NHA-FSJC Drive Starts on Sunday; Cooperation Urged

The combined National Health Agencies and Federal Services Joint Crusade Campaign for 1964 will be launched in the Greater Washington Area Sunday, March 1, and will continue through April 15. Chairman and Vice Chairman of the campaign for NIH are Dr. Kenneth M. Endicott, Director of the National Cancer Institute, and Dr. Robert H. Felix, Director of the National Institute of Mental Health.

"Surely no other effort is more worthwhile than this," said Dr. Endicott. "By our generous contributions, let us join those working through the National Health Agencies to lessen the tragedy of these illnesses in our community.

"Let us join also those providing overseas relief and truth messages through the Federal Service Joint Crusade Campaign for 1964."

(See DRIVE, Page 6)

U. S. Marks 16th Year Without Any Outbreak Of Imported Disease

The United States has marked its 16th straight year without an outbreak of smallpox or other quarantinable disease known to have been introduced from abroad, the Public Health Service announced recently.

Commenting on this, Surgeon General Luther L. Terry said: "It is reassuring to know that inspection procedures and vaccination requirements for travelers entering the United States are preventing the spread of smallpox and the other quarantinable diseases to our doorstep; thus at no time has there been a greater need for cooperation in the international fight against these diseases."

(See OUTBREAK, Page 7)

HEART FUND SWEETHEART IS A CHARMER

Four-year-old Kathy Jones, now fully recovered from recent open heart surgery, is the 1964 Heart Fund Sweetheart. "With her crown, scepter and baby doll, she chats happily with Dr. Ralph Knutti, Director of the National Heart Institute (left), and James J. Saxon, U. S. Comptroller of the Currency, who is General Chairman of the 1964 Heart Fund. The occasion was the Washington Heart Association annual meeting at the Mayflower Hotel. Dr. Knutti, the guest speaker, spoke before a packed house on smoking and heart disease. Doctors from more than a dozen foreign countries were among the 300 guests. —Photo by Capitol Photo Service.

AEC to Hold Discussion of Centrifuge Systems

The Atomic Energy Commission's Oak Ridge National Laboratory has scheduled a 2-day meeting at Oak Ridge, Tenn., April 30 and May 1, to discuss a promising new tool—zonal centrifugation systems—for isolating viruses and subcellular particles.

Developed jointly by the National Cancer Institute and the AEC, this major development in design and fabrication of centrifuges, which provides new approaches for investigation of cancer and viral diseases, will be described to representatives of interested industries and universities at the meeting.

Zonal Centrifugation

AEC's Oak Ridge National Laboratory has scheduled the meeting to furnish information on the techniques and theory of isolating and separating small biological particles by zonal centrifugation and to provide opportunity to the participants to examine the systems and discuss technical problems with staff members.

Two centrifugation systems will be discussed in detail: one used in separation of particles in the size range visible in the light microscope, including larger subcellular particles, nuclei, and mitochondria; and the other, visible in electron microscopes, including ribosomes and virus particles.

The research on zonal centrifugation systems is conducted in ORNL's Biophysical Separations Laboratory located at Oak Ridge Gaseous Diffusion Plant.

Ethan Shepley Appointed

Ethan A. H. Shepley, St. Louis (Mo.) attorney and former Chancellor of Washington University, has been appointed to a 4-year term on the National Advisory Arthritis and Metabolic Diseases Council, ending September 30, 1967.

Research Center Planned for Study Of 'Shaking Palsy'

Surgeon General Luther L. Terry of the Public Health Service announced recently that funds are being provided to the College of Physicians and Surgeons, Columbia University (New York City), to create a study center for research on Parkinson's disease and allied disorders.

Consisting of a clinical research center and a closely integrated medical information facility, the study center is being funded through two awards by the National Institute of Neurological Diseases and Blindness. These are:

Awards Exceed $500,000
1) A research grant totaling $347,950 to establish the clinical research center, and 2) a contract for $241,500 to establish the medical information facility on Parkinson's disease and related disorders.

Dr. H. Houston Merritt, Dean of the College of Physicians and Surgeons, and Dr. Melvin D. Yahr, Director, accompanied by Institute staff members, will present testimony before the House Appropriations subcommittee headed by Rep. John E. Fogarty of Rhode Island.

