

LET'S REALLY SUPPORT THE COMMUNITY CHEST

Let's really share Thanksgiving this year with the less fortunate. Let's give a decent contribution to the Community Chest.

Remember what the Surgeon General said: "Since a very substantial portion of the Community Chest expenditures are for health purposes, it is fitting that we in the Public Health Service respond favorably."

One hundred persons here at NIH have volunteered their services to help fulfill our quota of \$10,190.

It is not necessary to make an immediate contribution. Your pledge to contribute in the future will suffice.

The work of the Community Chest is impressive in terms of human needs met during 1948 in the Greater Washington area:

1. Family welfare services helped 57,889 persons.
2. Child welfare services helped 7,829 persons.
3. Youth development services helped 84,509 persons.
4. Hospital services helped 11,099 persons.
5. Health services helped 96,008 persons.
6. Community improvement services benefited the entire community.

DR. LARSON TO DIRECT ROCKY MOUNTAIN LAB

Dr. Carl L. Larson has been appointed Director of the Rocky Mountain Laboratory, filling the vacancy left by the recent death of Dr. Ralph R. Parker.

(See Dr. Larson, Page 4)



Both Mr. George W. Rusten (right), lab aid in the Microbiological Institute, and Dr. Joseph Greenberg, his supervisor, are pleased and proud of the award which Mr. Rusten won for devising equipment that facilitates laboratory work.

PERUVIAN DOCTOR HERE FOR ALTITUDE STUDIES

Dr. Tulio Velasquez of the San Marcos University Medical School in Lima, Peru, has been sent to us by the Institution of Andean Biology to learn the most recent techniques of studies on environmental adaptation.

The Institution is especially interested in the research, on myoglobin and the adaptation of animals to high altitude, which has been done by Dr. William J. Bowen in the Experimental Biology and Medicine Institute.

After spending two or three weeks as a guest worker in the Laboratory of Physical Biology, Dr. Velasquez will continue his observations at other institutions. He is in this country on a fellowship awarded by the Rockefeller Foundation.

LAB AID REWARDED FOR HIS DEVICES

MR. G. W. RUSTEN WAS AN UNSKILLED LABORER

Mr. George W. Rusten, laboratory assistant in the Microbiological Institute who came to NIH eight years ago as an unskilled laborer, has received a well-deserved "award for superior accomplishment."

The award, consisting of a one-step salary advancement in his present grade, was given to Mr. Rusten for devising three pieces of equipment that facilitate laboratory work.

He had previously earned several grade promotions because of his extreme interest in his work and his ability.

Presentation of the award was made by Executive Officer Albert F. Siepert on October 18 in the Conference Room of the Administration Building.

A group of Mr. Rusten's fellow workers and superior officers witnessed the ceremony. The latter included Mr. Kenneth H. Brown, Administrative Officer of the Microbiological Institute; Dr. F. J. Brady, Assistant Chief of the Laboratory of Tropical Diseases; Dr. G. Robert Coatney, Chief of that Laboratory's Section on Chemotherapy of Protozoal Diseases, where Mr. Rusten works as a Biological Aid; and Dr. Joseph Greenberg, Mr. Rusten's supervisor, who has consistently recognized his ability and encouraged his initiative.

Mr. Rusten has devised several pieces of equipment. The three

(See Lab Aid, Page 4)

Science Elsewhere

Control of Odors

Possibly the first book of its kind to be written, "Odors: Physiology and Control," is a systematic survey of how to deal with unpleasant odors.

The book is particularly concerned with the causes, detection, and removal, suppression, or neutralization of household and industrial odors.

Written by Carey P. McCord and William N. Witheridge, the book was published recently by McGraw-Hill Book Co., Inc.

Feeding Human Lice

Human body lice may now feed via a membrane of chick skin.

A new method for the artificial feeding of lice (described in Public Health Reports, October 14 issue) uses chick skin stretched across a small cylinder that is placed in a beaker containing the desired meal for the lice.

Some advantages of this technique are: (1) lice feed quickly after being placed on the membrane; (2) rapid feeding insures ingestion of virulent organisms mixed in the meal; (3) infected insects can be subjected to immunological and nutritional studies.

