

the NIH Record

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

July 2, 1963
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NATIONAL INSTITUTES OF HEALTH
PUBLIC HEALTH SERVICE

License Is Granted For 3-in-1 Live Polio Vaccine

Dr. Luther L. Terry, Surgeon General of the Public Health Service, has announced the licensing of a three-in-one Sabin live, oral, poliovirus vaccine.

The trivalent poliovirus vaccine is designed to confer simultaneous immunity against all three types of polio.

It will be produced and marketed by Lederle Laboratories of Pearl River, N. Y.—one of three firms licensed for the monovalent live polio vaccines, Sabin Types 1, 2, and 3.

Advantages Cited

"The main advantage of a trivalent live poliovirus vaccine," Dr. Terry said, "is that there is no need to keep track of the separate types of vaccines administered—a potentially confusing situation for health authorities and vaccinees alike.

"Moreover, in a community where the population already possesses

(See POLIO VACCINE, Page 7)

Civil Service Commission Proposes New Financing Of Retirement System

The Civil Service Commission recently recommended to Congress a major forward step in the long-range financing of the Civil Service Retirement System.

In proposed legislation, the Commission asked that Federal agencies make supplemental contributions to the Retirement Fund each fiscal year beginning in 1965.

Contributions Increase Annually

These contributions would be 0.5 percent of the employing agency payrolls in 1965 and would be increased by 0.5 percent each year until 1986 when they would level off at 11 percent.

The supplemental contributions would be in addition to the 6.5 percent of payrolls agencies have been contributing by law since 1957.

No increase is proposed in the 6.5 percent of basic salary now contributed by covered employees. CSC said that employees are paying 52 percent of the cost of the retirement benefits they are now earning.

(See NEW FINANCING, Page 8)

Medical Leaders Cite Accomplishments Of NIDR at 15th Anniversary Seminar

Significant advances in dental research during the 15 years since establishment of the National Institute of Dental Research were hailed by medical leaders at a scientific seminar marking the Institute's 15th anniversary on June 14 in the Clinical Center auditorium.

In welcoming addresses to the more than 400 guests, Dr. Luther L. Terry, PHS Surgeon General, and Dr. James A. Shannon, NIH Director, spoke of the steady progress in the Institute's scientific programs.



Dr. Joseph F. Volker addresses the Dental Institute anniversary seminar.—Photo by Sam Silverman.

Lauds NIDR Scientists

"NIDR's own research team and its grantees both here and abroad have contributed a vast amount of knowledge ranging from the immediately practical to the extremely fundamental," Dr. Terry said. "As a result, more is known today than ever before about tooth decay, periodontal diseases, malocclusion and cleft palate. Such an illustrious past augurs well for a productive future."

Dr. Joseph F. Volker, Vice President for Health Affairs of the University of Alabama and a member of the National Advisory Dental Research Council, cited the impact of the Institute's extramural grants programs on the Nation's dental schools. He noted that this program has "permitted dental schools to fulfill one of their long-neglected major objectives—that of research."

Notes Research Partnership

"There has now evolved," he said, "what is essentially a partnership between government and the university, between NIDR and the dental schools; and it may be that this relationship will become one of even greater mutual dependence in the years ahead. In my judgment, NIH should be commended for its efforts to keep dental and medical schools informed of its programs and problems."

Noting the critical manpower shortage in the dental profession and the need to expand existing dental schools and train new teachers, Dr. Volker said, "It is to the credit of NIDR that this acute problem was anticipated and positive steps taken to cope with it by instituting a training program for

(See NIDR ANNIVERSARY, Page 6)

Scientist, Ordained Minister, Will Help Bridge Gap Between Science, Religion

By Frances Dearman

An NIH research scientist last week became an ordained minister. Dr. Sjoerd L. Bonting was ordained by the Rt. Rev. W. F. Creighton, Protestant Episcopal Bishop of Washington, during ceremonies at the Washington Cathedral on June 29.



Dr. Sjoerd L. Bonting in his Clinical Center lab.—Photo by Bob Pumphrey.