(See RESEARCH CENTER, Page 8)

Shannon and Top Staff Are Scheduled to Begin Budget Testimony Today

Hearings on the Administration's $1.03 billion NIH budget request for Fiscal Year 1965 were scheduled to open today before a House Appropriations subcommittee headed by Rep. John E. Fogarty of Rhode Island.

Dr. James A. Shannon, NIH Director, accompanied by Institute Directors, Division Chiefs, and key staff members, will present testimony in support of the budget request. The hearings are expected to last through Friday.

The total NIH budget for the coming fiscal year, which begins next July 1, includes $515.4 million in operating appropriations, $58 million for Health Research Facilities construction grants, and $14.4 million for direct construction at NIH.
PHS Study Seeks Exposure Estimates From X-Ray Examinations, Procedures

Surgeon General Luther L. Terry of the Public Health Service recently announced a national study to provide estimates of population exposure from various types of X-ray examinations and procedures. "Many reports and articles have indicated that an important part of the total radiation to which the population is exposed may be accounted for by medical and dental X-rays," Dr. Terry said.

"Thus, long-range efforts are being made by medical and dental organizations and public health agencies throughout the country toward elimination of unnecessary radiation exposure from the healing arts without loss of the diagnostic or therapeutic benefits which X-rays provide."

The Surgeon General explained that the PHS study, in attempting to assess the present situation regarding exposure, will seek information designed to help the medical and dental professions to make more efficient use of X-ray equipment.

"A number of efforts have been made in the past to obtain information about X-ray exposure in this country," Dr. Terry noted. "These studies have been limited to selected populations or to certain types of examinations. The current study will be comparable in scope to the comprehensive studies made in other countries, including Great Britain."

Second in Series

The study will be the second in a series conducted jointly by PHS's Division of Radiological Health and the National Health Survey. A report on the first study covering X-ray visits from July 1960-June 1961 was published by the National Health Survey in October 1962.

The current study was planned with the advice of a group of distinguished radiologists and physicists. These consultants had available a report on a field trial conducted in Berks County, Pa., during the summer of 1963 to determine the feasibility of the methods to be used in the national study.

Dr. Terry said that a vital factor in the success of the study is the cooperation of radiologists throughout the country.

At ground-breaking ceremonies for the new Yerkes Regional Primate Research Center at Emory University, Atlanta, Ga., Dr. Geoffrey Bourne, the Director, gets an assist from a small primate friend who will be a resident of the center, scheduled for completion next year. This center is one of seven primates research centers that will be administered by the Animal Resources Branch of the Division of Research Facilities and Resources, one-the Oregon Regional Center-is completed. The others are in various stages of construction or final planning.-Photo by Darrell Thompson.

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'New Wave or Old Hat?' Is Today's Lecture Title

"New Wave or Old Hat?", a lecture describing some recent developments in the cinema, will be given by Dr. Lincoln F. Johnson, Professor and Chairman of the Department of Fine Arts, Goucher College, this evening (February 26) in the Clinical Center auditorium.

The program, which begins at 8:30 p.m., is presented by the Foundation for Advanced Education in the Sciences, Inc. Admission is free to all.

Orientalia Exhibit Shown At NLM Until April 30

The National Library of Medicine is exhibiting its collection of early medical documents from China, Japan, and Korea in the lobby of the NLM building here, through April 30.

The exhibit was prepared by the History of Medicine Division with the cooperation of Stephen Kim, the library's Oriental Area Specialist, and Sheila Durling, who coordinated the display.

Included in the Orientalia exhibit will be the Great Herbal, the Hai Yuan Lu Chi Cheng, which is the earliest scientific work on fornicative medicine, and the ever popular Tongui Pogam, printed in the sixteenth century but still in use today.

The exhibit will also include colored woodblock prints depicting the "demons of disease," such as measles.

NEWS from PERSONNEL

BUSINESS ENGLISH OFFERED

The Employee Development Section of PMB will offer classes in business English for clerical-secretarial personnel employed here at NIH, beginning March 16.

The course will provide 20 hours of training to be given in 1-hour sessions, three times a week. Mrs. Helen Morse of the Employee Development Section will be the course instructor.

Nominations will be made by supervisors through the Personnel Officers of the Institutes and Divisions. The nominations will close on Monday, March 2.

The course will emphasize grammar, punctuation, word division, spelling, and word usage.

Persons wanting additional information should contact their Institute or Division Personnel office.

SUMMER EMPLOYMENT

Many government employees have sons or daughters in high school and/or college who will be applying for summer employment this year.

