Former Fellows Pursue Research Of NIH Interest

A recently completed Division of Research Grants survey of the current activities of former PHS Fellows indicates that 94 percent are working in areas of interest to the various Institutes here that provided their fellowship support.

The new survey, prepared by the Analysis and Evaluation Section, is the fourth to be made by DRG. Considerably more detailed than earlier studies of the subject made in 1953, 1955 and 1957, it shows that the percentage of former Fellows engaged in some research activity stays about the same—approximately 87 percent.

Dr. Fraser of NIMH Receives PHS Award For Outstanding Work

Dr. Havelock F. Fraser, Associate Director of the Addiction Research Center, National Institute of Mental Health, was awarded the Public Health Service Meritorious Service Medal in ceremonies held February 12 at the USPHS Hospital in Lexington, Ky.

The award, for "an outstanding productive career in research on addiction," was presented to Dr. Fraser by Dr. Robert H. Felix, Director of NIMH.

First NIMH Winner

The first NIMH staff member to receive the PHS Meritorious Service Medal, Dr. Fraser has served in his present position since 1949. The research that he has reported and conducted since he has been at Lexington has formed the basis for Federal Bureau of Narcotics and World Health Organization decisions on the need for legal control of newly developed synthetic narco
dies.

Before joining the PHS Commissioned Corps in 1945, Dr. Fraser served as a medical intern at the USPHS Hospital on Staten Island, N.Y., and as a ward surgeon in the Employee Health Service Branch.

EHS Facilities in CC Are Being Renovated

Extensive renovation of the Employee Health Service quarters in the Clinical Center is now under way and construction will continue for the next 60 to 90 days.

Dr. John M. Lynch, Chief of the Employee Health Service Branch, urges employees during this period to use the North Employee Health Unit (Room 2BB34) in Building 31 whenever possible.

The services there will be expanded throughout the renovation period, and the staff will include two physicians on duty in the mornings and one in the afternoons, in addition to adequate nursing personnel.

Shane' Is Fourth Film In R&W Winter Series

The Recreation and Welfare Association of NIH announces that the next in its series of free movies will be "Shane," staring Alan Ladd and Brandon deWilde.

The film is scheduled to be shown Saturday and Sunday, March 24 and 25, at 8 p.m. in the Clinical Center auditorium.

Man-Against-Cancer Exhibit to Mark 25th Anniversary of Cancer Institute

Residents of the Greater Washington area will have a rare opportunity to see a dramatic portrayal of the Nation's fight against cancer during the month of April when "Man Against Cancer," an exhibition sponsored by the American Cancer Society and the National Cancer Institute, will be open free to the public on Pershing Square, at 14th Street and Pennsylvania Avenue, N.W.

Open daily from 11 a.m. to 8 p.m., beginning April 3 and continuing throughout the month, the exhibit is part of the 1962 celebration of Cancer Progress Year, marking the 25th anniversary of the founding of the National Cancer Institute and the first American Cancer Society national educational and fund-raising campaign.

Planned to bring into sharp focus the progress that has been made and the present day work of scientists, physicians, laymen and others who are involved in cancer control, the exhibition will include five exhibits, photographs, motion pictures, and a demonstration.

The exhibition is designed in concentric circles. At the center is a dramatic symbol of the enigma of cancer. Around this are exhibits which tell in clear and intelligible terms the story of major research fronts of today in epidemiology, chemotherapy, virology, and immunology.

The NIH funds were designated for the following activities:

- Grants & Related Contracts (Millions)
  - Research
  - Fellowships
  - Training
  - State control programs
  - Community demonstrations

- Subtotal $456.8
- Direct Operations
  - Research
  - Collaborative studies
  - Biologic standards
  - Training activities
  - Prof. & tech. assistance
  - Review & approval
  - Administration

- Subtotal $148.4
- Construction
  - Master utility extension
  - Research facilities and site acquisition
  - Cancer research facilities
  - Lab. 12 construction
  - Perinatal physiology lab.
  - Biologic standards annex

- Subtotal $16.3
- Health research facilities construction grants

- TOTAL $562.2

Following is a breakdown of the NIH budget request, exclusive of construction:

(See HEARINGS, Page 5)
NIAMD Rheumatoid Arthritis Theory Illustrated by New 3-D Plastic Model

A 3-dimensional model providing further evidence of the intimate relationship between inflammatory arteries and subcutaneous nodules of rheumatoid arthritis has been prepared by the DRS Medical Arts and Photography Branch for Dr. Leon Sokoloff, Chief of the Section on Rheumatic Diseases, NIAMD Laboratory of Experimental Pathology.