Dr. Bonting emphasizes that his duties as Head of the Section on Cell Biology in the Ophthalmology Branch, National Institute of Neurological Diseases and Blindness, will in no way be altered by his ordination.

Becomes U. S. Citizen

Pipe in hand, the quiet-spoken Dutchman who has recently become a United States citizen explains why he entered the ministry.

Convinced of the need for a frank confrontation between science and religion, Dr. Bonting realized that he could take a more active part in a dialogue between

(See SCIENTIST-MINISTER, Page 4)

Two Police Training Films To Be Shown Next Week

NIH employees will have an opportunity next week to see two new 35-minute training films for law enforcement personnel, produced jointly by the National Institute of Mental Health and the Louisiana Association for Mental Health.

"Booked for Safekeeping," a film on recognizing and handling abnormal people, will be shown at 3 p. m. next Tuesday and Wednesday (July 9 and 10) in the Clinical Center auditorium.

"The Cry for Help" (see NIH Record of June 5) will be presented there July 9 and 10 at 3:40 p. m. This movie, which deals with the handling of suicidal individuals, was awarded highest honors among mental health and psychology films at the Fifth Annual American Film Festival last May.

Dr. Harold Hildreth, NIMH Research Psychologist, served as project director for both films.

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The NIH Record reserves the right to make corrections, changes or deletions in submitted copy in conformity with the policy of the paper and the Department of Health, Education, and Welfare.

NEWS from PERSONNEL

PMB RECRUITMENT RESULTS

Approximately 200 clerk-typists and clerk-stenographers have been placed in permanent positions throughout NIH in the past six weeks as a result of an intensified field recruitment program conducted by the Recruitment and Placement Section, PMB.

Metropolitan area high schools and business colleges have been participating in the program, which was begun in January of this year.

Mrs. Mildred Dougherty, Placement Specialist, has been responsible for contacting and visiting schools, coordinating activities with school officials, interviewing students and administering Civil Service examinations at the schools to expedite placement.

In addition, student tours and visits to NIH have been arranged to attract students and inform them of clerical employment opportunities.

To assure continued favorable results in clerical recruiting programs, future plans of the Recruitment and Placement Section include an increased publicity program and a broadening of the geographical areas contacted to encompass additional schools and business colleges.

SEPARATION STUDY

The Program Evaluation and Reports Section, PMB, recently completed a study of Civil Service separations from NIH during 1962.

Of the more than 2,000 employees who left last year, 453 departed because of the expiration of limited appointments. Others left for various reasons, the most frequent of which was to complete

R&W Hamsters to Meet Next Tuesday, July 9

The next regular business meeting of the Hamsters, dramatic group of the NIH Recreation and Welfare Association, will be held next Tuesday (July 9) at 8 p. m. in Wilson Hall, Building 1.

The agenda includes a discussion of future dramatic productions and a report on some of the results obtained from the recently organized, informal Summer Workshop now being conducted by the Hamsters.

The latter group, which meets every Wednesday at 9:30 p. m. in the assembly hall of the Clinical Center, includes an instructional program of acting, directing, staging, and other aspects of the theater. All those interested in the theater arts are invited to attend these meetings.

Additional information regarding the Summer Workshop may be obtained from Jerry Osborne, Ext. 65803.

their education (384).

Other reasons for leaving were: to marry or accept home responsibilities (244); to transfer to other Federal activities (289, including 53 transfers to other parts of HEW); to accept positions in private industry (191); to move to another area (153); and to retire (60).

Most separations occur in the lower grades, where the bulk of NIH employees are in clerical, maintenance or supportive positions.

The results of this study are being made available to Personnel Officers of Institutes and Divisions so that they can make a more detailed study of the turnover in their areas and plan any actions to remedy situations which appear abnormal.

NIH Stamp Club Meets Here Monthly, Philatelists Have Varied Collections

By Marjorie Hoagland

The NIH Stamp Club, headed this year by Dr. Edward P. Offutt, Deputy Chief of Extramural Programs, National Institute of Arthritis and Metabolic Diseases, has attracted a growing number of members and sparked a wide range of interest during 1962-63.