A number of these students will place requests for employment with government agencies. Under the terms of new Civil Service Commission regulations, sons or daughters of DHEW employees will not be eligible for summer employment at NIH.

The regulations prohibit summer employment anywhere within an agency of "...the son or daughter of a civilian employee of that agency, or the son or daughter of a member of its uniformed service. ..."

SEPARATION MEETING FOR COS

A special separation meeting for Commissioned Officers at NIH who held Thursday, March 5, at 3 p.m. in the Clinical Center auditorium. This session, arranged by the Commissioned Officer Section, PMB, is designed to answer typical questions that confront an officer separating from active duty, such as separation procedures, pay for unused leave, travel and entitlements.

Complete inactivation information as well as all necessary forms will be available. Administrative personnel concerned with inactivation procedures are invited to attend.

List of Latest Arrivals

1/31—Dr. David Shapiro, Israel, Studies on the Chemical Synthesis of Labeled Compounds. Sponsor: Dr. Roseco O. Brady, NINDB, Bldg. 10, Rm. 3N12.

2/3—Dr. Phyllis M. Scott, Australia, Research on Developmental Psychology. Sponsor: Dr. Marian Y. R. Yarrow, NIMH, Bldg. 10, Room 2N214.

2/3—Dr. Hiroshi Oya, Japan, Research on the Role of Vitamin B12 in the Metabolism of Parasitic Helminths. Sponsor: Dr. Paul Weinl, NIAID, Bldg. 5, Rm. 131.

2/4—Dr. Peter Cerutti, Switzerland, Research on the Chemical and Clinical Aspects of Centrally Active Endogenous Amines and Their Metabolites. Sponsor: Dr. B. Witkop, NIAMD, Bldg. 4, Rm. 309.

2/6—Dr. Klaus Felgenhauer, Germany, Research on Enzyme Kinetics and Histochemistry. Sponsor: Dr. George G. Glener, NIAMD, Bldg. 10, Rm. 3N112.

2/11—Dr. Rudolf Kern, Switzerland, Clinical Research on Glaucoma. Sponsor: Dr. Ludwig von Saunn, NINDB, Bldg. 10, Rm. 10N309.

X-rays," Dr. Terry said.

The regulations prohibit summer employment anywhere within an agency of "... the son or daughter of a civilian employee of that agency, or the son or daughter of a member of its uniformed service. ..."

Separation Meeting for COS

A special separation meeting for Commissioned Officers at NIH who
Michael J. Begab, former Executive Officer to Dr. Stafford L. Warren, Special Assistant to the President for Mental Retardation, has been appointed Social Science Advisor to the Mental Retardation Program of the National Institute of Child Health and Human Development.

In this position, Mr. Begab will assist the Mental Retardation Program Director in formulating and planning activities of the program as they may relate to psychosocial, cultural, and economic aspects of mental subnormality. He will be particularly concerned with social work aspects of retardation.

He will also serve as liaison between the NICHD program and research personnel working in this field in government and throughout the country.

Prior to his assignment in Dr. Warren's office, Mr. Begab was a specialist on social services for mentally retarded children in the Children's Bureau from 1957-63.

Experience Cited

Mr. Begab has been a member of the staff of the Lima State Hospital, Lima, Ohio; Retardation Casework Supervisor, Southern Wisconsin Colony, Union Grove, Wis.; and as a caseworker at the Division for the Blind, Illinois Department of Public Welfare, Chicago.

Following World War II, during which he served as a combat navigator, Mr. Begab attended the University of Chicago where he earned the B.A. and M.A. degrees in 1948 and 1951, respectively, from the School of Social Service Administration.

University of Wisconsin To Honor Dr. Hertz

Dr. Roy Hertz, Chief of the Endocrinology Branch, National Cancer Institute, has been named to receive the University of Wisconsin Medical School's Distinguished Alumnus Award for 1964.

The award, given for distinguished contributions to medical science, will be presented to Dr. Hertz at the Medical School's annual alumni day meeting in Madison on May 22.

At the meeting Dr. Hertz will deliver a paper titled, "The Nature and Treatment of Hormone-Producing Tumors in Man."

Research Director Describes Ingenious Prosthetic Devices

By Bob Callahan

Persons with oral, facial or limb deformities come from all walks of life and many lands to the U.S. Army Biomechanical Research Laboratory as research patients, to be fitted with prosthetic devices designed to meet their individual needs.