Construction in Segments

Construction of the model in various segments was a necessary preliminary step to the creation of accurate medical illustrations demonstrating the theory that subcutaneous rheumatoid nodules develop in areas of arterial lesion.

The model was constructed by making tracings of microscopically enlarged serial sections of an early subcutaneous nodule. Outlines of the arteries, veins, capillaries, granulation tissue, and subcutaneous tissue were traced onto transparent plastic sheets.

The sheets were then placed in sequence, one below the other, to form a transparent block graphically illustrating the position of these systems within the sections of tissue.

The tracings were made to scale for every 15th section and coded by number and color to the various conditions found.

In another sequence, cutouts were made from dental wax to reproduce the mass of granulation tissue within the nodule, and from transparent plastic to represent the zones of fibrinoid necrosis surrounding the area of granulation.

The cutouts were laminated serially to form a 3-dimensional view of the nodule, and then glued beneath a tracing of the tissues on transparent plastic.

Termed Unique

A unique research tool when viewed in series or in part, the 3-dimensional model clearly demonstrates the relationship between the arterial lesion and the various systems depleted.

Howard Bartner, the medical illustrator responsible for execution of the model, worked in close collaboration with Dr. Sokoloff during all stages of developing the 3-dimensional concept.

EXHIBIT

(Continued from Page 1)

In the next circle are instruments, tools and techniques of research developed since 1937. On the outer rim are three-dimensional photographic and textual descriptions of the nature and scope of the cancer problem showing development in detection, diagnosis and treatment. Here emphasis is placed on what every person can do to protect himself against cancer.

The exhibition, which covers 9,000 square feet, will be housed in a geodesic dome loaned by the Ford Motor Company. Cooperation in staging and developing the exhibit has been obtained from leading scientists, hospitals and institutions, from the National Park Service which has made the space available, and from manufacturers who are supplying scientific equipment.

You may claim your child who is under 19, or a full-time student, as a dependent on your 1961 Federal income tax return no matter how much he earned in 1961 so long as you furnished over half of his support.

March 13, 1962

THE NIH RECORD

Published biweekly at Bethesda, Md., by the Public Information Section, Office of Research Information, for the information of employees of the National Institutes of Health, principal research center of the Public Health Service, U. S. Department of Health, Education, and Welfare.

Editor .................................................. E. K. Stabler

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PERSONNEL TO PERSON

ABRAHAM RIBICOFF, Secretary of Health, Education, and Welfare, has issued a statement concerning the Department's policy on age considerations in employment and promotion decisions.

He emphasized that DHHS employment and promotion decisions should be based on the individual's abilities and qualifications, without irrelevant restrictions such as age or other factors not related to job performance.

Sense of Worth Stressed

He called attention to the fact that most individuals can earn their livelihoods only through their jobs, and that they derive from their work a sense of personal worth and dignity, as well as income. This equality of opportunity for employment for older persons, when they compete with others of similar qualifications, should be an essential ingredient of DHHS policy, he said.

Secretary Ribicoff's statement concluded:

"I urge you, in your own actions and in influencing the actions of others, to be vigilant to assure that the right of qualified citizens to work for their government shall not be denied or abridged on account of age."

Registration Set March 14 For Histology Course

The Technicians Study Group of the National Cancer Institute has announced registration for a course in physiological histology to be taught by Dr. Rose MacCardle of NCI's Laboratory of Pathology.

The course, consisting of one lecture and one laboratory session each week, will be held on Wednesdays from 4-10 p.m.

April 4 has been set as the tentative starting date for the course, which will continue for approximately five months.

An organizational meeting for those interested in the course, which is offered free of charge, will be held in the Clinical Center 14th floor auditorium, tomorrow (March 14) at 4 p.m.

Study Group Officers for 1962 include Arleigh Green, President; Dr. V. MacCardle, Vice President; Shirley Pulley, Secretary; Henry Medlin, Treasurer, and Anne Wilson, Delegate-at-Large.

Further information concerning the course and other Study Group activities may be obtained from Mr. Green, Ext. 2175.
NIMH Psychomet Measures
Performance Speed in Aging

Dr. James E. Birren, Chief, Section on Aging, Laboratory of Psychology, NIMH, observes the speed with which Research Assistant Shirley L. Phillips reacts to various simple and complex stimuli at the panel of the Psychomet. — Photo by Jerry Hecht.

