

NIH



FILE COPY
record

DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE

October 6, 1958, Vol. X, No. 20

PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTH

UNITED GIVERS FUND DRIVE FOR \$68,889 OPENS AT NIH



Campaign chairmen display giant pledge cards at the recent UGF kickoff meeting for keymen.

DR. HILL TO PRESENT SEVENTH NIH LECTURE

Dr. Archibald Vivian Hill, Nobel Prize winner in physiology and medicine, will present the Seventh NIH Lecture on Tuesday, October 7. All NIH employees and guests are invited to attend the lecture, to be presented at 8:15 p.m. in the Clinical Center Auditorium.

Entitled "The Energy Exchanges Involved in Muscular Contraction and Nerve Conduction," the lecture will deal with the measurement of and rules governing energy exchange in muscles and nerves, which provides a framework into which specific molecular processes must be fitted.

(See NIH Lecture, Page 3)

EXPERTS DISCUSS ROLE OF VIRUSES IN CANCER

Fifteen outstanding scientists, including Drs. Jonas Salk and Richard Shope, met at NIH last month to help define possible causal relations of viruses to human cancers. The one-day conference was held at the request of the NCI Research Grants Branch.

Recommendations and suggestions that were made by the group will be useful in formulating future plans for supporting research on the virus origin of cancer. A long-range research program, however, will include the training and equipping of additional scientists to work in the related areas of virology, genetics, and protein chemistry.

DR. BURNEY ADDRESSES KICKOFF MEETING HERE

Surgeon General Leroy E. Burney launched the Third Annual United Givers Fund campaign for 5,871 NIH employees at a kickoff meeting September 25 in the Clinical Center auditorium. More than 300 campaign keymen and officials were in attendance.

The United Givers Fund Campaign at NIH, which will be conducted during the month of October, aims at a quota of \$68,889, an increase of eight percent over last year's goal.

"We of the PHS," Dr. Burney pointed out, "have special reasons to know the value of UGF, since at least one third of the agencies participating are health agencies. These groups," he added, "not only provide essential welfare services but help to educate both the public and professional workers and to support the search for new knowledge."

Dr. James A. Shannon, NIH Director, who introduced Dr. Burney, also praised the once-a-year, single-package quota effort. "I feel certain that this year we can not only exceed our 1957 total but come close to 100 percent participation and reach our quota," he said.

Master of ceremonies for the program was Dr. Ernest M. Allen, DRG Director, who is serving as chairman of this year's drive. Eckart Wipf, Administrative Officer, NINDB, informed the keymen of general campaign plans and organization at NIH.

Entertainment for the kickoff meeting was provided by two NIH employees -- Diana Hasenei, who danced to bongo drum accompaniment by Jon Harford, and Harris Spooner, who presented vocal solos, accompanied by George Cornwall.

Trichomoniasis Studies Yield Possible Drug Test

No. 215 in a Series



Four anterior flagella and an undulating membrane keep *T. vaginalis* in constant motion.

Vaginal trichomoniasis, a nonfatal parasitic disease affecting some 10 percent of women, may someday be brought under effective control. A promising step in this direction is a recent laboratory finding that may yield a standard method for evaluating systemic trichomonocidal drugs.

As an outgrowth of NIAID studies by Drs. Thomas A. Burch, Charles W. Rees, and Donald E. Kayhoe, on human trichomoniasis, Dr. Leon Jacobs and parasitologist Lucy V. Reardon have found that strains of *Trichomonas vaginalis*, the parasite causing the disease, differ in reactions in mice.

Strains of the parasite isolated from patients with mild to severe trichomoniasis were injected into the abdominal cavities of various strains of laboratory mice. Two strains of the trichomonads were outstandingly uniform in their behavior in A/LN mice--the mouse strain used as the standard host for testing. One strain of the parasite consistently caused the death of the mice, and the other did not.

The uniformity of results with the trichomonad strain causing death in mice indicates that it should be possible to use this method to test drugs given orally or parenterally for effectiveness in clearing trichomonads from the animal. The search for a cure for trichomoniasis might thus be facilitated.

Three types of trichomonads--oral, intestinal, and vaginal--live in the human body. While infection with the vaginal trichomonad may produce severe incapacitating vaginitis, usually it is associated with a chronic, low-grade infection and vaginal discharge and itching. Many women consider this condition normal, seldom bothering to consult a physician about their symptoms. Men harboring the parasite ordinarily are symptomless. Treatment is usually confined to topical application of trichomonocides and is often disappointing.