Meeting the first Thursday of every month, the club has members throughout NIH. Their collections range in subject from an important early pre-Israel collection to the new African states, and from topicals such as Fine Arts (painting and music) and Fauna to Railroads and Birds.

Bruns Is Speaker

Franklin P. Bruns, formerly Curator of the Philatelic Collection of the Smithsonian Institution and now head of the stamp department at a Washington department store, was the most recent speaker of the current stamp club season.

He addressed the members on how designs are selected for U. S. stamps and told of his experiences as a curator at the Smithsonian.

Mr. Bruns is nationally known as a stamp authority and as a syndicated writer on the subject, and is a member of the Committee for the Selection of United States Stamps.

Other meetings have been devoted to work by members on their individual collections, with time for

"shop talk" on virtually every aspect of stamp collecting.

Among countries represented by outstanding collections in the NIH group are the following: Israel, Switzerland, Africa, Spain, United States, the Netherlands, Canada, Egypt, France, Denmark, Finland, and the British Colonies.

There are also collections of United Nations stamps, U. S. Mint and First-Day Covers, plate blocks of U. S. and other countries, a Western Hemisphere collection, Gold Coast, and general collections.

New Members Welcome

Anyone working at NIH who has a stamp collection or is interested in forming one is eligible to join.

The next meeting has been set for Thursday, July 11, to avoid the Fourth of July holiday. At that time there will be an election of officers to assume their duties in September.

Philip P. Simon, Executive Officer of the Clinical Center, is Secretary for the current year. There also is an Executive Committee, to which former officers automatically belong.



The covers depicted were selected from the broad collection of more than 5,000 owned by Roy Perry, Chief of the Photographic Section of the Medical Arts and Photography Branch, DRS, a charter member of the NIH Stamp Club. They come from many foreign countries, exemplifying the relationship between world health and research here at NIH. Among the covers visible here are the Independence stamp of the Congo (lower left), the first stamps issued by the Federation of Mali (right center), an overprint of one of the earlier China provisional stamps from Formosa (left center), and one from Lebanon in the pre-United Arab Republic era (upper left).—Photo by Paul Mortillaro.

Study Reveals Role of Muscle Innervation in Neuromuscular Junction

Scientists at the National Institute of Neurological Diseases and Blindness have found that nerves implanted into denervated rat muscle are capable of forming a new neuromuscular junction at regions other than the original neuromuscular junction.

The neuromuscular junction is composed of a nerve ending in close juxtaposition to an area called the sole plate on the muscle fiber, a specialized area of the muscle membrane which contains a high concentration of the enzyme, cholinesterase.

There is considerable evidence that the transmission of the nerve impulse from the nerve ending to the muscle membrane is mediated by the chemical, acetylcholine (ACh).

Cholinesterase Destroys ACh

As an impulse reaches the nerve ending, a small amount of ACh is released and diffuses across the small gap between the nerve ending and the sole plate. The ACh reacts with a receptor in the sole plate and is then quickly destroyed by the enzyme cholinesterase.

Drs. Lloyd Guth and Andrew A. Zalewski of NINDB's Laboratory of Neuroanatomical Science, used a histochemical stain for cholinesterase as a criterion for determining the presence or absence of a sole plate.

They found that attempts to implant a nerve into a normally-innervated rat muscle failed to induce the formation of a functional neuromuscular junction.

Establishes New Junction

A nerve implanted into a denervated muscle established a new junction but only one new junction per muscle fiber. Furthermore, sites other than the original neuromuscular junction in denervated muscle are capable of forming a new junction provided that a firm connection between nerve and muscle can be established.

It is clear that the accumulation of cholinesterase at the muscular sole plate is determined by the presence of the nerve. The exact nature of this neural influence is not known, and the present experiment does not distinguish between the possibilities that the nerve causes pre-existing cholinesterase to accumulate at the neuromuscular junction, or that the nerve stimulates muscle to synthesize cholinesterase.

These results were reported in *Experimental Neurology*.