Lt. Col. Peter M. Margetis of the Army Dental Corps, recently assigned as Director of this laboratory, described its work and some of its problems at a recent National Institute of Dental Research seminar here.

Col. Margetis is the first Dental Officer to head the laboratory, a unit of the Walter Reed Army Medical Center, located in suburban Forest Glen, adjacent to Silver Spring, Md. "Both military and civilian dental professional groups have been singularly honored by this assignment," said Dr. Seymour J. Kreshover, Associate Director of the Dental Institute in introducing Col. Margetis.

Devices Listed

Mechanical hands, electric elbows, plastic ears and noses, synthetic skin and dacron blood vessels are patiently designed by the laboratory's experts and painstakingly fabricated by its polymer chemists and chemical and mechanical engineers.

"Designing a special prosthesis for an unusual case is common in our shop," said Dr. Margetis. With the aid of slides he discussed examples, including a man who had lost the major portion of an ear through trauma; a cancer patient who needed replacement of his nose, part of his mouth, and a considerable amount of skin and tissue including part of the palate; a phocomelia patient; and various types of arm and leg amputees.

One problem common in serious diseases of the maxillofacial area is the difficult fitting of the prosthesis to the affected area. "We don't have a really good adhesive material," Dr. Margetis said, "but we are working on better adhesives for them." Exposed prostheses will not tan, so patients may drop by to have their noses and cheeks tanned to match their own skin. Some have "spares" with color gradations to use at different seasons with varying exposures to the sun.

Since pigmentation and stain-resistant qualities are extremely important, tinting is done from the inside on all prostheses made for the maxillofacial area.

For upper and lower extremities, cosmetic gloves or stockings are used with nylon hairs inserted by dental hypodermic syringes to simulate the patient's natural hair. Frequently a patient will use a hook or mechanical hand for his work and substitute a more realistic cosmetic hand for social events.

A restorative material most used is terpolymer, a mixture of methylmethacrylate, butylacrylate and methyacrylamide.

This material forms the outer shell of a prosthesis. The inner layer may be one of several types—a foamed-up terpolymer or a foaming agent with a silicone material.

The advantages of corrugated synthetic blood vessels as compared with the smooth, to prevent kinking and collapse, are evident in this picture.

Vessels Are Corrugated

Research on synthetic blood vessels for human transplant is not yet three years old. The vessels are made of dacron coated with latex foam. Research showed that smooth vessels tended to collapse when kinked or bent, but corrugation increased patency, permitting unobstructed blood flow.

Biomechanical research is underway on patch graft material for use in aortic aneurysms; material which will substitute for the bile ducts; new mechanical hands with better grasping power; new chemical compounds for use in bones; skin transplants, and skin substitutions.

Prosthodontist impregnates nylon stockinet with liquid resin in fabricating a forearm prosthesis.—Photos by Armed Forces Institute of Pathology.

PHS Grant Awarded to Rockefeller Institute for Cellular Membrane Study

Investigations to show the relation between function of cellular membrane and its surface structure will be conducted at the Rockefeller Institute's Department of Cytology under a grant of $66,854 from the Public Health Service.

Dr. Walter Stoeckenius, Associate Professor of Cytology, will head the program. The grant will be administered by the National Institute of General Medical Sciences.

Past studies have demonstrated that the cell membrane consists of a double layer of lipid molecules with a strong affinity for proteins on both surfaces.

Assumptions Mentioned

The investigators assume that specific functions of these membranes are primarily determined by specific proteins such as enzymes, carriers, and receptors, and that the patterns they form on membrane surfaces are not random.

"We plan to concentrate on both animal and plant cells on surface detail rather than in-depth organization of the membrane," Dr. Stoeckenius said. By this approach, we hope to provide a structural basis for the general function of membranes as well as for their functional differences."

The investigators will use various techniques, including negative staining, improved methods of electron microscopy and X-ray diffraction to study both isolated cell components and disrupted cells.

By doing this, they hope to characterize the surface structure of different membranes and to correlate the surface structure with the special function of the membrane.

Detection Will Help

Detection of any morphological feature characteristic of one of the membrane systems in cells, they point out, will help in refining techniques for demonstrating cellular chemical organization and activity.

As an integral part of this project, Dr. George E. Palade, Professor of Cytology, will study the basic structure of the basement membranes of blood capillaries and its variations according to capillary type.