Lack of complete knowledge about the variability, virulence, and other aspects of trichomoniasis complicates the search for a cure. Added to this is the difficulty of eradicating parasites from the vagina, urethra, and the accessory glands; the sensitivity of the epithelium to topical drugs powerful enough to destroy the parasites; and the possibility of reinfection.

Coitus is considered to be the chief method of infection, but the parasite has been cultured from toilet seats and washcloths and has been found in young children and even infants. Recent NIAID studies showed the prevalence of trichomoniasis to be greatest among women 30 to 49. Contrary to other studies, however, no significant difference could be attributed to marital status or history of pregnancy.

Publication Preview

The following manuscripts were received by the SRB Editorial Section between June 26 and July 11.

DBS

Keyv, S. V., and Morrison, E. The stability after frozen storage of an *in vivo* antigen antibody bonding on red cells.

DRS

Dom, H. F. Darwin revisited.
Poiley, S. M. A systematic method of breeder rotation for non-inbred laboratory animal colonies.

NCL

Dawe, C. J.; Potter, M.; and Leighton, J. Progressions of a reticulum cell sarcoma of the mouse *in vivo* and *in vitro*.

Dunham, L. J.; Thomas, L. B.; Edgecomb, J. H.; and Stewart, H. L. Some environmental factors and the development of uterine cancers in Israel and New York City.

Duthie, R. B.; Merwin, R. M.; and Wolff, J. The functional activity of thyroid isograths within diffusion chambers in mice.

Greenfield, R. E.; Godfrey, J. E.; and Price, V. E. Studies on the anemia of tumor-bearing animals. I. Distribution of radioiron following the injection of labeled erythrocytes.

Greenfield, R. E.; Sterling, W. R.; Tarantola, V. A.; and Price, V. E. Studies on the iron metabolism of tumor-bearing animals.

Landau, B. R., and Lubs, H. A. Animal responses to 2-deoxy-D-glucose administration.

Landy, M.; Trapani, R.-J.; and Shear, M. J. Interference by endotoxic polysaccharides with inactivation of coliphage by human serum.

Law, L. W. Some aspects of the etiology of leukemia.

Rosen, F. S.; Skames, R. C.; Shear, M. J.; and Landy, M. Inactivation of endotoxin by a humoral component. III. Role of divalent cation and a dialyzable component.

Sievers, M. L., and Gallagher, N. I. Interrelationship of acid, pepsin and intrinsic factor production: an indirect gastric secretory study.

Skames, R. C.; Rosen, F. S.; Shear, M. J.; and Landy, M. Inactivation of endotoxin by a humoral component. II. Interaction of endotoxin with serum and plasma.

NHI

Avigan, J. A method for incorporating cholesterol and other lipides into serum lipoproteins *in vitro*.

Berliner, R. W. Clinical physiology of salt and water metabolism.

Bowman, R. L., and Karmen, A. A micro sample introduction system for gas chromatography.

Fry, D. L. The physics of air flow in emphysema.

Mills, I. H., and Bartter, F. C. Plasma hydrocortisone levels during cortisone administration.

Reiff, T. R., and Yienst, M. J. A rapid automatic semi-micro colloid osmometer.

Stadtman, T. C. A ferrous iron dependent alkaline phosphatase of yeast.

Weissler, A. Formation of hydrogen peroxide by ultrasonic waves: Free radicals.

NIAID

Damell, J. E., Jr., and Eagle, H. Glucose and glutamine in poliovirus production.

Hughes, L. E., and Philip, C. B. Experimental tick paralysis in laboratory animals and native Montana rodents.

Lackman, D.; Gerloff, R.; and Philip, R. A comparison of complement fixation and metabolism inhibition as methods of evaluating poliomyelitis antibody response.

Louria, D. B.; Mitchell, W.; and Emmons, C. W. The influence of the time of animal sacrifice and the volume used for direct culture on the isolation of pathogenic fungi.

Wright, W. H.; Phillips, B. P.; and Newton, W. L. Germ-free animal research at the NIH.

NIAMD

Bartlett, R. G., Jr. Effects of restraint on oxygen consumption of the cold exposed guinea pig.

Briggs, G. M. Unidentified factors.

Chemick, S. S., and Scow, R. O. Early effects of 'total' pancreatectomy on fat metabolism in the rat.

Eddy, N. B.; Besendorf, H.; and Pellmont, B. Synthetic analgesics. IV. Arealyl substitution on nitrogen of morphinan.