Electron Micrographs Reveal Details During Tooth Enamel Mineralization

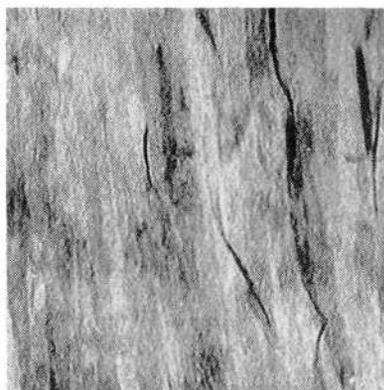


Fig. 1

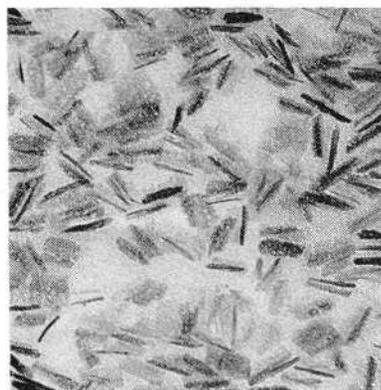


Fig. 2

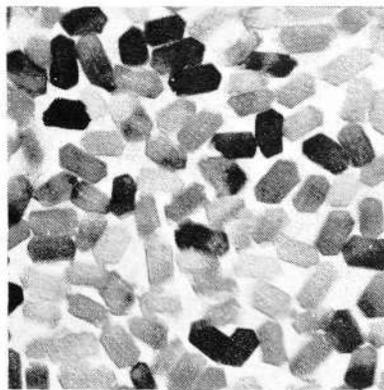


Fig. 3

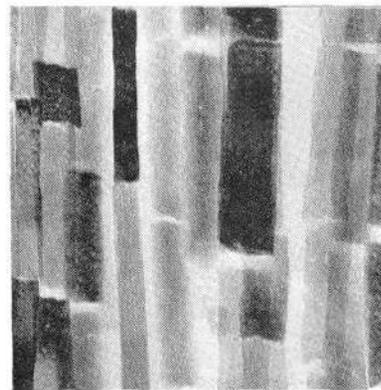


Fig. 4

In the development of the enamel of the teeth, the crystals change both in size and shape. Precise definition of these changes during enamel mineralization are illustrated in the four electron micrographs above, the work of Drs. Marie U. Nysten, Edward D. Eanes, and Karl-Ake Omnell, of the Laboratory of Histology and Pathology, National Institute of Dental Research.

At first the crystals form long, straight ribbons 10 Angstroms thick and 200 Angstroms wide. (There are 250,000,000 Angstroms in an inch.) There is such close end-to-end relationship of the individual crystals that further lengthwise growth seems almost impossible, although ample growth space appears between the ribbon-like rows. (Fig. 1—longitudinal section.)

Cross Section Shown

In Fig. 2, the ribbon-shaped crystals are viewed in cross section where they appear as slender rods. The formation of the long ribbons marks the end of the rapid first stage of the crystal growth.

In the second stage the crystals increase gradually in width and thickness and achieve their final shape as long hexagonal rods. (Fig. 3—cross section; Fig. 4—longitudinal section.)

This change in crystal form during enamel development was demonstrated in the teeth of rats. The spaces which remain between the crystal rows in mature enamel are a possible pathway for cariogenic

agents. The role these spaces may play in the onset of dental decay is being pursued.

This work is reported in the July 1963 issue of the *Journal of Cell Biology*.

W. J. Branigan Receives Award in Accra, Ghana

William J. Branigan, medical technician of the National Institutes of Health West African Laboratory, recently received a Superior Accomplishment Award, presented by William P. Mahoney, Jr., U. S. Ambassador to Ghana, in a ceremony at the Korle Bu Hospital, Accra.

The award was in recognition of Mr. Branigan's success in obtaining and developing laboratory space for the collaborative research project. Previously, lack of laboratory space had curtailed seriously the research conducted by the medical project staff. His example in the face of difficult circumstances was praised by both Ghanaians and Americans in Accra.

