3 New Assistant Surgeons General Appointed to PHS

Surg. Gen. William H. Stewart of the Public Health Service announced the appointment of three new Assistant Surgeons General Feb. 7. The appointments are effective immediately.

Dr. Francis A. Arnold Jr., Director of the National Institute of Dental Research, will be Chief Dental Officer of the Service. He succeeds Asst. Surg. Gen. Ralph S. Lloyd who retired Feb. 1.

Dr. David J. Sencer, Deputy Chief of the Communicable Disease Center, Atlanta, Ga., becomes Chief of the Center. He succeeds Asst. Surg. Gen. James L. Goddard who, on Jan. 10, was appointed Commissioner of the Food and Drug Administration.

Dr. Erwin S. Babeau, Deputy Chief of the Division of Indian Health, is named Chief of that Division. He succeeds Asst. Surg. Gen. Carruth J. Wagner who became Chief of the Service's Bureau

Gerontology Branch Transfer Combines All Major Aging Programs in NICHD

The Gerontology Branch, formerly part of the National Heart Institute, has been transferred to the Aging Program of the National Institute of Child Health and Human Development.

The research and training grants by the other Institutes, were transferred to NICHD in 1963. With the transfer of the Gerontology Branch, all major aging research and training activities at NIH are now consolidated in NICHD.

Branch in Baltimore

Located on the grounds of the Baltimore City Hospitals, the Gerontology Branch will continue to emphasize investigations of the basic biological mechanisms of aging, and description and interpretation of age changes in the various organ systems of human beings, as well as overall changes in performance and behavior.

It will also continue and expand its longitudinal study of more than 500 men from all walks of life who come to Baltimore every 18 months for a complete 2-day examination.

The Gerontology Branch, consisting of eighty-five employees, is directed by Dr. Nathan W. Shock. Dr. Shock holds B.S. and M.S. degrees from Purdue University and Ph.D. in physical chemistry from the University of California. He is a member of Phi Beta Kappa, Sigma Xi, and the American Chemical Society.

Dr. Becker Honored as Outstanding Chemical Spectroscopist of '66

Dr. Edwin D. Becker Jr., Chief of the Section on Molecular Biophysics, Laboratory of Physical Biology, National Institute of Arthritis and Metabolic Diseases, has been named the outstanding young chemical spectroscopist of 1966 by the Coblenz Society. He will receive the award Feb. 24 in Pittsburgh.

The Coblenz Society is a national organization of infrared spectroscopists who annually recognize a chemical spectroscopist under 36 years of age.

The award, which consists of an inscribed plaque, will be presented to Dr. Becker by A. Lee Smith, President of the Society, during a Coblenz Society symposium. Following the presentation, Dr. Becker will give a paper on some of his recent infrared work.

Dr. Becker joined the NIAMD as a research chemist in October 1955, shortly after receiving his Ph.D. in physical chemistry from the University of California. He is a member of Phi Beta Kappa, Sigma Xi, and the American Chemical Society.

Research Services Supplies Germ-Free Animals to Facilitate Basic Research

By Tony Anastasi

The "golden eggs" of chickens, which are helping in basic research on the viral induction of cancer, are available in limited numbers to NIH scientists through the Laboratory Aids Branch of the Division of Research Services.

These RIF-free (Resistance Inducing Factor) chickens are part of a long-range LAB program for upgrading the quality of NIH animals available for medical research.

The RIF agents are a group of viruses which cause chicken leukemia. One of the most important techniques in virology involves the use of fertile hen eggs.

Unfortunately, most eggs contain unwanted viruses, passed on from the infected hen, which interfere with the investigative work. The most worrisome of these are the RIF agents. Therefore, the RIF-free chick embryos are essential to the cancer scientists for certain specific types of studies.

RIF-free chicken eggs are also being used by the Division of Biologies Standards to test vaccines, such as measles, to ascertain that these vaccines are free of the RIF agents.

NIAID Studies Viruses

Also, the National Institute of Allergy and Infectious Diseases is studying viruses in the RIF group and using RIF-free eggs to develop new vaccines.

The chickens are only one phase of the LAB program to produce cleaner laboratory animals. The LAB also maintains supplies of germ-free and pathogen-free rats and mice.

These or their ancestors are C. s. arian derived, which eliminates the transfer of most diseases from mother to offspring.

Born and maintained within closely controlled environments.

Impact of Mental Health Centers to Be Evaluated

A first year grant of $99,960 to evaluate the impact and effectiveness of mental health neighborhood service centers in the South Bronx, New York City, has been awarded to Albert Einstein College of Medicine.