Enzymatic Activity Shown in Glial Cells During Brain Edema

A histochemical study by scientists of the National Institute of Neurological Diseases and Blindness offers new evidence that glia (small cells interspersed among the nerve fibers in the brain) display an increased enzymatic activity following brain injury associated with cerebral swelling.

By demonstrating histochemically various oxidative enzymes (dehydrogenases), the investigators were able to show that astrocytes (one of the three types of glia) appeared to increase their enzymatic activity during the development of edema. Furthermore, this increased activity persisted long after edema had subsided.

Findings Published

This study was made by Dr. Lucien J. Rubinstein, Visiting Scientist, together with Drs. Klatzo and Jaime Miquel, all of the Surgical Neurology Branch, NINDB, and is reported in the Journal of Neuropathology.

For these experiments, brain lesions in cats were produced by cold injury, with resulting swelling of the white matter of the brain. In the area of edema, certain enzymes showed an increased activity in astrocytes within 12 hours, whereas other enzymes showed this phenomenon at later stages.

The histochemical observations were correlated with other findings derived from application of specific staining methods for glia as well as by the use of fluorescently labeled proteins in the same brain injury.

Generally, the investigations indicated that the astrocytes are primarily implicated in the process of cerebral injury and emphasized the metabolically dynamic character of this involvement.

Dr. Shimkin, NCI, to Be Cancer Panel Member

Dr. Michael B. Shimkin, Associate Director for Field Studies, National Cancer Institute, will be a member of a panel discussing the subject, "Are Smoking and Air Pollution Causes of Lung Cancer?" at a meeting of the St. George Society next Tuesday, March 20.

The meeting will be held in the District of Columbia Medical Society's auditorium, 1718 M Street, N.W., at 8 p.m. Moderator of the discussion will be Dr. Brian Blades, Professor of Surgery, Georgetown University School of Medicine.

Question-Answer Period
Scheduled for Officers Planning to Leave PHS

A question-and-answer period for Commissioned Officers preparing to leave active Public Health Service duty on or about July 1 is scheduled to be held Wednesday, March 21, at 3:30 p.m. in the Clinical Center auditorium.

The session, planned under the direction of Joseph A. Stanton, Deputy Chief of the CC Clinical and Professional Education Branch, and Boyd W. Stephenson, Chief of the Commissioned Officers Section, PHS, is designed to answer typical questions that confront an officer about to return to private life.

Typical Questions Listed

These include questions on separation procedures, leave and pay, shipment of household effects, inactive status, physical examinations, and personnel orders.

Dr. Murray C. Brown, Chief of the PHS Division of Commissioned Officer Personnel, will be chairman of the session and Dr. Richard C. Arnold, PHS Assistant Surgeon General for Personnel and Training, will address the meeting.

On hand to answer questions will be Mr. Stephenson and Gene Knapp from the PHS Division of Commissioned Officer Personnel.

Complete registration information as well as all necessary forms will be available.

Administrative personnel concerned with inactivation procedures are invited to attend the session.

DRS Engineers Assigned Instrumentation Areas

Because of the widening scope of instrumentation projects and the support requested from its Instrument Engineering and Development Branch, the Division of Research Services is dividing engineering projects into various broad specialty fields, with a project engineer assigned to each.

At present three such areas of specialization have been organized.

The project engineers and their specialties are Peter Carmeci, automation; Gerald S. Cohen, physiological monitoring and clinical applications; and Gerald G. Vurek, biochemical analysis.

Each is an engineer educated in electronics and the life sciences. Other engineers who are specialized in electronics or mechanical engineering support the project engineers and also handle projects not falling under any of the named specialties.

The Branch plans to assign project engineers to other specialized areas of biomedical instrument engineering.
Dr. Karl Habel, NIAID, Is Visiting Lecturer At Glasgow University

Dr. Karl Habel, Chief of the Laboratory of Virology of NIAID, has accepted the invitation of the University of Glasgow to be a Visiting Lecturer in the Department of Virology. He left for Scotland on March 6.

A world authority on rabies, Dr. Habel in recent years has also been interested in the problem of polyoma tumor virus. He holds the rank of Medical Director in the PHS Commissioned Corps and has been prominently associated with infectious disease research at NIH since the late 1930s. During his extended stay in Scotland, he will continue his research on polyoma virus. He will also participate in a postgraduate course in basic virology at the University.