Ambassador Mahoney handed Mr. Branigan a letter of congratulations from Dr. Kenneth M. Endicott, Director of the National

Shannon Appoints Marjorie Wilson To Training Post

The appointment of Dr. Marjorie P. Wilson as Assistant to the Associate Director for Training in the Office of the Director, NIH, was announced recently by Dr. James A. Shannon, NIH Director.

In her new position Dr. Wilson's duties will encompass all aspects of the training and fellowship programs of NIH. She will act as liaison between Institute staffs and various other NIH groups on matters relating to training programs, will assist in the preparation of staff position papers in collaboration with selected Institute personnel, and will act as representative of the Office of the Director at NIH training meetings and others in which NIH has an interest. In his absence, she will act in general for Dr. Charles V. Kidd, Associate Director for Training, NIH.

Formerly With NIAMD

Dr. Wilson moves to her new post with over two years' experience as Chief of the Training Branch of the National Institute of Arthritis and Metabolic Diseases.

Before coming to NIH she was with the Veterans Administration as Assistant Director of the Education Service. Previously Dr. Wilson served first as Chief of the Residency and Internship Division, and then as Chief of the Professional Training Division.

Her work with the VA was concerned with programs of graduate medical education and also the Clinical Investigator and Senior Investigator programs. She dealt extensively with the relationship between the VA hospitals and the Council in Medical Education and Hospitals of the AMA, the Deans' Committees, and the Association of American Medical Colleges.

Pennsylvania Background

Dr. Wilson attended Bryn Mawr College and received her M.D. degree from the University of Pittsburgh School of Medicine in 1949. After interning at the University of Pittsburgh Medical Center Hospitals, she was a resident at Children's Hospital in Pittsburgh and Jackson Memorial Hospital in Miami, Fla.

Cancer Institute. In his remarks, the Ambassador said that "the American Government is justifiably proud and appreciative of Mr. Branigan's contribution to the collaborative research project between Ghana and the United States." Mr. Branigan previously was with the Laboratory of Pathology, NCI,

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(Continued from Page 1)

these two as a member of both communities.

After five years of study, he looks forward to discussing problems related to science and theology with his fellow scientists both in and out of the church. He hopes, in fact, to find scientists at NIH who are interested in exploring some of these questions.

The amiable scientist speaks emotionally of the history of religion and science and of the breakdown in communication between the two.

Says Theology Lags

For many years, he recalls, 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.

"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."

To help bridge the gap, some scientists in recent years have become theologians and entered the ministry while continuing their scientific activities. Dr. Bonting is the latest to join this group which includes Dr. William G. Pollard of the Atomic Energy Commission's laboratories, Oak Ridge, Tenn.

Is Netherlands Born

Dr. Bonting, born and educated in the Netherlands, came to the United States in 1952 after receiving his Ph. D. in biochemistry at the University of Amsterdam. He held positions at the Universities of Iowa, Minnesota, and Illinois before coming to NIH in 1960.

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, his wife Susan and their three children live at 5523 Grosvenor Lane, Bethesda. He attends St. Luke's Episcopal Church in Bethesda, where he will assist in the services.

Dr. Robert H. Felix, Director of the NIMH, is a member of the Diocesan Standing Committee which recommended Dr. Bonting for ordination.



National Heart Institute staff members watch as a visitor to the NHI award-winning exhibit (in reclining chair) gets a heart test by electrocardiograph. Left to right: Hanford Moxley, Norma Buscone, the visitor, Dr. Abraham Kagan, and Evelyn Trowbridge.

D.C. Heart Association Reports Record Fund

The Washington Heart Association's 1963 Heart Fund hit an all-time high of more than \$360,000, an increase of \$85,000 over last year's total, Campaign Chairman James J. Saxon announced recently.

"The extraordinary increase in contributions from the National Health Agencies Campaign in the Federal Government and an exceptional legacy of \$54,000 are largely responsible for the most successful campaign in the Heart Association's 15-year history," Mr. Saxon said.

The funds are used to promote heart programs of research, education, and community service, mostly within the District. The Washington Heart Association, as an affiliate of the American Heart Association, contributes 25 percent of its income to the American Heart Association, helping to make possible extensive research programs toward the conquest of heart diseases.