The grant, to be administered by the National Institute of Mental Health, will allow thorough evaluation of the operation of three neighborhood service centers serving some 150,000 persons in a blighted area of the South Bronx. The centers were established in 1965 under a grant from the Office of Economic Opportunity.
NIGMS Awards Grant for Training of Physician-Scientists to Duke University

A new research training program for the physician-scientist will be undertaken at Duke University Medical Center, Durham, N. C., under a grant from the National Institute of General Medical Sciences.

In announcing the initial award of approximately $178,000, Sarg. Gen. William H. Stewart of the Public Health Service said that the greatest health need today is manpower, especially people trained to meet new kinds of assignments which will come with the changing health needs.

The type of training to be given under the medical scientist training program is intended to develop research competence simultaneously in both the medical sciences and the basic physical and biological sciences.

Design Aids Student

The design of this curriculum at Duke University will help the student acquire a medical and scientific background tailored to his own needs and special interests.

Those who enter the program must have a good foundation in college mathematics and science, must fulfill all requirements for entrance to both medical and graduate schools, and must intend to make a career of research.

The new curriculum will compress into the first year general principles and information of the basic sciences usually covered during the first two years of medical school.

In the second year, the student will receive concentrated training in the medical sciences usually covered in the last two years of medical school, including some formal clinical training with patients of all ages and types of problems.

Curriculum Explained

These two years will provide an understanding of both basic and clinical sciences and their relationships, enabling the student to choose a major field of interest.

The succeeding years will be spent in developing research capacities in basic and medical sciences through research seminars and courses related to the student’s major field. Studies will continue on a year-round basis.

Many of the candidates may fulfill the requirements for the Ph. D. degree. A final year spent in an individually adapted medical program will complete the requirements for the M.D. degree.

92 Give Blood at Westwood

Ninety-two persons donated blood when the NIH Clinical Center’s bloodmobile made a first-anniversary trip to Westwood, Burlington, Feb. 10-11. Of these, 35 gave blood for the first time, augmenting the Blood Bank’s file of typed, available donors.
New Special-Purpose Analog Computer Helps NHI Analysis of Complex Curves

Frank Noble, NHI Laboratory of Technical Development (left) and Dr. Richard Baxter of the E. I. DuPont de Nemours & Co. Instrument Products, observe a demonstration of the DuPont 310 Curve Resolver by Anthony Materia, also of the DuPont Co. The new device is a commercial development based on electronic solutions achieved seven years ago by Mr. Noble and Dr. Joseph Hayes Jr., also of NHI, for analyzing certain complex analog curves important to an understanding of the chemical nature of a number of organic and inorganic materials.—Photo by Thomas Joy.

By Herbert B. Nichols

Two NHI staff members had an opportunity last week to see their original electronic solution for analyzing certain complex analog curves which are obtained through chromatography, electrophoresis and spectroscopy, translated into a commercial instrument by the Instrument Products Division of E. I. DuPont de Nemours and Company.

Frank W. Noble of the Laboratory of Technical Development, and Dr. Joseph E. Hayes Jr., now a scientist administrator in the Research Grants Branch, both of the National Heart Institute, witnessed a demonstration in Wilson Hall of the new DuPont 310 Curve Resolver they pioneered seven years ago.

Instrument Is Special

The instrument will now be marketed as a special-purpose analog computer for the rapid resolution of overlapping peaks in terms of their original form or distribution function.

Lectures and demonstrations attracted the attention of many NHI scientists and technicians, particularly from NHI, NCI, NIH and the Isotope Laboratory during morning and afternoon sessions.

Several brought along curves they wanted to try out on the 310 in the hope that this first instrument of its kind to be commercially available, might be able to save them hours of hand calculations or programming on a digital computer.

Dr. Richard Baxter, DuPont Application Chemist, took some of these curves back with him to Wilmington for “homework.”

According to Mr. Noble there are a number of analytical techniques, particularly in chemistry, that produce curves which are the sums of peaks or distribution functions.

The scientist is interested in locating the height, width and position of each peak, but some ride on top of others in overlapping fashion and some are completely buried.

The task accomplished by the curve resolver is to separate out the component distributions from each curve. It does this by generating in each of its function generator channels peak shapes that correspond to Gaussian, Lorentzian or other distributions.

Parameters Are Varied

The parameters of the individual trial peaks are then varied on each channel until the resulting summation curve from all channels exactly matches the original.

In gas chromatography the desired curve would be a graph of the concentration of some elusive sample versus time; and in the ultracentrifuge or electrophoresis it would depict the concentration of a sample component against position in the cell.

In an optical absorption spectrum, light absorption would be

(See COMPUTER, Page 8)
TRANSFER
(Continued from Page 1)

Celebrating the transfer of the Gerontology Branch to the National Institute of Child Health and Human Development, are, from left: Dr. Nathan W. Shock, Gerontology Branch Chief; Dr. Roy Hertz, NICHD Scientific Director; and Dr. Donald Harting, NICHD Director.—Photo by Jerry Hecht.

a Ph.D. from the University of Chicago.