Dr. Habel plans to return to NIH in early June. The following month he will attend the Eighth International Cancer Congress, to be held in Mexico City July 22-28, where he will present a paper entitled "Immunological Factors Influencing Polyoma Virus Oncogenesis."

After the meeting in Moscow Dr. Habel will proceed to Stockholm to work for three months at the Institute for Tumor Biology in the Laboratory of Dr. George Klein at the Karolinska Institute. He will return to this country at the end of October.

Dr. Wolf Will Present CC Concert March 15

Dr. Kenneth Wolf, pianist, will present the next concert in the R&W-sponsored winter concert series, Thursday, March 15, at 8:30 p.m., in the Clinical Center auditorium.

Dr. Wolf combines two full-time careers—scientist and concert pianist-composer. From 1957 to 1959 he was a Research Associate in the National Institute of Neurological Diseases and Blindness and at present is a Research Fellow at Harvard Medical School.

He studied music under Arthur Schnabel and Rosnin Lhevenn, and composition with Paul Hindemith. He has performed professionally for many years and has presented several previous concerts at NIH.

The program will consist of Mozart's Sonata in D Major, K. 576; Beethoven's Six Bagatelles, Op. 126; Brahms' 25 Variations and Fugue on a Theme by Handel; Schubert's Piano Quintet, D. 667; Ravel's Ma Mere L.Observable; and the world premiere of "Immuno logical Factors in the Genesis of Polyoma Tumor Virus." Dr. Habel plans to return to NIH in early June.

Nine Agencies Benefit In Current Campaign Of Joint Crusade

Once upon a time there was a mouse called Funnycfoot. He was given that name because his hind legs dragged. He had muscular dystrophy. Now, Funnycfoot and his brothers and sisters are helping scientists—supported by the Muscular Dystrophy Associations of America—to find the cure for this crippling disease which affects 300,000 Americans, most of them children.

The Muscular Dystrophy Associations of America is one of nine agencies being supported in the sixth annual National Health Agencies—Federal Service Joint Crusade campaign now under way at NIH. Of the nine agencies supported by the drive, six are in the health field and three conduct relief and information programs.

Supports These Agencies

The National Health Agencies receiving support in the Washington campaign are the Muscular Dystrophy Associations of America, the National Multiple Sclerosis Society, the National Society for Crippled Children and Adults, the United Cerebral Palsy Associations, the American Cancer Society, and the American Heart Association. Agencies receiving support from the Federal Service Joint Crusade are the American-Korean Foundation, CARE, and Radio Free Europe.

President Kennedy has endorsed the campaign and urges all Federal employees to give them their wholehearted support.

The government-wide campaign has been underway since March 8. The keynes Institutes and Divisions have completed their distribution of information and envelopes for the drive, and the contributions are beginning to come in.

"NIH participation in past years has not been as enthusiastic as I know it could be," said Dr. Ralph E. Knutti, NIH Director and Vice Chairman for the drive at NIH. "Last year, we had a participation of 95.0 percent. This year we have 95.0 percent participation for the National Health Agencies and 57.3 percent for the Joint Crusade can be improved," he said. "In view of the close relationship of our research to the health and welfare problems represented in the work of these nine agencies, I urge all employees to support this campaign as generously as possible."

amounting to 15 percent of the total. Four States—New York, Massachusetts, California, and Maryland—together account for over two-fifths of the former Fellows.
Dr. Heinz Specht Is President-Elect of D.C. Science Academy

Dr. Heinz Specht, Chief of the Laboratory of Physical Biology, National Institute of Arthritis and Metabolic Diseases, has been named President-elect of the Washington Academy of Sciences. He will fill this position for one year before becoming President of the Academy in January 1963.

The purpose of the Washington Academy of Sciences is to promote the advancement of the sciences in the Washington area. Through cooperation with 28 affiliated societies, the Academy sponsors a Washington Junior Academy of Sciences and makes annual awards and grants-in-aid for scientific work of unusual merit.

Active in Academy

Dr. Specht has been an active member of the Academy since 1948 and has served as its Secretary since 1955. He is well known for his research on respiratory physiology and his special emphasis in studies of abnormal atmospheric environments, both high altitude and underwater. He is also an authority on the toxicology of organic vapors.