Previous work has shown the basement membrane to be the main filtration barrier of normal glomerular capillaries in the kidney.

Dr. Palade hopes to carry current biochemical work on the composition of basement membrane to the fine structural level. In evaluating the effects of enzymatic digestion and various extraction procedures, the electron microscope will be used to monitor negatively stained samples.
X-RAY STUDY
(Continued from Page 2)

Dr. Roger Fuson Named NIGMS Section Head

Dr. Roger B. Fuson has been appointed Head of the Predoctoral Section in the Research Fellowships Branch of the National Institute of General Medical Sciences.

The Research Fellowships Branch awards and administers predoctoral, postdoctoral, and special fellowships for the support of research training in basic biomedical and health-related sciences.

It also administers a program of Career and Career Development Awards designed to increase the number of full-time career opportunities for outstanding scientists.

In Fiscal Year 1963, these programs supported 1,673 awards at a level of over $13 million.

Joins NIGMS in 1961

Dr. Fuson joined NIGMS in 1961 as a Research Program Administrator with the Research Grants Branch. Prior to this, he served for three years in the dual capacity of Assistant Director of Clinical Laboratories and Associate Director of the Laboratory of Experimental Medicine at the Montana Deaconess Hospital.

From 1952 to 1958 he was a medical bacteriologist with the Veterans Administration Hospital, and from 1951 to 1952 a research assistant at the University of Utah Medical School.

Prior to this he served for five years in the U. S. Air Force.

A native of Hazard, Ky., Dr. Fuson received M.S. and Ph.D. degrees from the University of Utah in 1952 and 1958, respectively.

The author and co-author of numerous scientific articles, he is a member of the American Society of Microbiology, the New York Academy of Sciences, and the American Society for Cell Biology.

Hamsters Reorganization Centralizes Authority in Three-Member Board

The Recreation and Welfare Association of NIH recently announced a reorganization of the Hamsters, the theatrical group it sponsors, to allow for expanding activities.

Under the reorganization, the authority previously held by the president has been placed in the hands of an elected 3-member governing board.

Board Members Named

Newly elected board members for 1964 are Arnold Sperling, Head of the CC Patients' Activities Section, Chairman; Vonnie Miles, NINDB; and Dr. Richard Srebro, NIAMD. The elected secretary is Linda Beadles, NCI.

Meeting periodically and whenever necessary, the board will plan and coordinate the various hamster activities. These include theater parties and social functions; program speakers and/or films for regular hamster meetings; and a series of theatrical workshops in which plays will be read and analyzed for production possibilities.

First in the board's list of priorities is the production of the musical comedy, "Flower Drum Song," a story of San Francisco's Chinatown.

Regular meetings of the dramatic group are held the first Wednesday of each month at 8:15 p.m. in Conference Room 2 in Building 31. The next meeting is scheduled for Wednesday, March 4.

Air Force Choral Group To Sing Here March 5

The Singing Sergeants, official United States Air Force Chorus, will present a program for Clinical Center patients on Thursday, March 5 at 7:30 p.m. in the 14th Floor assembly hall.

NIH employees and their families are invited to attend, although patients will have priority in seating.

Arrangements for this event were made by the CC Patients Activities Section through the courtesy of the U. S. Air Force Band.

This is the new Leonard Wood Memorial-Eversley Childs Sanitarium Leprosy Research Laboratory, dedicated February 15 in the City of Cebu, Philippine Islands. The new research lab provides about 5,000 square feet of space devoted to advance research in the etiology, epidemiology, microbiology, therapy, and prevention of leprosy in its several forms. The air-conditioned structure was built by funds of the Leonard Wood Memorial (American Leprosy Foundation). Purchase of laboratory equipment, essential to the conduct of clinical investigations, was made possible by provisions in a research grant awarded by the National Institute of Allergy and Infectious Diseases.

Dr. Roger Fuson Named NIGMS Section Head

Lois P. Jones Appointed Information Officer

Lois Perry Jones has been appointed Information Officer of the National Institute of Child Health and Human Development.

In her new position Mrs. Jones will be responsible for coordinating and managing the various public, press, and Congressional information activities of the Institute, including publications, releases, and press and public inquiries.

She will also be responsible for the dissemination of information to scientific and other publications, and to the Institute staff and other components of NIH.

Before her present appointment, Mrs. Jones was a writer and Deputy Information Officer of the National Institute of Mental Health.