Reported by Drs. H. S. Fuller, E. S. Murray, and J. C. Snyder of Harvard University School of Public Health, this work was supported by a grant from the National Institutes of Health.

METHOD IS DEVELOPED FOR CELL MEASUREMENT

A method for obtaining reasonably accurate estimates of the volume-surface ratio of morphological components such as cells or nuclei was presented by Dr. Harold W. Chalkley, Mr. Jerome Cornfield, and Miss Helen D. Park of the National Cancer Institute in the September 23 issue of Science.

In the opinion of the authors, the method should enable cytologists to analyze, accurately and rapidly, quantitative morphological characteristics of cells and tissues.

NO. 12 IN A SERIES

Studies in the Chemotherapy of Cancer

In the search for chemical agents that might exert a selective and controlling action on cancerous tissue, data are being collected in the laboratories of the Chemotherapy Section, headed by Dr. M. J. Shear, in the National Cancer Institute.

In seeking such agents, ideas for desirable chemical substances are evolved from the accumulated knowledge afforded by biochemistry and organic chemistry and from information concerning agents which affect cell division or which act as rodenticides, fungicides, amebicides, insecticides, etc.

To date, about 1300 compounds have been surveyed for tumor-damaging capacity. This property has been observed in about 60 compounds. All of these agents have been acquired or synthesized by the Organic Chemistry Unit -- Drs. Hartwell, Johnson, and Vivian.

The compounds selected are first screened for their destructive effects on transplanted tumors. The exploratory test is initially performed in mice bearing tumors and is completed in 48 hours. It consists of a single injection under the skin at a distance from the tumor.

The next step -- the second screening -- is the study of the severity of the toxic effects noted in the normal tissues of experimental animals to ascertain whether the undesirable effects would militate against further experimentation with these compounds.

A small group of tumor-damaging compounds derived from podophyllin -- a resin secured from the roots of the mandrake or May apple -- is one of the groups that have been singled out for study. Intensive investigation of three components of podophyllo-toxin, alpha-peltatin, and beta-peltatin -- was undertaken by Dr. Leiter, Downing, Greenspan, Kelly, and Waravdekar, with the purpose of determining their suitability for study in patients with incurable cancer.

Dr. MacCardle and Mr. Wodinsky are pursuing studies to determine the effects of these selected chemical agents on intracellular structures (such as the mitochondria and Golgi apparatus) and the distribution of certain inorganic constituents in treated normal and malignant cells. These experiments are designed to indicate morphologically the cellular site of action of the necrotizing compounds.

Mr. Perrault has succeeded in preparing large quantities of a tumor-necrotizing polysaccharide from *Serratia marcescens*, a commonly found chromogenic bacterium. Studies of Dr. Belkin and Mrs. Fitzgerald with this polysaccharide are concerned with its antigenic properties and with means of combatting or obviating these properties.

In collaboration with the Laboratory of Tropical Diseases in the Microbiological Institute, Dr. Belkin could find no evidence that KR (*Trypanosoma cruzi* endotoxin) produced any damaging effect on mouse sarcoma 37, the test tumor used. It had been maintained for some time by investigators in Soviet Russia that KR was active not only against experimental tumors but also clinically.

Aromatic arsenical compounds, previously found to possess tumor-damaging ability by the Section's screening procedure, are being investigated by Dr. Beck with regard to their lethality and tumor-damaging potency; and efforts are being made to devise procedures that will permit the safe use of large doses that up to now have been too toxic.

The purpose of the broad and systematic screening of many hundreds of chemicals compounds is to develop new leads for further research in the drug control of cancer. These leads are the result of the integrated effort of the entire staff, each member of which, within the sphere of his training and experience, has directed a large share of his time and effort toward the common problem.

**DENTISTS IN EUROPE
HONOR DR. McCLURE**

Dr. Frank J. McClure of the National Institute of Dental Research has been made an honorary member of the American Dental Society of Europe.

Regular membership in the Society, which was founded in 1873, is restricted to American dentists in Europe and European dentists who have had some training in this country.

Dr. McClure delivered a lecture before the Society in London in July 1948.

