site of the sensory abnormality in cystic fibrosis.

Dr. R. I. Henkin of the Laboratory of Clinical Science, NIMH, and Dr. G. F. Powell of Johns Hopkins Hospital, Baltimore, formerly of NIAMD, collaborated in reporting these sensory phenomena in *Science*.

Man is the only animal that laughs and weeps; for he is the only animal that is struck by the difference between what things are and what they ought to be.—William Hazlitt in *Reader's Digest*.