the NIH Record

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

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PUBLIC HEALTH SERVICE
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Cancer Meeting On Chemotherapy Begins Nov. 2

The Second Conference on Experimental Clinical Cancer Chemotherapy will be held on November 2 and 3 at the Statler-Hilton Hotel in Washington. The conference is sponsored by the National Cancer Institute's Cancer Chemotherapy National Service Center.

This meeting, like its predecessor in November 1959, will bring together most of the Nation's leaders in the cancer chemotherapy field.

80 Subjects Included

The program will include some 80 presentations on subjects ranging from synthesis and testing of new agents to evaluation of large-scale studies of the chemotherapy of all types of malignancy.

On Thursday, November 2, there will be a general session covering the broad chemotherapy field. Clinical predictability of laboratory testing will be discussed and re-

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New Electronic System At NLM to Accelerate Storage and Retrieval

PHS Surgeon General Terry recently announced that a contract has been signed with the General Electric Company for development of an electronic information storage and retrieval system at the National Library of Medicine. The new Library is located on the southeast corner of the NIH reservation and will be ready for occupancy late this year.

The new computer-based system, to be known as MEDLARS (Medical Literature Analysis and Retrieval System), will enable the National Library of Medicine to broaden and accelerate its services to medical education, research, and practice.

The Library, which this year observes its 125th anniversary, is re-

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Research Equipment Exhibit Opens With 134 Displays

An extensive and intriguing array of the latest research instrumentation and other scientific apparatus, numbering 134 exhibits, went on display here today with the opening of the Eleventh Annual Research Equipment Exhibit.

NIH secretaries who are serving as hostesses for the Research Equipment Exhibit, opening here today, examine a high-speed electronic shutter for ultraviolet television microscopy.—Photo by Bob Pumphrey.

The equipment is displayed in Building 22 and trailers lined up on the adjacent parking lot to accommodate the overflow.

Sponsored by the Nation's leading manufacturers of laboratory and clinical research tools, the exhibit program is featuring a series of special instrumentation clinics. These consist of demonstrations of their newest products by six of the exhibiting firms.

Developments Discussed

Running concurrently with the exhibit is the Symposium on Recent Developments in Research Methods and Instrumentation, which began last night in the Clinical Center Auditorium.

The symposium is held under the auspices of local chapters of national scientific societies.

The 4-day scientific meeting opened with a session on "Applied Gas Chromatography," presided over by Dr. Alton Meister, Chairman of the Department of Biochemistry, Tufts University School of Medicine.

Among the topics discussed were

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NIH Growth Reflects Interest in Research

By John Buckley
DHEW Management Trainee

Reflecting the Federal Government's growing support of medical research, the number of NIH full-time employees has increased during the past decade from 2,361 to 8,783.

These and a wealth of NIH employe statistics covering the past 10 fiscal years are contained in the NIH Quarterly Employment Report recently issued by the Personnel Management Branch, OAM.

Analysis of the statistical tables contained in the report reveals that the rate of NIH employee growth was greatest during the first seven years of the 1951-61 decade.

During that period the yearly rate of employee increase varied from 11 percent to a high of 27 percent. Not until 1959, when the total number of employees exceeded 7,000, did the yearly rate of

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UGF Fund Drive Opens; NIH Goal Set at $82,750

The 1961 United Givers Fund campaign was launched here October 2 with announcement of the NIH quota of $82,750 and appointment of the 26 staff members who will head the drive within the Institutes and Divisions.

Chris A. Hansen, Chief of the Division of Research Services, is this year's NIH Campaign Chairman, and Dr. G. Halsey Hunt, Chief of the Division of General Medical Sciences, is Vice Chairman.

Predicts Success

The quota for the National Capital Area is $7.8 million, of which the Federal Government agencies are being asked to contribute $3.4 million.

Mr. Hansen said he is confident that NIH will reach or exceed this year's quota, despite the fact that it is $3,445 above last year's goal.

"In this respect," he said, "we at NIH are fortunate. Not only has the number of individuals in our organization increased, but each member of the staff is personally concerned in his day-to-day work with promoting the welfare of his fellow man.

"As a result," he said, "we are

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CC Cafeteria Inaugurates New Deal With More Services, Food Selection

Beginning tomorrow (Wednesday) morning, the Clinical Center cafeteria will inaugurate a new deal, providing increased services, greater food selection, and "prices that will compare favorably with others at NIH."

In making the announcement, Edith Jones, Chief of the Clinical Center's Nutrition Department, said, "Everybody connected with the cafeteria is happy and excited about it, and we know that everybody at NIH will welcome the new plan."

"We expect," she added, "that business will be booming."

"These changes," Miss Jones said, "will go into effect October 11, when the cafeteria opens for breakfast at 7:30 a.m. We will serve eggs cooked to order, bacon, hash-browned potatoes, toast, rolls, fruit, cold cereals, coffee and milk.

"There will be one line and one cashier during this breakfast period which lasts until 8:30. After 8:30 we will have two cashiers on duty and will serve coffee, rolls, fruits and cold cereals until 11 a.m., when the lunch hour starts.

"And that," Miss Jones pointed out, "is when there is going to be a big change. We'll have one general line and two cashiers until

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'PERSONNEL' TO PERSON

WITH only six days (through October 16) remaining of the so-called "open season" on Health Benefit Plans, during which employees may enroll or make changes in enrollment without interruption of coverage, the Employee Relations and Services Section, PMB, offers the following list of suggestions:

1. **Read the brochures:**
   - all the way through.
   - ask about any statements you think important but do not understand.
2. **Consider your present and probable future health care needs:**
   - young and growing family?
   - nearing retirement?
   - frequent travel or moves?
   - planning to leave this area?
   - any special, known health problems?
3. **Consider each Plan's provisions for:**
   - hospital room and board—how much; what limits; what provisions for more?
   - doctors' services—what kinds; by whom; at what rates?
   - maternity care—what hospital benefits; what doctors' care?
   - other services and supplies—what is included and excluded, and to what extent, and under what conditions?
4. **Think about the importance YOU attach to such features as:**
   - choice of doctors.
   - preventive care.
   - locations at which care is provided.
   - direct payment by the plan to doctor or hospital.
   - coverage of expenses from the beginning of an illness.
   - away-from-home and emergency services.
   - benefits for specific conditions requiring long-term or other expensive care or treatment.
5. **Consider the costs**—in the light of your conclusions about:
   - Nos. 1, 2, 3, and 4, above, and what you can afford.