**DR. GREENSTEIN REPORTS
NEW AMINO ACID PROCESS**

A simple low-cost method for the mass-scale production of essential food substances called amino acids, in a form that can be utilized by the body without passing through the mouth and digestive tract, was described by Dr. Jesse P. Greenstein, head of the Biochemistry Section in the Research Branch of the National Cancer Institute, at the recent annual meeting of the American Chemical Society in Atlantic City.

Achievement of the new process was made possible by a biochemistry team, headed by Dr. Greenstein, that included Drs. Vincent E. Price, Paul J. Fodor, James B. Gilbert, Alton Meister, and Carl Baker.

In many diseases, such as cancer of the stomach or intestines, patients starve to death because normal intake of food is prevented by an obstruction or malfunctioning of the digestive tract. The new process will make available all the essential amino acids, which can safely be "fed" to patients by direct injection into the blood stream.

None of the essential amino acids, the components or building blocks of all protein foods, has previously been obtainable in safe form and in quantities sufficient for hospital and sickroom use.

During road construction, drive extra carefully when entering or leaving NIH grounds.

Calendar of Events

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<u>Date</u>	<u>Meeting</u>	<u>Time</u>	<u>Place</u>
Nov. 1	"The Incorporation of Purines into Nucleosides and Nucleic Acids." Dr. Herman M. Kalckar of University of Copenhagen.*	3:00 p.m.	Wilson Hall
Nov. 4	NCI Staff Seminar -- Dr. Lloyd Law, chairman. ⁽¹⁾ "Response of Strain db2 Mice to Methylcholanthrene." Dr. H. B. Anderson. ⁽²⁾ "Morphology of Mammary Tumors Without the Milk Factor Induced in dba Mice with Methylcholanthrene." Dr. Thelma B. Dunn.*	3:30 p.m.	Top Cottage
Nov. 4	National Advisory Dental Research Council.	10:00 a.m.	101 Admin. Bldg.
Nov. 10	NCI Staff Lecture -- Dr. H. I. Firminger, chairman. "Studies of Living Cells with the Ultraviolet Microscope." Dr. Robert Mellors of Sloan-Kettering Institute.*	3:30 p.m.	Wilson Hall
Nov. 18	"The Relation of Bacteriology to Dental Research and Practice." Dr. J. Howard Brown of Johns Hopkins University.*	2:00 p.m.	202, Bldg. 122, Naval Medical Center

*Open Meeting

**WE EXHIBIT OUR TESTS AT
SCIENTIFIC ASSEMBLY**

A joint exhibit by the National Institutes of Health and the Communicable Disease Center, depicting current methods of diagnosis for virus and rickettsial diseases, attracted considerable attention at the 20th Annual Scientific Assembly, sponsored by the D. C. Medical Society, October 17-19 at Hotel Statler.

The exhibit was aimed specifically at the practicing physician and gave a good idea of the scope and availability of diagnostic tests performed by NIH and CDC.

An attendant passed out copies of a manual of instruction to guide physicians in the collection, preparation, and shipment of specimens. Besides instructions, the manual gives reasons for taking precautions and describes the most important technics used in this work.

**DR. KALCKAR OF DENMARK
SPEAKS HERE NOV. 1**

Dr. Herman M. Kalckar, research professor at the University of Copenhagen, will conduct a Seminar on Enzyme Research, under the auspices of the Experimental Biology and Medicine Institute, at 3:00 p.m., November 1, in Wilson Hall.

An outstanding biochemist, Dr. Kalckar is particularly known for his research in purine metabolism and phosphorylation.

The exhibit was prepared by the Medical Arts Section of the Scientific Reports Branch in cooperation with Dr. Karl Habel, Chief of the Laboratory of Infectious Diseases, Microbiological Institute. It was designed by Miss Inez Demonet, head of the Section, and executed by Mr. Robert Baker, Mrs. Shirley D. Krogmann, and Mrs. June Isaminger Olson.

GLEE CLUB GETTING QUITE PROFESSIONAL

Our Glee Club is getting quite professional under the guidance of its new director, Miss Esther Linkins.

The piano accompaniment of Mrs. Sue Blandy (a friend of Mrs. Helen F. Matthews of the Scientific Reports Branch) has also proved helpful.

The Glee Club meets every Thursday evening at 8 o'clock in Wilson Hall.

If you want to join in time to take part in the Club's Christmas programs, you'd better do it now. Call Mrs. Amy L. Nifong on EXT. 517.