A Scientist Director in the PHS Commissioned Corps, Dr. Specht came to NIH in 1936 as a physiologist with the Research Section of the former Industrial Hygiene Division and the Industrial Hygiene Research Laboratory. He joined the NIAMD staff in 1946 and was appointed to his present position in 1953.

Is Faculty Member

He is a graduate of Princeton University and received a Ph.D. degree in physiology from Johns Hopkins University in 1933. He spent the following year at Johns Hopkins as an Adams T. Bruce Fellow in Zoology. From 1935 to 1936, he was on the faculty of the New York University Medical College.

Dr. Specht is affiliated with several scientific societies, including the Philosophical Society of Washington, the Society for Experimental Biology and Medicine, and the American Physiological Society.

Grant History Unit Employs 'Railroad' To Keep Its Financial Records Moving

Anne Hoenan (left) checks over a grants record while seated on her rolling desk-and-chair unit in the DRG Grants History Unit, and Lucille S. Anderson pulls a record from the thousands that are filed in the 48-foot magazines running almost the entire length of the room.—Photo by Sam Silverman.

Dr. Murray Aborn, formerly Executive Secretary of the Behavioral Sciences and Mental Health Study Sections, Division of Research Grants, has joined the staff of the Division of General Medical Sciences to head a new program of grants in the behavioral sciences.

Dr. Aborn will supervise the review of applications for research and training grants in the basic behavioral sciences. His appointment is a result of broadening interests by NIH in the health-related aspects of the sciences concerned with human behavior, augmenting present programs of the National Institutes of Mental Health and the Division's programs in the fundamental biomedical sciences.

Development Studies Planned

Studies will be supported on how and why man conducts himself as he does within his human and technological environments, and how and why he perceives and changes.

The research and research training activities will be concerned with fields such as cognitive, social, and physiological psychology; sociology and social medicine; and cultural and comparative anthropology.

Born in New York City, Dr. Aborn was a graduate assistant at Columbia University from October 1946 to June 1950 and received the Ph.D. degree there in 1950. He is well known for his work in the United States Army from September 1942 to December 1945.

Serves at AF Base

From 1950 to 1955 Dr. Aborn was on the faculty of the Department of Psychology at Michigan State University, East Lansing. From 1953 to 1957 he served as a research psychologist, Air Force Personnel and Training Research Center, Maxwell Air Force Base, Ala., and from 1957 to 1958 as an educational specialist, Industrial College of the Armed Forces, Fort Leslie J. McNair, Washington, D.C.

He then served as research scientist and team chairman, Special Operations Research Office, Washington, D.C., until September 1968, when he came to NIH as research psychologist in the Division of Research Grants.

He has contributed numerous articles to professional journals in the field of psychology and psychiatry, clinical diagnosis of intelligence, IQ variability in relation to age, information theory and immediate recall, and related subjects in behavioral sciences.
Promising New Method Developed to Purify Pathogenic Rickettsiae

The purification of large amounts of rickettsiae by differential, continuous flow centrifugation from mohr salt solutions followed by ether treatment, has been found to produce rickettsial material possessing protective qualities fully equal to conventional rickettsial vaccines. In addition, this method of purification reduces the amount of undesirable contamination with egg-white antigen.

The method was developed by Dr. Richard A. Ormsbee of the National Institute of Allergy and Infectious Diseases; Rocky Mountain Laboratory, Hamilton, Mont.

Human activity in egg proteins is well established and is one of the factors which makes the purification of rickettsiae important. Also, studies of chemical composition and antigenic qualities of rickettsiae depend primarily upon the availability of pure preparations.

Is Relatively Easy

In addition to providing pure suspensions of the organism, this method is relatively easy and quick, and results in efficient production of large amounts of purified organisms. Tests to date indicate that the preparations are fully potent protective antigens in animals.

Dr. Ormsbee worked with four rickettsial strains which cause human disease: Coxiella burnetii (Q fever), Rickettsia prowazekii (louse-borne typhus), Rickettsia mooserii (murine typhus), and Rickettsia helvetica (Rocky Mountain spotted fever).

With the new method he achieved large yields of purified rickettsiae from infected yolk sacs of embryonated chicken eggs. In C. burnetii preparations particularly, the amount of detectable egg-white antigen was reduced to very low levels.

Predicts Less Sensitivity

Dr. Ormsbee believes that these features make it feasible to use the purified preparations as vaccines for humans and as standardized serologic reagents. He predicts that such vaccines will markedly reduce the incidence of untoward reactions in persons sensitive to egg-white or yolk-sac antigens.