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FUND DRIVE

(Continued from Page 1)

in a unique position which enables us to realize more fully the need to support important community services that depend in large measure on the United Givers Fund."

Daily progress reports from the Institutes and Divisions are being displayed this year on two billboards representing apothecary balances. One is located on the island at Center and South Drives near Building 1, and the other on Center Drive near the Georgetown Road entrance to the NIH reservation.

A report on the overall progress of the drive will be made at an NIH-wide rally to be held in the Clinical Center auditorium next Tuesday, at 10:30 a.m. Featured at the rally will be the popular Muppets of TV fame, Sam and Kermit, and their creators, Jim and Jane Henson.

The Institute and Division chairmen are Richard L. Seggel, OD; Reynold R. Holliday, DRS; Dr. Roderick Murray, DBS; Dr. Joseph Gerber, DGMS; Dr. Dale R. Lindsay, DRG; Dr. Samuel M. Fox, NHI; Dr. Justin M. Andrews, NIAID; Dr. Francis A. Arnold, Jr., NIDR; Dr. Jonathan L. Cole, NIMH; Dr. Murray Goldstein, NINDB; Dr. Carl G. Baker, NCI; Dr. G. Donald Whedon, NIAMD; and Dr. Clifton K. Himmelsbach, CC.

The vice chairmen are Howard E. Kettl, OD; Elwyn L. Meenen, DRS; Dr. John C. Wagner, DBS; Daniel Bailey, DGMS; Harold W. Curran, DRG; Evelyn Trowbridge, NHI; John E. Fitzgerald, NIDR; Dr. Jeanne Brand, NIMH; Daniel M. McMonagle, NIAID; Jeni Arliss, NINDB; Kenneth H. Fleiger, NCI; Clair E. Lacey, NIAMD; and Milton W. Skolaut, CC.

This year nearly 150 health and welfare agencies in the National Capital area are supported wholly or in part by the United Givers Fund. Services provided by these agencies include such basic programs as care for homeless and neglected children, counseling on personal and family problems, hospital care, legal help, rehabilitation of the physically handicapped, and care for the aged.

Other UGF agencies work on the prevention, as well as the cure, of physical, mental, and social ills.

President Urges Equal Opportunity for Employment of Physically Handicapped

In designating October 1-7 as National Employ the Physically Handicapped Week, President Kennedy called upon the people of this Nation to further the equality of opportunity for employment of the handicapped.

The U.S. Public Health Service estimates that one in every 10 Americans has an impairment which limits his normal activities. Each year approximately 270,000 Americans become disabled to an extent which requires special job placement. This figure must be added to the backlog of 2,150,000 handicapped persons who need training and job opportunities.

From 1942 to 1961, the Federal Government hired nearly 180,000 handicapped persons. These employees have been placed in positions of responsibility and trust, and their performance records indicate that they do their jobs as well as or better than able-bodied workers performing similar tasks.

The Recruitment and Placement Section, PMB, reports that NIH has made a significant contribution to the employment of the physically handicapped. During the past three years, 48 handicapped persons have been employed at NIH. These people serve in non-technical, technical, professional, and administrative areas.

"Even though NIH has a fine record in hiring handicapped persons, there remains a lot that we can do," says C. M. Hull, NIH representative to the Departmental Committee for Placement of the Physically Handicapped.

Urges Fair Appraisal

"When new positions are created or vacancies occur, a determination should be made as to the possibilities for placing handicapped persons in these openings. Supervisory personnel should make a fair appraisal of the pertinent qualifications of physically handicapped applicants and employees.

"No one," he said, "should be denied the opportunity for employment because of a physical handicap which does not keep him or her from performing the job satisfactorily. For these reasons, NIH must assume a greater share of its responsibilities in the vocational placement of handicapped people."

For further information contact Mr. Hull, Ext. 2403, or Dr. John M. Lynch, Chief, Employee Health Service, Ext. 4411.

Members of the NIH Planning Committee for the 1961 UGF campaign select material to be used in publicizing the drive. From left: Roy Perry, DRS, publicity chairman; Dr. G. Halsey Hunt, Chief of DGMS, and campaign vice chairman; Robert H. Handy, DRS, coordinator of the drive; George Marsden, DRS, art director; and Chris A. Hansen, Chief of DRS and campaign chairman. Other members of the committee, not shown, are Hazel W. Rea, NIMH, and Francis J. Olsen, CC.—Photo by Bob Pumphrey.

Surprise Drills Mark Fire Prevention Week; TV, Movies Scheduled

National Fire Prevention Week, which began last Sunday and will continue through Saturday, is being observed at NIH with daily movies, TV shows, and unannounced fire drills.

According to Fire Marshal Kenneth W. Gettings of the Protection and Investigation Section, Plant Safety Branch, surprise drills will be held this week in the Clinical Center and several unspecified buildings, both on and off the reservation. The NIH Fire Department will participate in all practice alarms on the reservation.

Film on TV

A taped show on fire prevention, Use of Fire Extinguishers and How to Extinguish Fires, is being televised through Friday morning from 11:30 to 12:30 in the CC first-floor auditorium. The film is broadcast via the Walter Reed Army Medical Center's closed circuit TV. It can be picked up on Channel 2 on television sets in the CC patients' areas.

In addition the movie, Stop Fires and Save Your Job, is being shown at the same hours daily in the shop areas of Buildings 11 and 13, and in Building T-6.

CHEMOTHERAPY

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ports made on developmental studies of alkylating agents, purine antagonists, and endocrines. These three types of anticancer agent have thus far shown the most clinical promise.

That afternoon groups of papers on drug administration, patient selection, and small-scale clinical trials will be presented. Special data will be given on testosterone propionate, 5-fluorouracil, and the cooperative university and Veterans Administration studies of surgical adjuvant chemotherapy.

Friday, November 3, four simultaneous panels will cover: the hematologic malignancies; endocrine influenced tumors; perfusion, infusion, and related studies; and the solid tumors. A "capsule" discussion headed by Dr. Howard Skipper, Southern Research Institute, Birmingham, Ala.; Dr. Joseph Burchenal, Memorial Sloan-Kettering Cancer Center, New York, N.Y.; Dr. Albert Segaloff, Alton Ochsner Medical Foundation, New Orleans, La.; and Dr. Lyndon Lee, Veterans Administration, Washington, D.C., will summarize the highlights of the Conference. Concluding remarks will be delivered by Dr. Sidney Farber, Scientific Director of the Children's Cancer Research Foundation and Chairman of the Cancer Chemotherapy National Committee.