He is Editor-In-Chief of the Journal of Gerontology, a member of the PHS Advisory Committee on Gerontology, and Past President of the Gerontology Society.

He has been the recipient of numerous honors for his many contributions to the field and was the first scientist to be given the Annual Research Award for Meritorious Contributions to Gerontology by the Gerontological Society.

Construction Begun

Construction has now started on a new four-story laboratory building for research in aging on the grounds of the Baltimore City Hospitals.

Due for completion in 1967, this building will provide a badly needed research facility housing approximately 300 professional and ancillary personnel.

When completed, the facilities and resources available at Baltimore will be the most comprehensive in the country.

Awards Aid Construction Of Retardation Centers

Three awards totaling nearly $62.4 million to aid in constructing mental retardation research centers in the Northeastern, Midwestern, and Western sections of the country were announced recently by Surgeon Gen. William H. Stewart of the Public Health Service.

These latest awards bring to almost $30 million the total funds awarded under 1963 legislation authorizing PHS to provide up to 75 percent matching funds toward the cost of building large, multidisciplinary research centers to conduct and coordinate research training in mental retardation and related aspects of human development.

William B. Page, Office of Architecture and Engineering, DRFR (left), receives a commendation medal from Dr. John F. Sherman, NIH Associate Director for Extramural Programs, "in recognition of his outstanding administrative abilities in technical services to applicants for construction research grants and attaining cooperation to the fullest extent in the methods of construction as related to grants-in-aid for health-related research facilities and resources."—Photo by Ralph Fernandez.

Dr. Axelrod Cited for Meritorious Research In Biochemical Fields

Dr. Julius Axelrod, Chief of the Section on Pharmacology, Laboratory of Clinical Science, National Institute of Mental Health, has received the Award for Meritorious Research given by the Association for Research in Nervous and Mental Diseases. Dr. Axelrod, developer of the oral polio vaccine and winner of the 1955 Albert Lasker Medical Research Award, is a member of the NIAID Advisory Council.

Dr. Axelrod is Director of Virology and Cancer Research at the Children's Hospital Research Foundation, Cincinnati, Ohio. Another speaker will be Dr. Ian A. MacLeod, director of the Institute of Virology, Glasgow, Scotland.

The work of most of the other scientists participating in the symposium has been or is currently supported by NCI or NIAID grants or contracts. The University of Chicago also receives NCI training grants for its Cancer Training Program.

Dr. Axelrod has been responsible for many other scientific discoveries, including some 15 enzymes involved in the formation and metabolism of several hormones, and the inactivation of many drugs.

He has also identified four normally occurring metabolic compounds in the urine which have proved useful in diagnosing tumors of the sympathetic nervous system.

Dr. Axelrod has devised many micro-methods for measuring drugs, hormones and enzymes. He has also traced several drugs, hormones and biogenic amines through the body and determined their role and effect on body processes.

He has authored or co-authored more than 250 professional papers and has lectured widely both in this country and abroad.

Recently at NIH

Prior to his present position, he was senior chemist with the National Heart Institute.

Dr. Axelrod received his B.S. degree from the College of the City of New York, his M.A. degree from New York University, and his Ph.D. from George Washington University.

Dr. Axelrod is the second NIMH scientist in two years to be cited by the Association for Research in Nervous and Mental Diseases. Dr. Paul MacLean, of the Laboratory of Neurophysiology, won the award last year.

2 Institutes Participate in Symposium on Malignant Transformation Feb. 26-27

Five NIH scientists from two institutes will join other leading cancer research workers at a symposium in Chicago Feb. 26 and 27 to report their findings in a rapidly developing area of study—the viral transformation of normal cells into cancer cells in the test tube.

Renewed interest in the malignant transformation of cells in vitro is "one of the really exciting developments of the last 5 to 10 years," according to Dr. Paul H. Black of the Laboratory of Infectious Diseases, NIAID, who will be chairman of a roundtable discussion by symposium participants: Dr. Karl Habel, Chief of the Laboratory of Biology of Viruses, NIAID; Dr. Clyde J. Dawe, Laboratory of Pathology, National Cancer Institute; and Dr. Alan S. Rabson, Pathologic Anatomy Branch, NCI.

Dr. Dawe will read a paper on cellular factors in the tumor response to polyoma virus and Dr. Habel will report on research into the nature and function of specific antigens produced by tumor-forming viruses.

Dr. Black will present a paper on defective oncogenic viruses, and Dr. Rabson a paper on the transformation of human cells by oncogenic viruses.

Test Tube Experiments

Although experiments with human cells are being done in the test tube, Dr. Black stressed, scientists still have no proof that viruses cause cancer in humans.

Adenoviruses, which cause various human infections, are known to produce cancer in hamsters and other rodents, but no one knows yet whether they may cause human cancer, he said.