The study of the nature and chemical composition of rickettsial antigens has been facilitated by the availability of large amounts of purified organisms.

A phenomenon of note is described in the present paper. Two phases of C. burnetii organisms are recognized—Phase I characterized by failure, and Phase II by ability to fix complement under certain specific conditions. During centrifugation, Phase I Q fever organisms formed a white bottom layer with a sharply delimited upper boundary with a layer of brown contaminant above. In contrast, Phase II organisms formed a cream-colored bottom layer and were evenly distributed through the brown overlay. This is clear evidence of a structural or chemical difference between organisms in the two phases, and is the first time a variation of this nature has been recognized.

New TCO System Simplifies Purchase Of Numerous Small Dollar-Value Items

The value of decentralized placement of small purchase orders has been amply demonstrated over the past 12 months by the Telephone Charge Order system of the Supply Management Branch, OAM.

Developed by the SMB Procurement Section, the TCO system is designed to reduce the cost of handling small purchase orders and to expedite the final receipt of small-dollar-value items.

Said to be unique in Government, the system eliminates the preparation of formal purchase orders and orders the ordering office to have direct telephone contact with suppliers.

The system is used primarily for special and small term inventory supplies costing up to $50 and, in a few exceptional cases, up to $100.

In using the system any authorized person at NIH may place an order for supplies or equipment with any one of the 125 firms, most of them local, with whom the SMB Procurement Section has established charge accounts.

Deliveries are usually made within 24 hours directly to the requesting laboratory or office. In some cases deliveries are made to the receiving platform of the building in which the ordering office is located, and occasionally to the Shipping and Receiving Platform of Building 13.

System is Popular

An example of the simplicity and the popularity of the TCO system can be seen by the fact that from July 1, 1961, through December 31, 7,580 TCO's were placed by approximately 500 persons at NIH.

These orders contained 13,423 line items with a total value of $166,107.

In contrast, 17,106 purchase and charge orders with 55,469 line items were placed during the same period by the Procurement Section.

If you are a home owner you may deduct your property taxes and mortgage interest on your 1961 Federal income tax return if you itemize your deductions on Page 2 of the Form 1040.
140 Try Out for Parts In Hamsters' 'Li'Abner'

Rehearsals for "Li'Abner," the R&W Hamsters' spring production, began here last Sunday afternoon. The hit musical comedy is scheduled for presentation at the end of May.

The cast for the show, which ran for over 600 performances on Broadway, was selected from more than 140 applicants, the largest number ever to appear at Hamsters' tryouts.

Arnold Sprenger, CC, is the director of the production, and Jerry Osborne, NCI, is the choreographer. Stage manager is Phil Joram, DRS, and Ozzie Grabiner, OAM, is the producer.

New Handbook Is Aid To Scientists Arranging Data for Computers

A handbook of operational instructions tailored to enable investigators in biomedical fields to arrange their data for computer processing has been published by the University of California at Los Angeles.

Prepared with Division of General Medical Sciences and National Cancer Institute support, the UMD Computer Manual is the result of the research and experience of staff members of the Biostatistics Unit of the University of California Medical Center.

These investigators, in addition to their own studies, assisted many other researchers in planning their programs for computer processing.

From this varied experience the authors have grouped much of the work into categories, each with a general type of computation. They call these categories "package" programs, such as: regression, curve fitting, factorial analysis; tabulating, screening and plotting; time series analysis.

For each "package" program there is a description of its purpose, its limits, the way to prepare the cards for processing, and examples of how the results look when they come out of the computer and a mathematical statement of the computation involved.

The manual is intended as an aid to many biomedical investigators who hesitate to use computers as research tools because of time and effort (as well as knowledge of statistics and mathematics) required to prepare the programs.

More Passengers Needed to Sustain Silver Spring-NIH Rush Hour Buses

The Plant Safety Branch reports that the D.C. Transit rush-hour bus service between Silver Spring and NIH, inaugurated last December 18, has to date been carrying approximately two-thirds of the 30-passenger load needed to meet the cost of operation.

PSB points out that the service was initiated on a 90-day trial basis and that D.C. Transit may be forced to discontinue it unless the minimum operational cost is met. If such a decision is made, ample advance notice will be given.

Those who have been using the service have expressed satisfaction with its convenience, according to a PSB spokesman.