Mrs. Townsend Retires From Cancer Institute

Mildred S. Townsend of the Research Information Branch, National Cancer Institute, will retire from NIH on July 12 after nine years of service. She came to NIH as secretary to James F. Kieley, then NCI Information Officer and now Chief of the Research Information Branch, and has been a correspondence clerk for the past one and one-half years.

Mrs. Townsend moved to this area 18 years ago with her late husband and two sons. One son, Robert S. Townsend, is with the NIH Office of International Research and is now assigned to East Pakistan as Administrative Officer of the Pakistan-Seato Cholera Re-

New Heart Exhibit Wins Award at AMA Meeting

The National Heart Institute's new exhibit, "Screening for Coronary Risk: Demonstration by the Framingham Heart Study," won a certificate of merit at the 112th Annual Meeting of the American Medical Association in Atlantic City, June 16-20.

Physicians attending the meeting were shown how they could use the exhibit methods in their offices to screen heart risk patients.

They were told to watch for the seven risk factors associated with coronary heart disease: high blood pressure, obesity, electrocardiogram abnormalities, age, cigarette smoking, high cholesterol level, and vital capacity.

Award Presented

The award was presented in the Section on Internal Medicine category to Drs. Thomas R. Dawber, Abraham Kagan, and William B. Kannel, all of NHI's Framingham Study.

The exhibit was created by Dr. Kagan and Evelyn Trowbridge, Special Projects Officer of the Heart Information Center. It was designed by William N. Thompson, Director of Visual Aids, DHEW, and produced by Design and Production, Alexandria, Va.

Miss Trowbridge, in charge of information at the exhibit, was assisted by Dr. Joseph E. LeBauer, Dr. Gary D. Friedman, William E. Glennon, Norma Buscone, Theresa Ceredona, Mary Ciccarelli, Patricia McNamara, and Lorna Lyell, all of the Framingham staff, and Hanford Moxley, Linda-Ann Jenks, and William E. Sanders, of the Heart Information Center.

search Laboratory.

Mrs. Townsend's friends and co-workers at NIH will wish her well at a luncheon in her honor July 12.

Dr. Whedon Is Chairman Of NIH Fund Drive for Nat'l Cultural Center

Dr. G. Donald Whedon, Director of the National Institute of Arthritis and Metabolic Diseases, has been appointed Chairman of the NIH fund-raising drive for the National Cultural Center.

Participation by all NIH employees in this nation-wide drive is being solicited by keymen in each Institute and Division.

Commenting on the benefits to be realized from this national forum for the arts, Dr. Whedon said:

"The President reminds us that the 'brightest pages of history . . . reflect the brilliance of some great age of culture. . . ."

"As Federal employees, we can show 'pride in our country . . . by contributing to building the National Cultural Center.'"

Authorized by Congress

This is the first time that a nation-wide, fund-raising campaign for a cultural center has been authorized by the Congress. In the National Cultural Center Act, it designated 13 acres on the banks of the Potomac as the site for the new center. Congress stipulated, however, that funds for the building must come from voluntary contributions.

The drive to raise the \$30 million needed to build the center was launched last November and is now underway across the Nation.

The benefits of programs to be presented by this national organization—built by the American people, for the American people—will be realized throughout the country as well as overseas.

Offers Attainable Goal

Programs will provide an attainable goal for hundreds of talented individuals and cultural groups who have not yet reached a national performing status.

There are symphonies, jazz bands, theatrical and operatic companies, as well as singers, actors, dancers, and poets in every section of the country whose standard of performance is exceedingly high. Although recognized in their towns, regions, or states, they may have had no opportunity for recognition on a national level.

The center will stage a series of national and international festivals where the criterion for presentation will be quality of performance.

This will be the first time this has been done in the Nation's Capital. Here, groups and individuals meriting the honor will be invited to participate.



Dr. Whedon

NIH Spotlight Reveals:

Combination of Interest in Art, Science Leads to Career as Medical Illustrator

By Dick Sheehan

Summer Information Trainee

"Herb has the ability to jump into many complex and different problems, and to finish them rapidly and competently."