Malignant transformation of human or animal cells growing in a tissue culture, Dr. Black said, has these other advantages: • The oncogenic event is produced rapidly and the proportion of cells transformed can be measured.

The research worker can focus on the event in the test tube and observe it continually.

• The variable factors present in the animal have been removed.

• Screening of many different viruses is easier in the test tube than in the intact animal.

Scientists report good correlation between results from test tube transformation and from work with animals, although it has not been proved that a virus which causes transformation of certain cells in vitro will invariably produce a tumor in the intact living organism.

Transformation Demonstrated

Malignant transformation of cells in the test tube by some viruses was demonstrated in the early 1950s. A spurt in the field of virus-cancer research came in 1959 with the demonstration that polyoma virus will transform cells in vitro.

Conference proceedings will be summarized by Dr. Albert Sabin, developer of the oral polio vaccine and winner of the 1965 Albert Lasker Medical Research Award, who is a member of the NIAID Advisory Council.

Dr. Sabin is Director of Virology and Cancer Research at the Children's Hospital Research Foundation, Cincinnati, Ohio. Another speaker will be Dr. Ian A. MacLeod, director of the Institute of Virology, Glasgow, Scotland.

The work of most of the other scientists participating in the symposium has been or is currently supported by NCI or NIAID grants or contracts. The University of Chicago also receives NCI training grants for its Cancer Training Program.

In Biochemical Fields

• Biochemical factors in activation and inactivation of drugs.

• Elucidation of the metabolic pathways of noradrenalin and adrenalin in the body.

• Uptake, storage and release of noradrenalin in the sympathetic nerves and the effect of drugs on these processes.

• Biochemical functions of the pinacal gland and how such functions are controlled by the sympathetic nervous system.

Other Discoveries Noted

Dr. Axelrod has been responsible for many other scientific discoveries, including some 15 enzymes involved in the formation and metabolism of several hormones, and the inactivation of many drugs.

He has also identified four normally occurring metabolic compounds in the urine which have proved useful in diagnosing tumors of the sympathetic nervous system.

Dr. Axelrod has devised many micro-methods for measuring drugs, hormones and enzymes. He has also traced several drugs, hormones and biogenic amines through the body and determined their role and effect on body processes.

He has authored or co-authored more than 250 professional papers and has lectured widely both in this country and abroad.

Prior to his present position, he was senior chemist with the National Heart Institute.

Dr. Axelrod received his B.S. degree from the College of the City of New York, his M.A. degree from New York University, and his Ph.D. from George Washington University.

Dr. Axelrod is the second NIMH scientist in two years to be cited by the Association for Research in Nervous and Mental Diseases. Dr. Paul MacLean, of the Laboratory of Neurophysiology, won the award last year.
Dr. Allen Named Advisor On Hospital Computers

Dr. Scott Allen has been named Advisor on Hospital Computer Systems to the Director of the NIH Clinical Center, Dr. Jack Masur.

Dr. Allen will take part in a feasibility study, already underway at the CC, of the use of computers in a nuclear critical hospital environment.

The study includes determination of accuracy and practicability as well as costs and the extent to which they will be offset by manpower savings. This program may eventually involve the use of a time-shared central hospital storage and retrieval system.

The long-range purpose of the study is to demonstrate to hospital administrators whether the installation of computers in hospitals is advantageous.

Dr. Allen has just completed 2 years of computer research at Harvard University and Massachusetts General, where an extensive NIH-sponsored research and development program is underway.

Dr. Schmitt Discusses 3 Brain Systems In Explaining the Neurosciences Program

By Hilah B. Thomas

The Neurosciences Research Program—its scientific basis, how it operates and its future—was explained by Dr. Francis O. Schmitt, Institute Professor at the Massachusetts Institute of Technology, at a recent seminar sponsored by the National Institute of General Medical Sciences. The NRP is an independent research institute established in Boston in 1962.

Dr. Schmitt said that the central problem in science today is to understand the development and workings of the human brain. Knowledge which he says has more potential for good or evil than any bomb.

Dr. Schmitt believes that tools will be found for mind control, and that most scientists today are unaware of the revolution taking place in the science of the mind. Schmitt outlined three aspects of brain function in discussing the scientific basis of the NRP. He described the neuronalus, the aspect of the brain, its oldest and simplest system, which relates the animal with its environment.

The contractile net in some protozoa, with a center near the nucleus and fibrils extending to the cilia, is an example of the “doorbell effect” in which a sensory input (animal bumps an object) goes through an automatic circuit (network or neuron-synapse-muscle) and results in an effector output (animal jumps or swims away).

Brain Stores Information

The second aspect of the brain (cognition, memory, and learning) involves a storage mechanism. This mechanism, which is unknown in animals below the worm, is a network in primitive animals. In vertebrates it lies in the forebrain; in man it may be hidden in the limbic system.