The morning bus leaves the D.C. Transit terminal at the Silver Spring Armory at 7:55, arrives at the Woodmont Triangle in Bethesda at 8:15, and arrives at NIH at 8:20.

The evening bus leaves NIH from the Memorial Road stop at Building 4, at 5:10. It arrives at the Woodmont Triangle at 5:15, and at Silver Spring at 5:25.

The bus picks up and discharges passengers at all established bus stops along the East-West Highway-Colesville Road route.

Haenszel Finds 2-Month Tour Is All Too Brief

Although one American went around the world recently in a little over an hour, William M. Haenszel, Chief of the Biometry Branch, National Cancer Institute, feels that the two-month world tour from which he just returned was all too brief.

Leaving Washington November 28, Mr. Haenszel touched ground in Hawaii, stayed a little longer in Japan, spent some 30 days in India, checked in at the offices of the World Health Organization in Geneva, and arrived back in this country January 21.

From December 8-11, Mr. Haenszel attended sessions of the All-India Cancer Conference in Bombay. He addressed the delegates on the need for establishing and maintaining cancer registrars and morbidity surveys on sound principles. Following the Conference he met with staff members of the India Cancer Society to discuss plans for setting up such a registrar and survey in the Bombay area.

As a consultant to WHO, Mr. Haenszel visited six Indian medical centers to review developments relating to cancer epidemiology and geographic pathology and to investigate the feasibility of setting up an international reference center for oral cancer, a common form of malignancy in India.

Although the main thrust of his trip was directed toward India, Mr. Haenszel spent a few days in Japan with Professor Mitsuo Segi, Tohoku University, Sendai, discussing plans for collaborative studies initiated last summer when Professor Segi was a Visiting Scientist at the National Cancer Institute. These studies will be part of a comprehensive survey of changing cancer risks for Japanese migrants to this country.

36 Scientists Receive NHI Career Awards for Cardiovascular Studies

Thirty-six scientists doing research in the basic medical and biological sciences under a National Heart Institute program have been approved as recipients of cardiovascular research career awards totaling $520,729, Surgeon General Luther L. Terry announced recently.

Purpose of the NHI program—one of several career award activities being supported by NHI—is to encourage and support investigators working in basic cardiovascular areas such as lipid research, blood coagulation, pediatric cardiovascular therapy, cardiovascular tissue immunology, cardiovascular research hematology, and cardiovascular surgery, embryology and teratology, computer methodology and developmental instrumentation.

Two Types Offered

The NHI program includes two types of support: Cardiovascular Research Career Development Awards, and Cardiovascular Research Career Awards.

Cardiovascular Research Career Development Awards provide aid for young scientific investigators who need further experience to qualify for senior research positions. Twenty-nine of these awards totaling $358,649 have been made to 29 investigators at 20 institutions.

Provides Opportunities

Cardiovascular Research Career Awards provide stable career opportunities for investigators with superior capabilities in the health-related sciences. Seven of these awards totaling $162,074 have been approved for investigators at seven institutions.

The 36 awards are for one year. Support for the 29 Career Development investigators can be continued for five years and may be renewed for an additional five years. Further support for the seven Career Awards investigators can be provided in 5-year increments, subject to review at appropriate intervals.

Work Reviewed

This continued support for both kinds of the career awards, depends on the year-by-year availability of funds appropriated by Congress, and upon the continued meritorious work of the scientists as determined by review panels of distinguished scientists and research administrators.

The Surgeon General, on the recommendation of the National Advisory Heart Council, approves the payment on all awards.
Immunologic Response To Toxoids Blocked By Methotrexate

Findings of a recent Division of Biologics Standards study indicate that amino-methyl-polyglutamic acid (methotrexate) is capable of blocking the development of skin hypersensitivity, the primary antibody response, and the specific febrile response to ovalbumin and diphtheria toxoid in guinea pigs. The effect of methotrexate on immunologic responses apparently depends on the dose of methotrexate employed and the strength of the antigenic stimulus.

The present study was undertaken because of results of previous lines of investigation. In 1958, National Cancer Institute investigators demonstrated that methotrexate nullified mortality in mice due to homograft reactions following total body X-irradiation and homologous marrow inoculation.

May Inhibit Responses

Other investigators, also working with mice, have suggested that methotrexate might inhibit immunologic responses and it has been shown to modify lymphocyte choriomeningitis (LCM) virus-host and tumor-host relationships.