Small Unit Is Big Performer In Fire Prevention at NIH

By Mary-Helen Emmons

A small, unpretentious structure, in a fence-enclosed area at the corner of South and Center Drives, is a focal point for the elimination of one of the greatest fire potentials on the NIH reservation—the accumulation of flammable chemical waste.

This small structure which performs such a big function is the Chemical Waste Disposal Plant, an important unit of the NIH Fire Department.

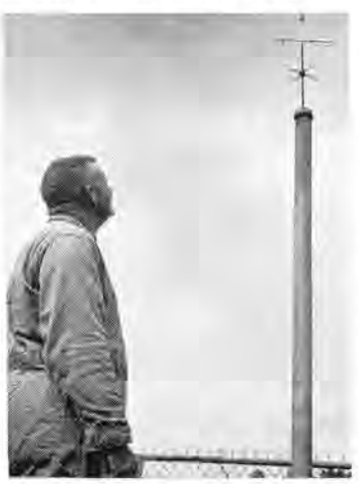
At this plant—the only one of its kind in the United States, according to Fire Chief Norman C. Anders—members of the Fire Department daily destroy the many hundreds of kinds of flammable waste solvents, organic materials, acids, poisonous compounds, and compressed gases that comprise a major threat to physical safety in NIH laboratories.

Procedure Is Hazardous

The destruction of these wastes is a hazardous procedure from the time they are collected from the various laboratories until they are rendered harmless at the plant. Each category of waste requires a different method of handling, and many that are non-combustible in their natural states react violently when exposed to incompatible compounds.

Chemical waste for disposal is transported by members of the Fire Department from NIH laboratories to the plant in a specially equipped two-part, steel-plated truck. The roof of the truck is designed to slide open so that if an unstable chemical should explode in transit, the impact would be diverted upward without damage to the truck or the occupants of the cab.

Whenever such unstable material is transported, the truck's dome light is flashing, and in some cases the siren is used as a warning to the drivers of other vehicles.



Mr. Mullican checks the wind direction before destroying waste chemicals.

W. Ray Mullican, a Fire Inspector with the Service Unit of the NIH Fire Department (left), pours waste acid into the acid sink at the Chemical Waste Disposal Plant. William F. Coleman, a Service Unit Firefighter, stands by in case of accident.—Photo by Jerry Hecht.

Chemicals are destroyed in accordance with accepted disposal procedures. Acids are poured into a specially constructed acid sink from which they drain through a 35-foot glass pipe to a neutralizing tank. They are treated with lime until completely neutralized under pH control, then committed to the sanitary sewer.

Other chemicals, and especially those of unknown composition, are fed in unopened bottles or cans, through a drop-slot in an 18 inch concrete wall, into a "bottle crusher."

Operated Hydraulically

This is a unique mechanism consisting of a steel angle-iron ram, five feet high and two feet square, operated hydraulically. As bottles are crushed by this ram they are sprayed with water to dilute the chemicals and minimize fumes.

Solvents and known hazardous solids are burned in a special pit, and flames are discharged into a combustion chamber designed to reduce smoke and disagreeable odors.

One of the most important features of the disposal plant is an everyday weather vane. Because of noxious odors the hour of waste disposal is determined at all times by the direction of the wind. If the wind is blowing toward occupied buildings, disposal is delayed until it shifts to another direction.

All of the firefighters on the reservation have been thoroughly trained in the handling of waste chemicals and every precaution is taken for their safety.

From the time the wastes are collected from the laboratories until destruction is completed, the men work in teams of two. When engaged in actual destruction, they wear protective clothing consisting of coveralls, heavy rubber aprons, boots, rubber gloves, and face shields. They are also equipped with oxygen tanks to avoid the danger of breathing contaminated air.

So far this year the Fire Department has destroyed 10 tons of solid chemical waste and 4,000 gallons of liquid waste. This is almost as much as all the waste destroyed during 1960.

Chief Anders says that he is highly gratified with the success of the disposal operation. He particularly emphasizes the value of fire-preventive measures such as this one, because of the violent and unpredictable nature of many chemicals and the intensive physical and property damage that could result from improper handling.

$14.5 Million in Grants Awarded Health Facilities

PHS Surgeon General Terry recently announced the award of 48 grants, totaling $14,575,628, to help build and equip additional health research facilities in 40 institutions in 23 States.

Administered by the Division of Research Grants, the Health Research Facilities construction program is designed to expand and improve the Nation's facilities for medical research.

Grants are made to both public and private nonprofit hospitals, medical and dental schools, schools of public health and other research institutions and are awarded on a matching basis.

Congress Extends Program

Approval of the awards by the Surgeon General upon the recommendation of the National Advisory Council on Health Research Facilities initiates the sixth phase of the $180 million program, established in 1956 and extended by the 85th Congress in 1958.

"The grants," Dr. Terry said, "include awards for new construction and funds needed for renovations and remodeling of antiquated and inadequate facilities, as well as essential research equipment for previously awarded construction projects now nearing completion."

Including the recently announced grants, 832 awards totaling $164,423,772 have been made to eligible institutions since the inception of the Health Research Facilities program.

'Double Jeopardy' Seen in Allergies From Parasites

The "double jeopardy" to man of parasitic infections which also cause serious allergy problems demands parasitologists whose knowledge and training in immunology equals their competence in parasitology, Dr. Justin M. Andrews, Director of the National Institute of Allergy and Infectious Diseases declared recently.

He characterized hypersensitivity stemming from an invasion of parasites as "a supremely cruel jest of nature."

Dr. Andrews presented these views in his Presidential Address to the 36th annual meeting of the American Society of Parasitologists at Purdue University.

Possibilities Indicated

He indicated some of the possibilities, as well as realities, of allergic illness and disability due to a hypersensitivity to worm parasites.

Dr. Andrews pointed out that the "grotesque pathology" of elephantiasis, a potential complication of filariasis, is due to lymphatic obstruction which is believed to be caused or augmented by sensitivity to filarial or microfilarial proteins.

He cited hypersensitivity to *Ascaris*, a worm which parasitizes many animals, because of the special occupational risk it holds for physicians, nurses, allied laboratory workers, and persons engaged in the slaughter and meat-processing industry who have been sensitized by the parasite.

Knowledge Scanty

"Little is known about the actual incidence of allergic morbidity and mortality due to hypersensitivity to helminth (worm) parasites," Dr. Andrews said, "but certainly some of these possibilities are of more than academic interest."

Dr. Andrews outlined the history and medical literature of the two disciplines of parasitology and immunology and explained procedural devises for indicating the existence of allergic states in parasitic diseases.