The third aspect of the brain deals with cognition, answers the question “Who am I?”, plans for the future, uses symbols of speech and writing, and makes abstractions. This system, which appears to be the unique gift of man, lies in the neocortex where 70 percent of man’s 10 billion neurons are found.

The primary question, of course, is how does this system work? Dr. Schmitt explained that the nerve impulses, which appear to be basically similar, may act through molecular recognition as switches.

This recognition could be selective or directional, and the arrangement of amino acids on these polymers could change the shape of the molecules enough to act as a code for most of these reactions in much the same way as the nucleic acids and gamma globulins known to code information.

Many physiologists, behavioral scientists, and psychologists who are accustomed to thinking of the brain in terms of systems and circuits find this idea of molecular coding repugnant at the present time.

The Neurosciences Research Program represents an effort to integrate the various approaches to understanding the mind into a new type of thought with a new idiom.

Activities Described

Associates in the NRP are 31 scientists from all over the world working in the physical, chemical, mathematical, biological and medical sciences. The Program’s headquarters is located in a Center at the American Academy of Sciences in Boston, with a permanent staff providing library, communication, and investigative services to members.

NRP Associates meet regularly to identify important problems for study and set up workshop sessions. A small group of scientists interested in a particular problem are invited by the NRP to attend the workshop and present papers. Accounts of these meetings are sent to all Associates who contribute any information or research results they may have, and final results of the discussions are published in the Bulletin of the NRP which is distributed around the world. In addition interested scientists come to Boston to work at the Center or in Dr. Schmitt’s laboratory for various periods of time, and may also attend the workshops.

Advantages Are Many

All these activities, Dr. Schmitt said, result in corporate thinking, new ideas, new recruits in the field, and rapid research developments which are disseminated throughout the scientific community.

The NRP, which receives support from both private sources and government agencies, has been described as a “sort of voluntary working study section.” Dr. Schmitt is confident that similar facilities could also be designed for other science branches.

Mayo Alumni News Sought

Alumni of the Mayo Clinic, Rochester, Minn., are requested to report to W. J. Holmes, Editor of the Mayo Alumni, any news-worthy items of their activities.

Stephen Ackerman Chief Of Planning. Evaluation Branch in New Division

The appointment of Stephen J. Ackerman as Chief of the Planning and Evaluation Branch of the new Division of Regional Medical Programs, National Institutes of Health, was announced recently by Dr. James A. Shannon, Director of the NIH.

Mr. Ackerman comes to NIH from the Public Health Service’s Bureau of State Services, where he has been Associate Chief for Planning and Analysis since 1962.

In his present position, Mr. Ackerman will be responsible for the overall development of program plans and evaluation of the achievements of the Regional Medical Programs to combat heart disease, cancer, and stroke.

Born in Washington, D.C., Mr. Ackerman received the B.S. and LL.B. degrees from Georgetown.

Background Cited

In 1942 he worked for the Federal Reserve Board and later was an economic statistician at the War Production Board until 1945.

After World War II Mr. Ackerman joined the PHS Bureau of Medical Services as an economic statistician. He became a budget examiner with the Bureau of Budget in 1951, and was admitted to the District of Columbia bar in that year. In 1953 he joined the BSS as Financial Management Officer.

From April 1964 to April 1965 Mr. Ackerman served as Executive Secretary to the President’s Commission on Heart Disease, Cancer, and Stroke.

Pfc. Paul J. Weddle, Plant Safety Branch, was selected as Guard of the Month for January for prompt action in alerting authorities to a malfunctioning machine in the Clinical Center, thereby preventing serious damage to the $15,000 machine.—Photo by Ralph Fernandez.
GERM-FREE
(Continued from Page 1)

This germ-free rat takes a cautious approach to his meal at feeding time. He is housed inside a germ-free tank and fed by a caretaker through a long glove attached to the tank. —Photo by Jerry Hecht.

these animals provide nearly the ultimate in research animals now available.

The germ-free animals provide the original stock for pathogen-free colonies. Germ-free animals are raised in complete isolation, but pathogen-free animals, raised in limited access rooms, come in direct contact with caretakers.

To prevent the introduction of pathogenic or detrimental organisms, everything entering the PF areas, including personnel, are subjected to strict decontamination procedures.

Breeding Procedure New

This highly controlled breeding and handling of research animals is a relatively new procedure.

Not long ago the major requirement for laboratory animals was that they be reasonably healthy. But lately more research investigators are requiring animals which are also free of infections, which are genetically defined, have been reared in a constant environment, and have been fed a standard diet.

Responding to these added requirements, the LAB, under the direction of Dr. Robert J. Byrne, Chief, has embarked on its long-range program for upgrading the quality of animals available for use to NIH scientists.