Fox, M. R. S. Nutritional significance of vitamin B₁₂. I. Metabolic functions in experimental animals.

Heppel, L. A.; Strominger, J. L.; and Maxwell, E. S. Nucleoside monophosphate kinases. II. Transphosphorylation between adenosine monophosphate and nucleoside triphosphates.

Mickelsen, O. Water.

Rosenthal, S. M. The estimation of histones and protamines in biological materials.

Sargent, L. J., and Ager, J. H. Carbinolamines derived from δ - ω -bromoacetyl-N-acetyl *asym-tetrahydroacridine*.

Seven, M. J.; Kliman, B.; and Peterson, R. E. Clinical studies with penicillamine in hepatolenticular degeneration.

Stetten, M. R. Transglucosylation by a mammalian liver enzyme.

NIDR

Rogosa, M.; Fitzgerald, R. J.; and MacKintosh, M. E. An improved medium for the selective isolation of the *Veillonella*.

Shiota, T. Enzymatic synthesis of folic acid-like compounds by cell free extracts of *Lactobacillus arabinosus*.

NIMH

Carlson, V. R. After effect of a moving pattern.

Gillette, T. L., and Yarrow, M. R. A study of methodology for assessing interpersonal relationships within the family.

NIHDE

Fuertes, M. G. F. Generation, conduction and transmission of nerve impulses.

Guth, L., and Frank, K. Restoration of diaphragmatic function following vagophrenic anastomosis in the rat.

Imus, H. A. Research into neurological and sensory disorders.

Irwin, R. L.; Rowley, P. T.; and Wells, J. B. Tension response of mammalian muscle to intra-arterial acetylcholine injection.

Stevens, H., and Dekaban, A. S. Progressive cerebral degeneration of childhood.

NIH RECORD

Published by
Scientific Reports Branch
Division of Research Services
National Institutes of Health
Room 212, Building 8
Bethesda 14, Maryland
OLiver 6-4000 Ext. 2125

NEWS BRIEFS

Dr. Philip A. Klieger has joined the staff of the Office of Vocational Rehabilitation as Medical Consultant. In this capacity he will provide consultive services in the rehabilitation of the disabled for State and other public rehabilitation agencies, as well as for OVR.

* * * * *

School and college enrollment in the United States, increasing for the 14th consecutive year, will reach a new alltime high of about 45 million in the school year 1958-59, according to a recent Office of Education report.

Dr. Arnold Visits Pioneer Fluoridation Project

Grand Rapids, the city that pioneered in water fluoridation 13 years ago, was praised for its cooperation in the project by Dr. F. A. Arnold, Jr., Director of NIDR, when he visited there recently. The occasion was an address made by Dr. Arnold to the convention of the Michigan section of the American Water Works Association.

Dr. Arnold told the group that fluoridation has cut the cavity rate in Grand Rapids school-age children 60 percent. He pointed out that 1,650 communities, representing over 33 million persons, are now using fluoridated water.

NIH LECTURE Contd.

Dr. Hill, a well-known physiologist, is presently Professor Emeritus of the Department of Physiology, University College, London. He was awarded the Nobel Prize with Otto Meyerhof in 1922, for work on heat loss in muscle contraction. In other studies he established the origin of muscular force in carbohydrates, with the origin of lactic acid.

Dr. Hill was born in Bristol in 1886 and was educated at Trinity College, Cambridge. He served as Professor of Physiology at Manchester University and at University College, London. From 1926 to 1951, he was Foulerton Research Professor of the Royal Society, working at University College.

A Member of Parliament for Cambridge from 1940-45, Dr. Hill is a former president of the British Association for the Advancement of Science and Secretary General of the International Council of Scientific Unions.

NIH HAS MAJOR ROLE IN INTERNATIONAL HEALTH

Current NIH participation in international health programs is at an alltime high, spurred by mounting recognition of the need for a unified attack on disease. As PHS's primary research center, NIH has undertaken much of the responsibility for communicating new medical knowledge beyond this country's geographical and political boundaries.

Recent PHS programs administered by NIH range from the granting of postdoctoral fellowships to European scientists for study in the United States to field studies that have resulted in more effective control of schistosomiasis in Egypt. Such work has proved the value of coordinating health studies and exchanging scientific information.

International exchange of medical knowledge is fostered by PHS through five general programs. Direct support of research in foreign countries is the largest of these, receiving over a million dollars in NIH grants during fiscal 1958. The interchange of scientific personnel and support of international meetings rank next in importance. Recently, our support of translation services and reciprocal exchange missions has increased substantially.