One such device consists of demonstrating the passive transference of skin-sensitizing antibodies generated by specific parasite antigens. The technique has been employed for this purpose to a limited extent by parasitologists, Dr. Andrews said, but merits wider application.

Dr. Andrews said that the subject of his address had originated in the desire to "stimulate members of our Society to more and better adjunctive research in the hypersensitivity aspects of our own discipline."

He added that he was encouraged by finding "both in original research reports and in our parasitological texts . . . unmistakable evidence of keen interest and able competence in immunology on the part of our parasitologists."

Study Suggests Enzyme May Control Staphylococcus Resistance to Penicillin

Continuing basic biochemical studies on the mechanism of action of new synthetic penicillins were reported by Dr. Harry G. Steinman, Laboratory of Clinical Investigation, National Institute of Allergy and Infectious Diseases, at the Fifth International Biochemical Congress held in Moscow.

Dr. Steinman indicated that the close association between the resistance to benzylpenicillin (Penicillin G) displayed by certain naturally occurring strains of the staphyloccus (a grave problem in the treatment of some staphylococcal infections has been created by the resistance of these strains to penicillin) and their production of the enzyme penicillinase suggests a fundamental cause-and-effect relationship.

Role Uncertain

Dr. Steinman said that there is some uncertainty as to the exact role of penicillinase since previous investigations have shown that there also exists in staphylococci an entirely different mechanism of resistance which is not based on penicillinase.

Since the problem of resistant staphylococci and its clinical management is vitally important, understanding of this basic mechanism of resistance may have important practical application.

Furnishes Evidence

By the use of graded series of inocula of strains of staphylococci containing different basal amounts of enzyme, Dr. Steinman obtained results which furnish evidence that the degree of resistance of a given concentration of staphylococci was a function of the natural basal content of the enzyme.

The quantitative effects of the enzyme were reflected not only in the tremendous divergences in minimal inhibitory concentrations for small and for large inocula, but also in the difference in minimal inhibitory concentrations for equally large numbers of two strains of staphylococci with different capacities to produce enzyme.

The role of penicillinase in penicillin-resistance was further examined by the use of modified penicillins which were poor substrates for the enzyme. It was found that for several penicillins which were refractory to the destructive action of the enzyme, the difference in minimal inhibitory concentrations against a penicillinase-producing strain and against a non-penicillinase-producing strain of *S. aureus* was only about 2-fold, even for large inocula. This was in sharp contrast to differences of greater than 1,000-fold obtained with penicillins having the same degree of reactivity with the enzyme as benzylpenicillin.

Compares Concentrations

Dr. Steinman compared the relative minimal inhibiting concentrations against penicillinase-producing and non-penicillinase-producing staphylococci with a number of penicillins having differing reactivities with penicillinase.

He concluded that a minimum of a 100-fold difference in reactivity with penicillinase, relative to benzylpenicillin, is required to enable a penicillin to be equally effective against large and small inocula of a penicillinase-producing and non-penicillinase-producing staphylococci. This criterion may be useful in predicting the potential value of new penicillins on the therapy of staphylococcal infections.

Response Is Similar

Under conditions where penicillinase is rendered ineffective, it is evident from the near-equivalence in minimal inhibitory concentrations of penicillins refractory to the action of penicillinase, that both penicillinase-producing and non-penicillinase-producing organisms are intrinsically similar in their response to the antibiotic action of penicillin.

By way of contrast to the penicillin mechanism is the type of resistance displayed by mutants of *S. aureus* which can readily be selected for resistance to penicillin in the laboratory by exposure to increasing concentrations of the antibiotic. Resistance developed as readily to 2,6-dimethoxyphenlpenicillin (Staphcillin) as to benzyl-penicillin.

However, the resistance of such selected mutants cannot be based on penicillinase since non-penicillinase-producing organisms never acquired the capacity to produce the enzyme even though a very high degree of resistance was achieved.

This resistance mechanism appears to be superimposable upon the penicillinase mechanism since the change in penicillinase content of penicillinase-producing organisms (which increased through induced enzyme formation) did not parallel the increase in resistance. This type of resistance does not appear to be of clinical importance, since earlier studies have shown such resistant mutants to be less virulent, as well as culturally different, than the parent pathogenic strains.

NCI Scientists 'Isolate' Tumors, Will Study Growth Requirements

Scientists of the Public Health Service's National Cancer Institute have developed a technique for growing "isolated" tumors in laboratory animals. The tumors are isolated from surrounding organs and connected with the host animal by only a single artery and vein, from which blood can be drawn.

Use of this technique will permit more accurate study of tumor-host relationships and growth requirements of tumors than has hitherto been possible, according to Dr. Pietro M. Gullino and Flora H. Grantham, of the Institute's Laboratory of Biochemistry, who described their work in the current issue of the Journal of the National Cancer Institute.

The Institute scientists reported the use of the method in growing 12 different types of transplanted tumors. By relatively simple surgery, a kidney is isolated from the surrounding tissue and pulled out through the muscle layers into the subcutaneous space, leaving only a vascular connection with the host animal.

Grows in Paraffin Bag

A tumor is implanted in the kidney, which is enveloped in a bag of paraffin. The tumor grows in this bag and destroys the kidney; the kidney blood vessels remain as the only connection between the tumor and host. An ovary may be used instead of a kidney with equal success.

The procedure can be applied to all tumors normally grown in a solid form in rats, hamsters, and mice. Amounts of tumor obtained are very large; ovarian implants are as much as 400 times larger than the host ovary.

Samples of blood drawn at intervals from the connecting artery and vein can be analyzed quantitatively in studies of the exchange of fluids between tumor and host.

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sponsible for acquiring, indexing, storing and disseminating world literature relating to the medical sciences. It constitutes the largest collection of scientific medical literature in the world.

Commenting on the need for MEDLARS, Dr. Terry said: "The world of medical science today is producing enormous and constantly increasing quantities of published information. Organizing this information and disseminating it to scientists and physicians who need it is a monumental job. The nation's medical research program urgently needs the kind of service MEDLARS can provide."

Lists 125,000 Items

The basic publication of the National Library of Medicine is the Index Medicus, a monthly bibliography of world medical literature which during the past year listed some 125,000 items representing scientific publications of 77 different countries in 30 languages.

The Library also publishes special bibliographies and conducts an inter-library loan service which has disseminated as many as 11,000 separate articles, on request, during a single month.

Is Pioneering Venture

Dr. Frank B. Rogers, Director of the Library, pointed out that the MEDLARS system is a pioneering venture in relation to conventional library practices.