"Our program is a step in the continuous path to higher quality research animals," says Dr. Charles W. McPherson, Assistant Chief of LAB.

Goal Described

"The ultimate goal is a completely defined animal; one that is defined genetically, microbiologically, nutritionally, and environmentally. If this is accomplished, it would remove many of the variables now present in animal research," he said.

Working with Drs. Byrne and McPherson are two others who have been instrumental in improving the animals in both quality and genetic makeup. They are Dr. Cobert D. LeMunyon, Chief of the LAB Animal Production Section, and Dr. Carl T. Hansen, Associate Chief (Genetics) of the Section.

Dr. McPherson pointed out that the germ-free and pathogen-free animals and RIF-free eggs are now available to NIH scientists and that he expects increasing requests for these.

He said that eventually these animals are expected to replace the conventional ones produced in NIH colonies here. The animals are now housed on the reservation, but expansion of the program calls for new facilities at the NIH Animal Center in Poolesville, Md.

106 Employees Volunteer For 'Common Cold' Study; More Urgently Needed

As a result of requests appearing in the NIH Record, 106 NIH employees have volunteered since September 1965 for the "common cold" study conducted since late 1962 by NIAID's Laboratory of Infectious Diseases. The study needs a continuing supply of volunteers.

Employees with colds are requested to aid this long-term project by contributing samples of nasal secretions plus two blood samples. Participants receive $2 for each blood sample.

Appointments may be made by calling Mrs. Sara Kelly or Harvey James on Ext. 65811. It would be best to do so within the first three days of infection.

The researchers would like employees, if possible, to schedule appointments in the morning, since the processing of blood samples and nasal secretions requires considerable time.

Dr. Ralph G. Meader, former NCI Associate Director for Grants and Training, and now Deputy to the General Director, Massachusetts General Hospital, Boston (left), accepts a scroll citing his distinguished service in the field of cancer. It was presented Jan. 19 by Dr. Carl G. Baker, Associate Director for Program, NCI.—Photo by Thomas Joy.

Dr. J. Franklin Yeager, NHL Associate Director, Retires After 30 Yrs.

Dr. J. Franklin Yeager, Associate Director for Extramural Programs of the National Heart Institute, recently retired after 30 years of Government service. He has been one of the key figures in the development of the Heart Institute's research and training grants program since its inception in 1949.

Dr. Yeager came to NIH in 1948 after a distinguished career in teaching and research in basic physiology. Following a year as Executive Secretary to the Hematology and Physiologic Study Section of the Division of Research Grants, he joined the developing Grants and Training Branch of the NHL.

Named Associate Director

Two years later he became Chief of the Branch and in 1961 he was appointed Associate Director for Extramural Programs.

The National Heart Institute, with its mission to seek the causes, prevention, and methods of diagnosis and treatment of cardiovascular diseases, obligates approximately 75 percent of its billion-dollar budget to grants-in-aid for research, training, and fellowships through its Extramural Program activities.

Providing creative leadership and imagination, Dr. Yeager has influenced and directed the Heart Institute's grant activities in many ways. During the period 1952-1953 the whole NIH program of graduate training was developed under his leadership.

He was a charter member and Chairman of the Research Subcommittee of the NIH Executive Committee for Extramural Affairs, and recently with training grant programs. It was this committee that drafted many of the regulations governing stipends and educational requirements.

Other Services Noted

In 1951 he served as Chairman of the Advisory Committee on Grant Statistics and was a member of a task force appointed by the Director of NIH in the fall of 1958 to undertake a study of the impact of the NIH grants programs on the medical schools of this country. Dr. Yeager also played a critical role in the establishment and development of the Regional Primate Research Centers of NIH.

The recipient of NIH and Department of Health, Education, and Welfare Superior Service Awards in 1956 and 1960, Dr. Yeager was a member of Harvard University's Visiting Committee to Biological and Research Facilities and a member of the committee to select recipient of the Ida B. Gould Memorial Award for Research on Cardiovascular Problems.

He has traveled to many other countries, including India, Lebanon, Israel, Japan, Kenya, and Panama, as representative of the Heart Institute.—Photo by Jerry Hecht.

Dr. William H. Stewart, PHS Surgeon General and former NHI Director (left), joins Dr. and Mrs. J. Franklin Yeager at a reception honoring Dr. Yeager upon his retirement after three decades of Federal service, 18 of them with the Heart Institute.—Photo by Jerry Hecht.

General Hospitals Seen As Psychiatric Resource

A recently completed nation-wide survey revealed that general hospitals treated and discharged almost 600,000 psychiatric patients in the most recent 12-month reporting period. This represents a 40 percent increase in psychiatric services rendered by general hospitals over the past 10 years.

A total of 5,291 general hospitals responded to the survey, which was conducted jointly by the American Hospital Association and the Office of Regional Primate Research Centers.