Recent Assignment Cited

From July to October of last year she served as Press Secretary to Dr. Stafford L. Warren, Special Assistant to the President for Mental Retardation. During that time Mrs. Jones was instrumental in setting up press coverage and arrangements for the White House Conference on Mental Retardation.

Prior to coming to NIH, Mrs. Jones served as Managing Editor of the Bethesda Record and later in the same capacity for the Foreign Service Journal.

She also headed the Joint Information Service of the American Psychiatric Association.

She received the A.B. degree in English literature at the University of Kentucky and is currently doing graduate work in sociology.

Mrs. Jones is a member of Theta Sigma Phi, the national women's professional journalism fraternity, and the National Association of Science Writers.

Richard L. Seggel, NIH Executive Officer, presents cash awards of $140 each to Grover T. Fletcher and Daniel F. Kenney, left to right, Chief and Assistant Chief of the Housekeeping Services Section of the Office Services Branch, OAM, in recognition of their joint effort in the preparation of a Housekeeping Services Section operation manual. The manual includes operating instructions, guidelines for supervision, leave procedures, history of NIH, and promotion policies.—Photo by Bob Pumphrey.
**Scientists Reveal Technique to Measure Changes in Heart Chambers’ Dimensions**

Scientists at the National Heart Institute have measured changes in the external dimensions of individual heart chambers throughout the cardiac cycle in intact, unanesthetized patients in efforts to study a variety of interventions, such as drugs, respiration and exercise on the heart.

This has been done by means of silver-tantalum clips sewn to the surface of the heart during operation to correct congenital or acquired heart defects.

Dr. Eugene Braunwald, NHI Cardiology Branch Chief, and co-author of a paper on this work, said, “For years investigators have realized the importance of determining cardiac volumes or dimensions, in addition to intracardiac pressures, in order to permit a more complete understanding of the mechanical aspects of the heart’s activity.”

In recent operations, the NHI scientists sewed three clips to the surface of the left ventricle, right ventricle, or both. These clips, placed as far apart as possible, were arranged in the form of a triangle whose apex lay in the ventricular outflow tract.

“Careful animal studies had shown that the clips were inert and harmless to heart tissue,” Dr. Braunwald said.

Three months to a year after operation, cineradiograms were obtained on each patient. The films, recorded with a 16mm camera, were subsequently projected and the distances between the clips measured on each frame.

These measurements were correlated with EKG tracings, arterial pulse pressures, heart-chamber pressures, and other data which had been taken while the films were being taken.

Since the cineradiograms were taken in the frontal plane, serious measurement errors could result from the rotation of the heart in the sagittal plane during the cardiac cycle.

**Errors Found Trivial**

To eliminate this possible source of error, biplane studies were done on each patient so that suitable corrections might be made. The studies showed that these errors were trivial if the clips had been properly positioned.

The scientists used this technique to measure ventricular dimensions during respiration and exercise. Such measurements had never before been made in intact, unanesthetized human subjects.

The studies showed that, as the patient inhales deeply, the reduced pressure in the thoracic cavity results in increased venous return and an increase in right-ventricular size (average increase: 12.5 percent).

The subsequent increase in right-heart output is followed, usually 2-3 heartbeats later, by a smaller increase in left-ventricular size.

**Ventricular Decrease Noted**

Increased intrathoracic pressure during the Valsalva maneuver produced a striking decrease in right-ventricular size, followed some 1-5 cycles later by a smaller decrease in left-ventricular size.

These observations indicate that changes in heart filling pressure can modify heart output in accordance with Starling’s Law.

When the patients performed light exercise on a bicycle ergometer, right ventricular dimensions decreased by 6.0 percent at the end of systole and 5.6 percent at the end of diastole. Left-ventricular dimensions decreased by 5.1 percent and 6.5 percent, respectively.

Despite the considerable reduction in heart size, there was an increase in the vigor of ventricular contraction, probably resulting from the release of norepinephrine in the heart by increased sympathetic nerve discharges.

These findings were reported in Circulation Research by Drs. Gerald Glick, Dean T. Mason and Eu...
New Method Estimates Psychiatric Disturbance In College Population

A new method for estimating degrees of mental illness has been reported in an epidemiologic study of college students.

In one of the first psychiatric epidemiologic studies of college students, a random sample of 20 percent of the freshman class of a moderately small church-affiliated metropolitan college were tested and interviewed for indications of emotional disturbance.