"There have been other efforts in the bibliographic field, with systems using electronic computers, but none approaching the size of this one," Dr. Rogers said. "MEDLARS will be designed to process several hundred thousand pieces of bibliographic information annually.

"Our present system, which is part-manual and part-mechanized, is designed to turn out a single product—the Index Medicus. In contrast, MEDLARS will give us the flexibility we need to meet other national requirements.

Speed, Efficiency Cited

"We will be able to produce by machine, quickly and efficiently, specialized bibliographies to meet specific requests. If someone asks us for a bibliography of publications on a single disease category, for example, MEDLARS will be able to sort out and reproduce a list chosen from over a million possible articles in a very short time."

It is estimated that the development, installation and testing of the MEDLARS project will take about two years. The new NLM building here will be adapted to incorporate the MEDLARS equipment.

New Flexibility of Lab Design Noted In Research Facilities Seminar Here

Pictured while participating here recently in the first of a proposed series of research facilities design seminars are several of the 14 PHS design engineers who attended. Left to right: Murray A. Getz and Robert A. Cohen, BMS; Wilbur Taylor and C. J. Arcilesi, BSS; a stenographic reporter; and RFPB Development Chief John A. Confrancesco, who arranged the meeting.—Photos by Sam Silverman.

Research laboratories are being designed with maximum flexibility to meet the needs of future research requirements.

This trend, which is reflected in planning for new facilities at NIH, at the Communicable Disease Center, and in Food and Drug Administration's new buildings, was noted during the Research Facilities Design Seminar held at NIH September 7-8, sponsored by the Research Facilities Planning Branch, Division of Research Services.

Hansen Opens Seminar

Attended by DRS representatives and by design engineers from the Bureau of Medical Services, Bureau of State Services, Food and Drug Administration, and the National Academy of Sciences, the seminar was opened by Chris A. Hansen, DRS Chief, and moderated by A. E. Williamson, Chief of the Research Facilities Planning Branch, and Donald L. Snow, Chief of the Laboratory Design Documentation Project.

It was the first meeting of such a group of design engineers to exchange information about the planning problems they share in common.

Robert M. Dillon and Robert W. Spangler, both members of the Building Research Advisory Board, represented the National Academy of Sciences, and the Food and Drug Administration was represented by William H. Allen.

Others present included Robert A. Cohen, Lewis D. Wilkinson, and Murray A. Getz, of the Bureau of Medical Services.

Also: Ross W. Buck, H. C. Vollrath, Henry Miller, August Hoenack, Wilbur Taylor, Philip P. Sayre, Richard Gaulin, Marvin Fleishman, Bruce M. Baird, E. K. Day, and C. J. Arcilesi, of the Bureau of State Services, and Lawrence F. Gaffney, John A. Cofrancesco, and Dewayne E. Durst, of NIH.

Mr. Cofrancesco, Acting Chief of the RFPB Development Section, was responsible for arranging the seminar.—J.T.T.

A. E. Williamson, RFPB Chief (right), one of the moderators of the seminar, confers with former Assistant Chief, C. J. Arcilesi, now on the Facilities Planning Staff of the Bureau of State Services.

Preparation of Cultures Is 'Big Business' Here

Over 23 million ml. of culture media were prepared by the Media and Glassware Section of the Laboratory Aids Branch, DRS, during the first six months of 1961.

These figures were revealed in a joint survey by LAB and the Financial Management Branch.

The study showed that 4,500 individual requests for over 400 different types of bacteriological and tissue culture media accounted for the vast quantity produced. NIAID was the largest consumer, with 5 million ml., while NIMH used only 12,000 ml.

As an indirect but related outgrowth of media preparation, the Glassware Preparation Unit of the Section washes and sterilizes over 5 million pieces of laboratory glassware annually for this and other research uses.

Negotiators Visit Poland to Discuss Joint Research

An eight-man team of negotiators, including four from NIH, were scheduled to arrive in Warsaw, Poland, October 8 to discuss proposed collaborative research projects with representatives of the Polish Ministry of Health and Polish scientists. The team planned to remain in Poland for 10 days.

The proposed studies would be supported by U.S.-owned Polish currencies and would be administered by the Office of International Research.

Members Listed

NIH members of the team are Dr. Richard L. Masland, Director of the National Institute of Neurological Diseases and Blindness; Joseph S. Murtaugh, Chief of the Office of Program Planning, Office of the Director; Dr. Igor Klatzo, Head of the Section on Clinical Neuropathology, NINDB; and Dr. Margaret Sloan, Special Assistant to the Director of the National Cancer Institute.

Other members of the team, all of the Public Health Service, are Scott Adams, Deputy Director of the National Library of Medicine; Ralph C. Graber, Assistant Chief, Division of Air Pollution; Dr. Richard L. Woodward, Chief of Water Supply, Sanitary Engineering Center, Cincinnati, Ohio; and Dr. James H. Steele, Veterinary Director, Communicable Disease Center, Atlanta, Ga.

Discussion Areas Named

Proposed areas of discussion include studies of the perinatal causes of central nervous system diseases, cerebrovascular diseases, encephalitis, the geographical distribution of cancer, brain lesions in dogs and monkeys, and animal brain function.

It is anticipated that the discussions will involve selection of Polish institutions and investigators representative of the several areas of mutual interest. After initial discussions the team plans to divide into groups for visits to these institutions.

Funds to be used to support the proposed collaborative studies are U.S.-owned foreign currencies resulting from the overseas sale of surplus U.S. agricultural commodities under Public Law 480.

The 1962 appropriations for NIH include $5,059,000 for research projects in Burma, India, Egypt, Pakistan, Yugoslavia, and Israel, as well as Poland.

NIHUGF'61

NIH Spotlight

Mr. Rusten in the Lab.
Photo by Ed Hubbard.

A three-month stint as an unskilled laborer while he waited for another job was all young George Rusten wanted when he came to NIH in 1941.

But the other job never opened, and George Rusten came to like NIH. Today he's still here, but not as a laborer.

Twenty years, many promotions, and a strong devotion to medical research have made him a research technician—a job normally held by college graduates.

Supervises Testing

He is now supervising attenuated polio virus testing in monkeys, in the Laboratory of Viral Immunology, Division of Biologics Standards.

"My first job at NIH was to clean out an office in Building 1," he said. "I did everything back then—cut grass, dug ditches, drove trucks—you name it, I did it!"