Results of the survey were announced by the Public Health Service.

There are 3,183 general hospitals that now admit psychiatric patients—1,046 of them for the express purpose of diagnosing and treating such patients.
Studies of Sea Urchins To Explore Cell Growth

What molecular mechanisms enable cells to multiply, specialize and join together to form tissues? Through studies of primitive animals such as sea urchins, a group of scientists at the University of California in Berkeley will search for answers to this and other questions, with the aid of a grant from the National Institute of General Medical Sciences.

The award, with first-year support, amounting to $217,715 was announced recently by Surg. Gen. William H. Stewart of the PHS.

The California investigators plan to explore relationships between individual cells and the animal as a whole, as well as reactions and movement within cells. No one knows at present what enables a cell to move, to divide, to attach to other cells, and to change from an unspecialized egg to a specialized tissue cell.

Cell Processes Investigated

Dr. Daniel Mazia, the principal investigator, is professor of zoology. Using modern techniques of chemistry and microscopy combined with special methods for growing cells, he and his associates will investigate the molecular mechanics of cell processes.

Other questions which Dr. Mazia and his associates will investigate concern why most cells stop dividing and begin to specialize after the organism reaches a certain stage, how certain hormones stimulate particular cells to make special proteins, where in the cell the proteins are made, and what makes cells assume definite patterns.

It would appear here that at least one NIH employee (center, hands in air) was overwhelmed by the blizzard of ’66. But the “victim” was posed by Tony Anastasi, DRS Information Officer, to simulate burial in the snow. R. R. Auvil (left) and Tom Nettles, Grounds Maintenance and Landscaping Section, DRS, do their best to extricate the victim.—Photo by Ralph Fernandez.

Dr. Roy Hertz Admits 1st NICHD Patient to Clinical Center Jan. 16

When Dr. Roy Hertz, Scientific Director of the National Institute of Child Health and Human Development, admitted the Institute’s first patient to the Clinical Center Jan. 16, he marked another important milestone in the history of clinical research at NIH. Dr. Hertz had also admitted the first patient to the Clinical Center over 12 years ago.

NICHD, recently reorganized, has allotted 13 of the CC’s 516 beds. Members of the new clinical care staff include Dr. Griff Ross, Chief; Dr. William Odell, and two clinical associates, Dr. Howard Kulin and Dr. Arlene Riskind.

First Patient Admitted

The first CC patient, admitted by Dr. Hertz on July 6, 1953, was Charles C. Meredith of Germantown, Md. Although Mr. Meredith’s condition was listed as “serious,” he lived until September 1954.

The assignment of beds to NICHD was the first addition to the CC of an Institute clinical investigation program in 10 years. In the CC’s first year, six Institutes were allotted beds, and NIDR was added in December 1955.

The Washington Evening Star in 1953 described the admission of the first patient as follows:

“The $64 million Clinical Center in Bethesda, seven years in planning and construction, today opened its doors and went into business.

“A gray-haired, elderly man, identified only as a ‘Montgomery County farmer,’ was the first patient to enter the impressive structure operated by the Public Health Service.

“He chatted cheerfully with a doctor about farming and then was wheeled away to become the object of intense treatment and research. A spokesman of the Center would describe his illness only as ‘serious.’

“Sixteen other patients were to arrive throughout the day. Eight were said to be heart patients, two arthritic patients and six—victims of cancer . . . Officials said they hoped to fill up to 26 beds by the end of the week.”

Charles C. Meredith is shown during admission to the CC on July 6, 1953. With him is Dr. Roy Hertz.—Photo by Vernon Taylor.

Chris Hansen, Chief of DRS, Publishes Article On Environmental Health

The two most important factors influencing our lives, according to many authorities, are heredity and environment. Both are under study at NIH. Many scientists here are studying heredity, but perhaps it’s not as evident that the Division of Research Services conducts a sizeable program in the environmental health area.

An insight into the preventive medical aspects of a good environmental health program is presented in the February issue of the American College Health Association Journal by Chris A. Hansen, Chief of DRS.

In the article Mr. Hansen discusses some of the environmental health projects at colleges and universities.

Programs Listed

Mr. Hansen cites in his article some examples of programs in this area at NIH:

1. Air samples collected during a routine survey of one of the operating rooms revealed evidence of Staphylococcus aureus organisms. A detailed study ruled out the implication of organisms in the physical facilities and narrowed the field to a few of the operating room staff. At the present time, these staff members are being studied to determine how may be shedding the organisms. (Ed. note: Since this article was written measures have been taken to detect, on a routine basis, operating room personnel that are carriers and shedders of the organism and other harmful organisms.)

2. An explosion-proof, activated charcoal filter unit was developed to permit scientists to conduct in a cold room experiments involving large amounts of toxic solvents.