Reporting in a recent issue of the Journal of Experimental Medicine, Dr. Robert M. Friedman and his coworkers in the DDB Laboratory of Viral Immunology, have suggested that methotrexate may also act to suppress development of the delayed hypersensitive state. This was supported in their studies by the observation that methotrexate inhibits the specific febrile responses in addition to inhibiting the delayed skin reaction.

Implications Seen

The investigators suggest that these findings may have wide implications because suppression of the development of the delayed hypersensitive state might be a useful tool in the investigation of such biological phenomena as the mechanism for antibody synthesis, autoimmunity, the rejection of homografts, and the host reaction to infection.

A deficiency of folic acid has been shown to impair antibody production in rats and chicks. Methotrexate, which is commonly used in the treatment of some malignant diseases including leukemia, acts as a folic acid inhibitor.

The primary antibody response was more easily inhibited in guinea pigs by methotrexate than was development of the delayed skin hypersensitivity response. In this respect, the effect of methotrexate resembled that of X-irradiation.

Dr. Friedman is now on the staff of the National Cancer Institute.

CU OPEN HOUSE drawing BIG CROWD

Dr. David E. Price, Deputy Director of NIH, cuts the ribbon during an open house celebration at the new offices of the NIH Credit Union in Building 31. Approximately 950 persons attended the morning and afternoon open house parties last Tuesday, the day after the CU opened for business in its new quarters, Room 1A07 and 1A08. Left to right: Jeanne H. Wolter, NH, member of the CU Board of Directors; Robert H. Grant, Assistant Chief, OIR, Vice President of the Board; Dr. Price; Dr. D. Jane Taylor, NCI, President of the Board; and O. J. Wood, CU Manager.

Photo by Sam Silverman.

16 Scientists Receive NIMH Career Grants

Grants amounting to $241,796 have been awarded from Fiscal Year 1962 funds to 16 individuals by the National Institute of Mental Health, under the newly established NIH Research Career Award Program. Similar awards are made by other NIH Institutes and Divisions.

The aim of this program is to strengthen research on the problems of mental health and mental illnesses by providing career support to highly qualified individuals.

Two types of awards are available, the Research Career Development Awards and the Research Career Awards.

The Research Career Development Awards provide eligible young men and women with a minimum of three years' postdoctoral experience with support for five to 10 years while gaining experience as independent investigators. Thirteen scientists are receiving this support from NIMH at the present time.

The Research Career Awards, of which three have been granted to date, are given to experienced investigators who are continuing established productive careers of independent research and related activities. These awards, which are reviewed at five-year intervals, are made with the intention of continuing Federal support for the full career of the scientists, provided that they maintain standards set by their institutions for research scientists.

DBS Scientists Find Antiviral, Antibacterial Activity in Mollusks

The presence of antibacterial and antiviral substances in oyster material as well as abalone material has been demonstrated in recent studies by Dr. Chen Pein Li, Chief of the Section on Virology, and his coworkers in the Laboratory of Virology and Rickettsiology, Division of Biologics Standards.

Antiviral activity against influenza virus and poliovirus, as well as antibacterial activity against Streptococcus pneumoniae, was demonstrated in oyster material in vitro and in vivo. This work was presented by Dr. Li at a meeting of the New York Academy of Sciences.

Previous work by Dr. Li had shown that tissue fluid from the abalone contains antimicrobial factors which inhibit Staphylococcus aureus and have a protective effect in experimental poliomyelitis in mice.

Paralysis Reduced

Evidence of antiviral activity was demonstrated by the effect of oyster material on infection of mice and tissue cultures with influenza virus and poliovirus. Monkey kidney tissue cultures were treated with oyster material and infected with the three types of poliovirus. Although the reduction of cytopathic effects was only moderate, inhibition of 90 to 99.9 percent of viral growth was observed. Moreover, the incidence of paralysis in inoculated mice was reduced for each type of poliovirus by approximately 20 percent.

In mice infected intranasally with influenza B virus, Great Lakes strain, the death rate was reduced by oyster material from 60 to 70 percent in the untreated infected mice, to 20 to 50 percent in the treated infected ones.

The antibacterial activity of oyster material in mice infected with S. pneumoniae was demonstrated by a 22 to 25 percent decrease in the death rate; similar results were obtained in earlier experiments with abalone tissue fluid.

Agents inhibiting poliovirus are of rare occurrence and those which have heretofore been reported have not for various reasons come into use for the treatment of diseases in man.