In 1942 George Rusten took a physical examination for permanent appointment as a laborer. The doctors found a slight heart murmur and told him he would have to do lighter work. Still classed as a laborer, he ran the elevator in Building 5 for a short time.

"I guess I was born with an interest in science," Mr. Rusten smiled. "When I was a kid I used to de-wing flies to see what made them work."

Gets First Lab Job

So, when an under-scientific-helper position opened the following year in a glassware washing room of the Laboratory of Tropical Diseases (of the former Microbiological Institute), George Rusten applied for and got the job. It was later reclassified as junior laboratory assistant.

In 1948, Dr. D. Jane Taylor, then a parasitologist in the Laboratory of Tropical Diseases (now of the National Cancer Institute), needed a lab technician in her malaria and amebiasis studies. She had observed George Rusten's capabilities, and offered him the chance.

"This was the turning point for me," Mr. Rusten said. "My work became more than just a job."

Dr. Taylor taught him surgical procedures and other skills necessary for laboratory work. He learned quickly. "Dr. Taylor was the first person to really give me training and responsibility," he said.

Wins Award

Mr. Rusten further justified Dr. Taylor's judgment the following year, when he won a superior accomplishment award for devising three pieces of equipment that simplified handling of animals in laboratory procedures.

In 1955, when the Division of Biologics Standards was established, Mr. Rusten became a research technician at DBS, supervising animal testing in the Laboratory of Viral Immunology.

Today he is busy supervising attenuated virus tests on as many as 100 rhesus monkeys at a time.

The monkey-testing program is not without its humorous side. Mr. Rusten admits that most lab workers, despite their better judgment, occasionally become attached to the little monkeys.

He remembers one female monkey who had been named "Stupid" by the lab workers. To prove the misnomer, Stupid escaped from her cage one night and, one by one, released all the other monkeys from their cages.

NHI Investigators Clarify Glucose Role In Maintenance of Stored Body Fats

The vital role of glucose in maintaining stored fat as well as the sequence of reactions by which adipose tissue converts foodstuffs to triglycerides—the major chemical form in which fats are stored in the body—has been determined by investigators at the National Heart Institute.

Investigation of the chemical processes involved in the conversion of foodstuffs to stored fat by adipose tissue was made by Dr. Daniel Steinberg, Head of the Section on Metabolism, Laboratory of Cellular Physiology and Metabolism, National Heart Institute, and his associates, Drs. Martha Vaughan and Simeon Margolis.

Their studies, which also revealed several ways in which hormones may influence the balance of fat deposition and fat mobilization, were reported to the Fifth International Congress on Biochemistry in Moscow, last month.

Only a part of the food eaten at any meal is burned immediately for energy. Much of it is converted into fats (triglycerides) and stored in adipose tissue which serves as the major storehouse of energy available to the body.

Fats are then released from adipose tissue either slowly, to supply energy needed between meals or during sleep, or quickly, to supply the large amounts of energy required in emergencies or during vigorous exercise.

Difference Revealed

The NHI investigators' work revealed one major difference between the process of conversion of foodstuffs to fat carried out by adipose tissue and that demonstrated in other body tissues. This difference is the role of glucose and has major implications with regard to the mechanisms that control fat deposition in the body.

When fats are broken down in the usual way, the products evolved are free glycerol and the component fatty acids from the parent molecule. Stored triglycerides are composed of three fatty acid molecules linked chemically to one glycerol molecule.

Before glycerol can be linked to the fatty acid molecules, it must be coupled with phosphate. The coupling is done by an enzyme present in most tissues but not in adipose tissue.

Since adipose tissue does store triglycerides and yet lacks the enzyme to perform the necessary glycerol-phosphate coupling action, the glycerol-phosphate complex must be supplied to it.

Glucose Necessary

Apparently the complex is derived from glucose which is brought to the adipose tissue in the blood stream, and a constant supply of glucose is necessary for adipose tissue to maintain its stored fat.

Work by Dr. Robert S. Gordon, another NHI investigator, has established that when a person is fasting and has very limited reserves of glucose available, fatty acids are mobilized from adipose tissue and used as sources of energy.

On the other hand, when plenty of glucose is available, such as just after eating, fatty acids are not mobilized.

The present work shows that the rate at which triglycerides are made is radically increased under the same circumstances that halt fat mobilization.

Insulin decreases fat mobilization from adipose tissue, presumably by its action in increasing glucose metabolism in the tissue. Epinephrine, on the other hand, greatly stimulates the release of fatty acids from the depots.

This action of epinephrine is shared to a varying degree by several other hormones. The effect is not produced by altering the availability of glucose, but may result from acceleration of the rate of breakdown of the triglycerides.

Studies done in collaboration with Dr. Philip R. Eaton, also of NHI, have shown that the rate at which muscle tissue burns fatty acids is controlled in an important way by the concentration of the fatty acids in the blood.

When strips of muscle taken from the limbs of rats were exposed to varying concentrations of free fatty acids, the rate at which the fatty acids were used increased in proportion to the concentrations.

Evidence Cited

Unless the body has as yet undiscovered mechanisms by which it can control and limit the rate at which these fatty acids are burned when present in high concentrations, a higher rate of metabolism appears to be associated with high levels of fatty acids in the blood.

The investigators pointed out that in two conditions associated with elevated metabolism—hyperthyroidism and overactivity of the adrenal medulla—there is an excessively rapid mobilization of fat and an elevated level of fatty acids in the blood.

They suggested that the high overall metabolic rate associated with these two conditions could be linked to the more rapid burning of fatty acids by muscle exposed to high concentrations of them in the blood. More work is needed to evaluate this hypothesis.

Small Car Spaces Ready For Use on Parking Lots

The Plant Safety Branch has announced that over 150 parking spaces for small cars are now ready for use on NIH parking lots. Previously only six small-car spaces were available here.

The Central Parking Lot (Lane 4) now has spaces for 42 small cars. Lots 29-B (Lane 1) and 30-B (Lane 3) have a total of 27 spaces; Lots 4-A (Lane 1) and 5-A (Lane 4), 37 spaces; Lot 21-B, 20 spaces along the fence; and Lot 10-F (Lane 2), 30 spaces, and more will be provided if needed.

New separating lines have been painted to decrease the 8-foot-wide spaces for large cars to 6½ feet for small cars. Six small-car spaces are approximately equal to five larger spaces.

EXHIBIT

(Continued from Page 1)

"Recent Advances in the Analysis of Lipids by Gas Chromatography," "Gas Chromatographic Separations of Steroids and Related Compounds," and "Application of Gas Chromatography to Amino Acids."