3. Television is being used to correlate bacteriological results of air sampling during surgical operations with actual events occurring in the operating room. In this way, previously unexplainable peak bacteriological counts may be evaluated.

Revised Travel Booklet Gives Vaccine Data

The Public Health Service recently published a revised edition of the booklet, “Immunization Information for International Travel, 1965-66.”

It provides information on vaccine requirements of foreign countries as well as requirements for entrance into the United States. This handy-sized booklet (4½ by 6 inches) was revised as of September 1965.

Copies of the booklet, PHS Publication No. 384, may be obtained from the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402, at 35 cents a copy. There is a discount of 25% for 100 or more copies delivered to the same address.
**NEW ASSISTANTS**

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Not all of NIH could dig out as quickly as Bethesda employees. At the Poolsville, Md., Farm 1,500 animals were isolated, together with their caretakers. Through the kindness of the Army Material Command, 2 helicopters transported 4 Laboratory Aids Branch personnel, 2 Ground Maintenance Section personnel, and supplies. John Leach of Plant Safety Branch, OAM, coordinated enough supplies such as food and blankets to ride out any further emergency. Employees are shown unloading the supplies. Third from left is Dr. Thomas P. Cameron, Chief of the Animal Conditioning Section. Dr. Raymond Zinn, Chief of the Biological Service Section at Poolsville, is pictured with his back to the camera.—Photo by Thomas Joy.

## 4th, 5th Radio Programs In Cancer Series to Be February 26, March 5

"Development and Use of Drugs —Chemotherapy in Cancer Research," the fourth program of the NCI Research Report Series, is scheduled to be broadcast locally over WAMU-FM (88.5 mc) Saturday, Feb. 26, at 4:30 p.m.

Scientists will discuss the development of anticancer drugs, especially through the collaborative program coordinated by the NCI.

In this program chemicals are tested in animal systems for effectiveness and toxicity and those found to be active are then studied in human patients.

Drugs now in use and some of the research problems under investigation will be featured.

The six participants in this program will be present or former members of the NCI with one exception—a vice president of Ketek Met Laboratories.

"Mathematics in Cancer Research," the fifth program of the series, is scheduled for the same time and station on Saturday, March 5.

## Helen Grosskopf Retires From CC Nursing Dep't After 18 Years Service

Helen Grosskopf, Assistant for Education and Training to the Clinical Center Nursing Department Chief, retired Feb. 1.

Miss Grosskopf was a Senior Nurse Officer (equal to Navy commander) in the PHS Commissioned Officer Corps. She is a veteran of 18 years' service with the Corps, and also served 2½ years in the Navy Nurse Corps during World War II.

Miss Grosskopf received her B.N. at St. Luke's Hospital, Chicago; a B.S. degree in nursing education at Marquette University, Milwaukee, and an M.A. degree in nursing administration from Teachers College, Columbia University.

She joined the CC in 1956 as Assistant Director, Department of Nursing Services, and in 1960 she was named Assistant Director of the Nursing Department.

Miss Grosskopf is remembered a pioneer in the study of fluorides and epidemiological studies of the effects of fluoridation, Dr. Arnold has received an honorary Sc.D. degree from Western Reserve University, as well as the Callahan, Geis, and Dean Awards.

Dr. Sencer has been a member of the PHS Commissioned Corps since 1937. A native of Grand Rapids, Mich., he was educated at Wesleyan University, Middletown, Conn., and the University of Missouri, and received his medical degree from the University of Michigan in 1951 and a master degree in Public Health from Harvard University in 1958.

Prior to appointment as Deputy Chief of CDC in 1964, he spent four years as an Assistant Chief. His entire career has been in the area of infectious disease control.

Dr. Ebel continued in this position in the Division of Indian Health in 1960, he was Indian Health Area Director.

## Computer

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plotted against wave length.

At the time Mr. Noble and Dr. Hayes did their pioneering work, early models proved useful at NIH for organizing academic data, for analyzing a number of infra red or ultra-violet-visible spectra, for measuring rather complicated blood pressure graphs and for several problems in biostatistics.

"It seems fantastic to those of us who work with ideas like this, how long it takes for a model to eventually reach the manufacturing and marketing stage," said Mr. Noble.

"It takes a long time to interest something new sits on the shelf or finds use only among a small circle of scientists.

**Experience Noted**

Dr. Ames joined NIH after obtaining a Ph.D. from the California Institute of Technology in 1953. He worked in NIAMD's Laboratory of Biochemistry and Nutrition as a PHS Postdoctoral Fellow for one year before transferring to NIMH. He returned to NIAMD one year later.

During 1961 he spent a sabbatical year working with Dr. Francis Crick at the Cavendish Laboratory, University of Cambridge, England, and with Dr. Francois Jacob at the Institut Pasteur, Paris, both subsequently Nobel laureates, under a National Science Foundation Senior Postdoctoral Fellowship.