The investigators developed the College Health Survey (CHS), a questionnaire designed to measure deviations from the mean in three areas of an individual's functioning:

1. Intrapsychic (absence of thought disorder, affect disturbance or physiologic imbalance); 2. Interpersonal (ability to form and maintain satisfactory face-to-face relationships); and 3. Social role (ability to achieve potential in carrying out predominant role in society).

Subjects Rated

Subjects were rated quantitatively on a 6-point scale, from "very well" through "severely disturbed," in each of these three areas. They were also rated on this scale by a psychiatrist during a clinical interview.

Of the 86 male subjects, 58 percent were classified as "well," 30 percent as "subclinically disturbed," and 12 percent as "clinically disturbed."

After a year's interval, the class as a whole improved in mental health, showing 10 percent more "well" individuals and six percent fewer "clinically disturbed." However, the incidence of new illness for the year was five percent.

Reliability and validity studies of the results indicate this method of classifying mental illness is of more value than conventional qualitative patterns, such as anxious, schizoid, depressed, etc., which do not in themselves indicate the degree of disturbance.

Behavioral Patterns Assigned

These descriptive behavior patterns were also assigned to each subject as part of the study. Subjects who showed a high degree of disturbance on the quantitative CHS scale were found to have a greater number and variety of the specific qualitative symptoms.

Further investigations of the subjects who showed significant changes in mental health status may lead to a better understanding of the etiology of psychiatric disturbances among college students.

Refinements in methodology introduced here may be useful in future psychiatric epidemiology.

The investigators, Drs. William G. Smith and Norris Hansell, both of the Department of Psychiatry, University of Pennsylvania, and Dr. Joseph T. English, formerly with the National Institute of Mental Health and now with the Peace Corps, reported their study in the Archives of General Psychiatry. The study was supported in part by an NIMH grant.

To help Record readers forget the annoyances of winter weather, Dick Mellen and Pat Earp display this alluring Caribbean travel poster in the snow outside of Building 31. Mr. Mellen is in the Travel Unit of NIAMDD's Interdepartmental Committee on Nutrition for National Defense. Mrs. Earp is an ICNNM secretary. —Photo by Lou Cook.

James Kavanagh Named Consultant to NICHD

Dr. Robert A. Aldrich, Director of the National Institute of Child Health and Human Development, has announced the appointment of Dr. James F. Kavanagh as a consultant in speech pathology and audiology to the Institute's Human Communication Program.

For the past three years Dr. Kavanagh has been a Professor of Speech and Hearing Science at the University of Maryland. He also has served as a consultant in speech pathology to the Mt. Alto Veterans Administration Hospital and the National Institute of Dental Research.

Disorders of the communication process are major reasons for reduced learning capability, and the Human Communications Program will study the complex ways in which human beings receive information from their environment and are able to express themselves through coordination of various interacting organ systems.

Development Emphasized

Primary emphasis will be placed on the normal development of the complex functions resulting in language and speech.

Born in Takoma Park, Md., Dr. Kavanagh received his B.A. degree from George Washington University and his M.S. and Ph.D. degrees from the University of Wisconsin.

From 1953 to 1960 Dr. Kavanagh served as Director of the Speech and Hearing Clinic at the University of South Dakota.

He received a Danforth Scholar Award in 1959. This award is given to outstanding university professors in teaching and to permit them to do advanced work.

Member of a number of professional societies including the American Speech and Hearing Association and the American Association of University Professors, Dr. Kavanagh is also the author or coauthor of a number of articles in the field of speech pathology and audiology.

Jessie Scott to Direct PHS Nursing Division

Surgeon General Luther L. Terry of the Public Health Service has announced the appointment, effective February 16, of Jessie M. Scott as Chief of the Service's Division of Nursing. Miss Scott succeeds Margaret G. Arnstein who will immediately undertake a new assignment with the Agency for International Development.
Technicians Study Group of NCI Elects Officers

The Technicians Study Group of the National Cancer Institute recently elected the following officers for 1964: Carol Menge, President; Paula G. Carney, Vice President; Arleigh Green, Secretary; Russell T. Crockett, Treasurer; and Oves J. Fleener, Delegate-at-Large.

The purpose of the study group, established nine years ago, is to promote and conduct educational activities, provide better liaison between research groups, and broaden knowledge of the work and programs in progress throughout NCI laboratories.