CREDIT UNION ASSETS NOW TOTAL \$93,835.33

Credit Union assets of \$93,835.33 were disclosed recently by Mrs. Amy L. Nifong, Assistant Treasurer.

For information on joining the Credit Union, call Mrs. Nifong on Ext. 517 or Capt. Laurence M. Johnson on Ext. 417.

POSITIONS NOW OPEN

For information on the following positions, call the Personnel Office, Ext. 445 or 536.

*Information & Educational Specialist	CAF-11
*Laborer	CPC-2
*Biological Aid	SP-2
*Biological Aid	SP-3
*Biological Aid	SP-5
*Bacteriologist	P-1
*Biologist	P-1
*Chemist (Biochemistry; Baltimore, Md.)	P-1
*Chemist	P-1

*Civil Service Status Necessary

LAB AID cont'd.

which won him his award are: (1) an operating block particularly suitable for holding laboratory animals, (2) a rocker that agitates media in an incubator, and (3) an inoculating block that facilitates intravenous inoculation of chickens.

Mr. Rusten lives at 2685 Wade Road, S. E., Washington, D. C.

COURSES AT EDGEWOOD

Indoctrination courses designed especially for physicians, in chemical warfare, radiological defence, and associated subjects will be given by the Chemical Corps School at Edgewood, Maryland, between January and July 1950.

The schedule of courses follows: January 9 to 27, January 30 to February 17, March 6 to 24, April 3 to 21, May 1 to 19, June 5 to 23, and July 10 to 28.

Nominations should be made about six weeks in advance and routed to the Division of Commissioned Officers through Personnel Officer W. R. Schroeder, 113 Bldg. 1.

COURSE FOR MEDICAL RECORD LIBRARIANS

A training course for Medical Record Librarians will be given early next year, at the Baltimore Marine Hospital.

Medical Record Librarians have a variety of duties associated with patients' medical records, including the final processing and review of completed records, indexing, and abstracting of clinical record data.

For detailed information, call Mrs. Helen B. McGuire early this week, at Ex. 6300, Ext. 2861.

DR. LARSON cont'd.

Dr. Larson came to the National Institutes of Health 10 years ago and has served since February 1948 as Assistant Chief of the Laboratory of Infectious Diseases, Microbiological Institute.

He will be returning to his native state, and to the laboratory where he first did research work, when he assumes his new duties at Hamilton, Montana, on January 1, 1950.

Dr. Larson has been interested in the diseases of animals that are transmittable to man, especially leptospirosis, tularemia, and brucellosis. Recently he has been studying the effect of soluble antigens in the production of immunity and in the role played by so-called Freund's adjuvant in increasing the effectiveness of such antigens employed as vaccines.

"HAMSTERS" SEEK LOUD TALKERS AND MINK COAT

Our "Hamsters" are beginning to get somewhere with their famous play, "Life at NIH" -- otherwise known as "In Vitro Veritas" and "Are We Men Or Are We Experimental Animals?"

During the past week they have put the antepenultimate touches to their scripts; and during the last few days they have held tryouts for cast in Wilson Hall after work.

The Hamsters say they will need a few more people who can talk good and loud.

They also need "props" -- including one rather old mink coat and six scarcer items, for further information on which please call Mr. Charles R. Barley on Ext. 582.

MR. ROMAN WILL GIVE COURSE IN PURCHASING

Mr. Sidney E. Roman, our Purchase and Supply Officer, will conduct a training course in purchasing at T-6 beginning November 1.

The course will run for six months and will require two hours each week.

Candidates for the course will be recommended by the administrative officers of the various institutes.

For more information call Mr. Roman on Ext. 561.

Selected Reading

Recent additions to the Library:

- Goldman, Henry M.
Periodontia. 2d ed. St. Louis, Mosby, 1949.
- Lee, Royal
Protomorphology; the principles of cell auto-regulation. 1st ed. Milwaukee, Lee Foundation for Nutritional Research, 1947.
- Nachod, Frederick C. ed.
Ion exchange: theory and application. N. Y., Academic Press, 1949.
- Rosebury, Theodor.
Peace or pestilence; biological warfare and how to avoid it. N. Y., Whittlesey House, 1949.