In addition to expanding support in these areas, NIH cooperates with the World Health Organization's scientific activities relating to common objectives and makes special grants to enable scientists to hold international study group meetings. Twenty-three NIH staff members are now serving as technical consultants to WHO.

It seems almost certain that NIH will play an increasingly important role in future international health programs. In the closing sessions of the 85th Congress, Senator Lister Hill proposed a \$50-million appropriation to create a National Institute of International Medical Research and suggested Bethesda as the location. In October, a subcommittee headed by Senator Hubert Humphrey will meet to evaluate current international health activities.

FIRE PREVENTION WEEK

OCTOBER 5 - 11

DRS. BURNLEY AND SHANNON OPEN UGF DRIVE HERE



Surgeon General Leroy E. Burnley (left) and NIH Director James A. Shannon pledge their support to UGF after the kickoff meeting at which Diana Hasenei (center) entertained.

300 WORKERS CONDUCT UGF CAMPAIGN AT NIH

A team of over 300 employees, organized to conduct the Third United Givers Fund campaign here, is aiming to meet the NIH quota of \$68,889 before the end of October.

The drive at NIH is directed by a chairman, Dr. Ernest M. Allen, Director, DRG, and a co-chairman, Dr. Jack Masur, Director, CC. Vice chairman is Eckart Wipf, Administrative Officer, NINDB, and the co-vice chairman is Philip Simon, Administrative Officer, CC.

In addition, there is a campaign chairman, a vice chairman, and keymen for each NIH Institute and Division. Chairmen and vice chairmen are William Carrigan and Jane Stafford, OD-NIH; R. H. Henschel and Genevieve L. Garner, DBO; William B. Page and Robert Handy, DRS; Dr. Roderick Murray and George A. Brust, DBS; Dr. Halsey Hunt and C. B. Baldwin, DGMS; Dr. Clifton Himmelsbach and Gilbert J. Frey, DRG; and Dr. Kenneth Chapman and Margaret Badger, CC.

Institute officials are Dr. Francis A. Arnold, Jr., and John E. Fitzgerald, NIDR; Dr. Floyd S. Daft and C. E. Lacey, NIAMD; Dr. Paul Q. Peterson and John M. Hannan, NIAID; Dr. Pearce Bailey and Ruth Dudley, NINDB; Dr. James Watt and Elwyn L. Meenen, NHI; Dr. Robert D. Coghill and Walter H. Magruder, NCI; and Warren C. Lamson and Dr. Curtis Southard, NIMH.

Dr. Allen, Mr. Wipf, and Mr. Adler arranged for the keymen's kickoff meeting.

GIVE TODAY -- THE UNITED WAY

The United Givers Fund, which combines 142 of the National Capital Area's health and welfare agencies in one yearly campaign, has set a goal of \$7 million this year.

The UGF represents a time- and money-saving method of supporting community agencies. Fund-raising volunteers ring the householder's doorbell only once, and staff, office space, and time are consolidated into one package. With this unity of effort, each participating agency receives more money than if each conducted an individual campaign.

Member agencies of UGF cover the broad scope of the metropolitan area's welfare activities. Health agencies include those that aid retarded children, mental health clinics, the Visiting Nurse Association, and organizations concerned with multiple sclerosis, cerebral palsy, and blindness. Welfare organizations provide assistance in every area of family and child need. The Boy Scouts and Girl Scouts are included, as well as the Red Cross, settlement houses, and armed services hospitality centers.

To keep these agencies alive, a fair share is being asked of each Government employee--to be contributed in one sum or paid in installments. If desired, the giver may designate one or more agencies to receive his contribution.



United Givers Fund Quotas - 1958

Institute or Division	Number of Employees	Quota
Office of the Director	38	\$ 946
Division of Business Operations	620	4,769
Division of Research Services	776	7,566
Division of Research Grants	215	2,566
Division of General Medical Sciences	22	298
Division of Biologics Standards	164	1,779
Clinical Center	1,439	10,335
National Cancer Institute	791	11,486
National Heart Institute	348	5,444
National Institute of Allergy and Infectious Diseases	300	4,321
National Institute of Mental Health	426	7,215
National Institute of Dental Research	112	2,062
National Institute of Arthritis and Metabolic Diseases	384	6,760
National Institute of Neurological Diseases and Blindness	236	3,323
Total	5,871	\$68,889