The symposium sessions are scheduled daily at 2 p.m. and 8 p.m. Today's sessions deal with "Factors Influencing the Interpretation of Spectra" and "Optical Rotatory Dispersion."

The Wednesday and Thursday sessions will consider thermogravimetric analysis, electron probe analysis, the application of physiological instrumentation to clinical problems, and electron magnetic resonance.

Chairmen Listed

Chairmen of these sessions include Dr. Ellis R. Lippincott, University of Maryland; Dr. Ulrich Weiss, National Institute of Arthritis and Metabolic Diseases; Dr. Saul Gordon, Fairleigh Dickinson University; Dr. Isidore Adler, U.S. Geological Survey; Gerald S. Cohen, Division of Research Services, NIH; and Dr. Edwin D. Becker, National Institute of Arthritis and Metabolic Diseases.

The research equipment exhibit will be open daily from 11 a.m. to 5 p.m., except tomorrow (Wed.) when it will remain open until 9 p.m.

Last year's exhibit and symposium set an attendance record with a total of 6,237 visitors. They came as representatives of hospitals, universities and colleges, research institutions, government agencies, and other organizations devoted to public health and medical research. Included were visitors from 21 countries of Europe, Latin America, the Middle East, and the Far East.

Heart Ass'n. Executives Attend Seminar at NIH

A two-day seminar for staff executives of State affiliates and local chapters of the American Heart Association will terminate this afternoon at NIH.

The discussion today included a session on cardiovascular diseases, research reporting, and grants and training. Yesterday's session, which included a briefing on control programs in allied sessions, was held at the downtown offices of the Heart Disease Control Program, Division of Chronic Diseases, BSS.

Similar sessions are conducted at least four times a year at NIH. Their purpose is to assist national, state, and local heart association professional staffs to acquire a fuller understanding of the intramural research activities and grants programs of the National Heart Institute.

Five NIH Employees Win Cash Awards For Suggestions, Work Performance

Cash awards totaling $705 for superior work performance and adopted suggestions were presented to five NIH employees at individual ceremonies held here recently.

Thelma L. Gardner, a statistical coding clerk in the Laboratory of Socio-Environmental Studies, NIMH, received a check for $295 for her suggestion for a new method of statistical treatment of data processed on electronic equipment.

Katherine P. Lashmit, Executive Secretary of the Cardiovascular Study Section, DRG, and Arline Ludwig, a clerk in the Center for Aging Research, DGMS, received checks for $170 and $140, respectively, for sustained superior performances. Mrs. Ludwig received her cash award at the DGMS quarterly luncheon in honor of employees' birthdays, held September 22 at Thompson's restaurant in Bethesda.

A cash award of $75 was presented to William I. Adkinson, a laborer, Office Services Branch, OD, for devising an inexpensive cleaning tool which has become part of the standard cleaning equipment of the Night Cleaning Unit. Specific uses of the tool, consisting of a roll of steel wool attached to a mop head, are removal of wax from the edges of baseboards, in corners, under desks, and in congested areas where a floor machine cannot be used.

John J. Babchak, Shops Section welder, Plant Engineering Branch, DRS, has received a $25 incentive award for his suggestion for the design and installation of a device which significantly extends the service-free period on animal cages.

Arline Ludwig, a clerk in the Center for Aging Research, DGMS, receives a check for sustained superior performance from Dr. G. Halsey Hunt, Division Chief, at an employees' birthday luncheon.—Photo by Jerry Hecht.

Katherine P. Lashmit, Executive Secretary of the Cardiovascular Study Section, DRG, receives her award for sustained superior performance from Dr. Dale R. Lindsay, Chief of the Division.—Photo by N. MacVicar.

An adopted suggestion earns a cash award for Thelma L. Gardner, an NIMH statistical coding clerk. Dr. Joseph M. Bobbitt, Associate Director for Program Development, makes the presentation.—Photo by N. MacVicar.

National Gallery Strings Will Play Here Oct. 19

The National Gallery Strings, with Richard Bales, conductor, will be heard in the Clinical Center auditorium Thursday, October 19, at 8:30 p.m. This will be the first program of the 1961-2 concert series sponsored by the NIH Recreation and Welfare Association.

Mr. Bales will direct the entire string section of the National Gallery Orchestra in the "Don Quixote" Suite of Telemann; Concerto for Two Violins in D minor, Bach, with Mark and Nancy Ellsworth as soloists; Round for Strings, Diamond; and Simple Symphony for Strings, Britten.

Because of the expense involved in producing concerts, there will be a charge for admission to the series this year. The fee will be $1 for adults and children 12 or over. Free tickets will be issued for children under 12 years and for Clinical Center patients and their attendants.

Tickets must be obtained in advance from the CC Film Desk.

ISA Requests Dr. Alt To Organize Division Of Biomedical Sciences

Dr. Frederick Alt, Chief of the Instrument Engineering and Development Branch, Division of Research Services, has been requested by the Instrument Society of America to organize and serve as Director pro tempore of a Biomedical Sciences Division within the society.

The request is the result of the growing national importance of biomedical instrumentation engineering.

At the present time biomedical engineering is recognized as a distinct discipline by the Institute of Radio Engineers and the International Federation of Medical Electronics but only in the field of medical electronics.

The proposed new ISA division is planned to represent the professional engineer in all important areas of biomedical instrumentation engineering: electronics, optics, thermodynamics, and mechanical, sanitary, and chemical engineering.

In the past, biomedical engineering sessions at ISA conventions were presented under the auspices of the society's Physical and Mechanical Measurements Division.

12 YEARS AGO—

These items appeared in the 1949 July and September issues of the NIH Record, *then in its first year of publication:*

Wisconsin Avenue will be widened to 70 feet from Five Points, north to Chelsea Lane, thus eliminating the "bottle-neck" that has become increasingly worse as Bethesda and the areas north of the community have grown in population.

* * *

Two free tickets to their first show will be presented by "The Hamsters" to the person submitting "the best new name" for their organization.—*July 29.*

* * *

"The Hamsters" have resigned themselves to being called "The Hamsters." No more appropriate name was submitted in the recent title contest conducted by the NIH drama group.—*September 16.*

* * *

"Resolved, that the membership of the Southern Branch of the American Public Health Association endorses the fine research program carried forward by the National Institutes of Health." This resolution was passed by the Southern Branch at its annual meeting held recently in Dallas, Tex.

Dr. Mary Maver, NCI, Retires September 25

Dr. Mary E. Maver, a member of the original staff of the National Cancer Institute and its first woman scientist, retired September 25 after 31 years with the Public Health Service.