The meetings are held on the first Thursday of each month, at 12:30 p.m. in Wilson Hall. Technicians from NCI and other Institutes are invited to attend.

The study group program has included speakers, films, and occasional visits to other research facilities. Classes and seminars are also sponsored by the group.

Fleming Award Winner Develops Plan For Reconciling Science and Religion

One of the 10 outstanding young men in Government career service to receive this year's Arthur S. Fleming Awards, Dr. Sjoerd L. Bonting, 38, is well known to his NIH colleagues as Head of the Section on Cell Biology in the Ophthalmology Branch of the National Institute of Neurological Diseases and Blindness.

This section, which Dr. Bonting initiated in 1960, plans, originates, and conducts research to elucidate basic biochemical and physiological processes in the developing and functioning eye and in other organs.

His Fleming Award citation termed his most important single accomplishment, "the finding that certain glycosides may be of use in the treatment of certain types of glaucoma."

Native of Netherlands

Born and educated in the Netherlands, Dr. Bonting came to this country in 1952 after receiving his Ph.D. in biochemistry at the University of Amsterdam.

Prior to coming to NIH in 1960 he held positions at the Universities of Iowa, Minnesota and Illinois.

For his work at NIH Dr. Bonting has twice received the "Fight for Sight" award of the National Council to Combat Blindness and the Association for Research in Ophthalmology.

The first citation was for his work on rhodopsin, one of the visual pigments, in the developing retina. The second award recognized his findings on the Na-K ATPase enzyme system, especially as it relates to the formation of aqueous humor in the eye.

Dr. Bonting is also known to readers of the Record as a result of a feature story last July reporting his ordination by the Rt. Rev. W. F. Creighton, Protestant Episcopal Bishop of Washington, at ceremonies in the Washington Cathedral on June 29. This was his ordination to the diaconate, which was followed on January 11, 1964 by ordination to the priesthood.

Interviewed last year, the quiet-spoken Dutchman, now a U.S. citizen, explained that he had entered the ministry because he was convinced of the need for a frank confrontation between science and religion.

He pointed out that for many years religion was dominant, then science captured respect and attention. The past century, he noted, has seen such rapid advances in science that theology has failed to keep pace.

Are Views Reconcilable?

"The scientist speaks of chance and proof, the theologian of Providence and faith," he said. "How can they both be true? As a scientist I have to maintain that the scientific world view is true; as a Christian I also believe in the theological world view."

At that time Dr. Bonting said he hoped to find scientists at NIH, both in and out of the church, who were interested in exploring some of these questions.

Queried recently on this score he said:

"Since last September six or seven people from various denominational backgrounds at NIH have been meeting with me. In several sessions we have drawn up an outline of a theology of science. We are now engaged in expanding the various sections of this outline in more extensive essays, with the hope that this may be useful and interesting to a wider group of biological scientists."

The Fleming Awards were presented at a luncheon on February 13 in the Statler Hilton Hotel, at which Franklin D. Roosevelt, Jr., Under Secretary of Commerce, was the guest speaker.
Professor of Neurology, will share leadership responsibilities for the two projects.

Parkinson’s disease, sometimes referred to as shaking palsy or paralysis agitans, is a neurological disease affecting between 300,000 and 500,000 Americans. An estimated 25,000 to 45,000 new cases develop each year. In most cases, the cause is unknown.

Characteristic symptoms — uncontrollable trembling, muscular rigidity, and a stumbling type of walk—are progressive and in most instances gradually produce disability and often complete helplessness.

No Cure Known

There is no cure for Parkinson’s disease; however, drugs, surgery, and physical therapy have helped to relieve symptoms.

Commenting on the award, Dr. Richard L. Masland, NINDB Director, said, “We propose to establish a limited number of disease study centers, such as the one at Columbia University. Within each of these there will be a scientific team engaged in a multidisciplinary research attack. “An information and program analysis facility will complement each of these research efforts in order to provide a broad overview of each field.”

Choice of Site Explained

According to Dr. Masland, the New York site was selected for the first of these study centers because of the College of Physicians and Surgeons’ outstanding multidisciplinary program in Parkinson’s research; the strong support of the program by Columbia University, including use of its clinical and library facilities; and support by the Parkinson’s Disease Foundation, the voluntary health agency preliminary program in Parkinson’s research; its records of physicians and Surgeons has had active in this particular field of research.

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