A chemist in the Nucleic Acids Section of NCI's Laboratory of Biochemistry, Dr. Maver joined the staff of the PHS Hygienic Laboratory—forerunner of NIH—in 1930 to engage in cancer research with Dr. Carl Voegtlin, the first Director of NCI.

Her work has been exclusively in the field of enzymes concerned with the metabolism of nucleic acids.

A native of Detroit, Mich., she received a B.S. degree in 1914 and, in 1926, a doctorate in organic chemistry from the University of Chicago. She was also awarded a Douglas Smith Fellowship at the University of Chicago.

Prior to her association with NIH, Dr. Maver served as a pharmacologist with the Chemical Warfare Service, U.S. Army, and as a research associate at the Sprague Memorial Institute for Medical Research in Chicago.

NIH GROWTH

(Continued from Page 1)

increase drop below 10 percent.

Within the past three fiscal years, 1959-61, the rate of increase has leveled off, varying from 7.5 to 8.5 percent.

The statistical tables also reveal that approximately half of NIH personnel (as of June 30, 1961) are employed within the seven Institutes. These employees total 4,387, as compared with a total of 1,838 within the four Divisions, 1,573 in the Clinical Center, and 985 under the Office of the Director.

The number of full-time employees, by Institutes, was reported as follows: NCI, 1,166; NIMH, 818; NIAID, 591; NHI, 576; NIAMD, 545; NINDB, 510; and NIDR, 181.

The Divisions' employee totals were reported as: DRS, 1,037; DRG, 467; DBS, 222; and DGMS, 112.

In an organization devoted to medical research, one would expect to find more than a few possessing one or more doctorate degrees. This expectation is amply realized at NIH, where 1,211 members of the scientific and professional staff hold 1,276 doctorate degrees in more than 25 different disciplines.

Medicine is represented by 566, the biosciences by 351, the physical sciences by 77, and psychology by 60. A variety of other branches of knowledge including, among many others, dentistry, veterinary medicine, mathematics, and public health, are represented by 157 doctorate degrees; and 65 Doctors of Medicine are holders of other doctorate degrees also.

HIGH SCORER WINS HIGH PRAISE

Harold R. Wolfe (center), a Senior Buildings Engineer in the Plant Engineering Branch, DRS, receives a graduation certificate and congratulations from Chris A. Hansen, DRS Chief, for the high score he achieved in the PEB Air Conditioning and Refrigeration Course which ended in August. Martin L. Jeter (left), instructor and head of the North Buildings Unit, looks on. A repeat of the 9-month course started October 3.—Photo by Jerry Hecht.

SEB Unravels Mystery Of NIH 'Chicken Coops'

In response to numerous inquiries, the Sanitary Engineering Branch, DRS, has reported that the "chicken coops" at various points on the reservation do not contain chickens, but instruments for measuring water and sewage flow.

The SEB is collecting flow data which will be used in determining the best location and proper size for water and sewer mains to serve the reservation in the future. The coops will be removed when the survey is completed.

DGMS Appoints Rosen Financial Analysis Officer

Julius Rosen, Supervisory Budget Analyst of the Public Health Service's Division of Hospitals, has been appointed Financial Analysis Officer for the General Clinical Research Centers Branch of the Division of General Medical Sciences.

As Financial Analysis Officer, Mr. Rosen will serve in the negotiation, financial management, and planning and analysis connected with the establishment and maintenance of the General Clinical Research Centers through grants administered by DGMS.

British Blood Specialist Addresses DBS Staff

Dr. Robert Kekwick, British scientist and authority on the human antihemophilic factor, reviewed his work here recently before DBS staff members.

The session was of particular interest to the staff of the Laboratory of Blood and Blood Products, who are working on the purification and chemical characteristics of certain of the clotting factors.

A faculty member of the University of London, and a staff member of the Lister Institute of Preventive Medicine, Dr. Kekwick is well known for his work on the fractionation of plasma proteins, based on low-temperature ether precipitation.

Lillian England Named Conference Coordinator

Harold W. Curran, Executive Officer of the Division of Research Grants, has announced the appointment of Lillian England as Conference Assistant.

Mrs. England will assist in coordinating conference services for all extramural meetings held on the reservation. Her responsibilities will also include assisting Institute and Division personnel in making arrangements for their meetings, including advising consultants on PHS travel regulations, arranging for luncheons and coffee breaks, making hotel reservations, and supervising the transportation of materials to be used at meetings.

Those desiring her assistance may phone Ext. 5881.

NIHUGF'61

Soviet Visitor Confers With NIH Scientists

Prof. A. N. Studitskiy, one of Russia's leading specialists in the field of histology, visited NIH September 27-28 to confer with scientists from NINDB, NCI, and DBS.

Sponsored by the National Research Council of the U.S. National Academy of Sciences, the Soviet scientist is spending a month in the United States. His itinerary will include visits to medical colleges and research institutions in several cities.

Since 1935 Prof. Studitskiy has been working in the Institute of Animal Morphology of the Academy of Sciences of the USSR in Moscow.

The author of over one hundred scientific works, his publications have been concerned chiefly with elaboration of the study of restoration of organs and tissues. His most recent work dealt with problems relating to electron-microscopic and cytochemical research of the mechanism of restorative and plastic processes.

CAFETERIA

(Continued from Page 1)

11:30, and then three lines and four cashiers for the rest of the noon period.

"The big innovations," she added, "are these. In addition to the general counter lines there will be a line to the new grill counter, and there will be two places where customers can get coffee without having to get back into the big lines.

"At this grill counter, hamburgers, frankfurters, and grilled cheese sandwiches will be available. Those who wish to supplement their grill selections with other items can break into the general lines for the other things."

During the 2-5 p.m. period, Miss Jones said, desserts and sandwiches will be available, and there will be one cashier. Dinner will be served from 5 to 6:30 p.m., with one line and one cashier.

These services and hours will be in effect Monday through Friday of each week. The Saturday, Sunday and holiday schedule will be: breakfast, 8:30 to 9:30 a.m.; lunch, 11 a.m. to 1:30 p.m.; and dinner, 5 to 6:30 p.m

"Clinical Center cafeteria patrons," Miss Jones said, "will also find new items on the counter from time to time We plan to serve steamship rounds of beef, barbecue, pastrami, pizza, and other somewhat unusual foods in addition to the standard menu."

The food vending machines, she said, will continue to be available 24 hours a day in the coffee shop across the corridor from the cafeteria.