This is what Howard Bartner, Head of the Clinical Illustration Unit of the Medical Arts Section, DRS, has to say about Herb Smith, 27, one of NIH's medical illustrators.

One of Mr. Smith's more recent jobs was the construction of two wire models, one of a chick embryo and the other of a human brain. They were done for that portion of an exhibit on mental retardation prepared by the National Institute of Neurological Diseases and Blindness.

The models drew favorable comment when they were shown at the Joseph P. Kennedy, Jr., Foundation Awards dinner, and subsequently in the lobby of the Clinical Center. When the exhibit was shown at the National Science Fair in Albuquerque, N. Mex., it attracted requests for 10,000 pieces of information material.

Does Job in 6 Days

Mr. Smith took only six days to complete the models on a "rush" basis. At about the same time he was also working on a series of surgical illustrations to accompany Dr. Maitland Baldwin's work on his "brain-splitting" operation.

Also recently completed was a series of composite drawings reconstructed from neoprene casts of the vessels of the cat eye. They were done to illustrate the work of Drs. Vernon Wong and Frank J. Macri on the effects of drugs on the blood flow of the eye.

He sculptured and cast a bust of Hippocrates for use by the National Cancer Institute in its exhibit "Landmarks in the History of Cancer Research."

Entries Exhibited

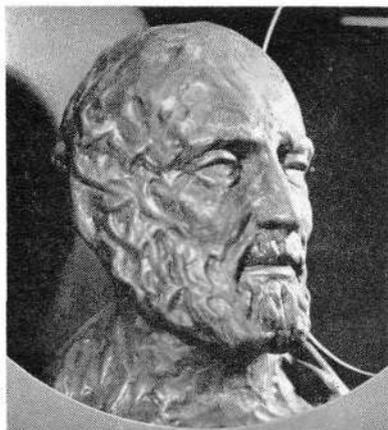
In addition to these projects Mr. Smith had three works exhibited in the Fifth Annual NIH Art Exhibit. Two of these pieces, along with other selected entries and the award winners, were recently on display in the lobby of Building 31.

Mr. Smith says that he got into the field of medical illustration because "it seemed to offer the best combination of my interest in science and art."

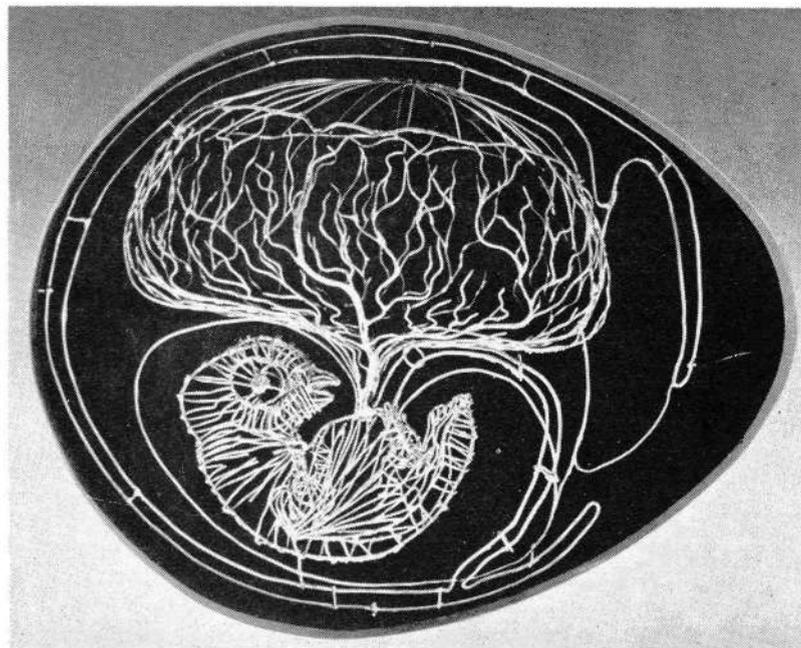
Mr. Smith went through the Detroit public school system and then to Albion College, Albion, Mich. After receiving his B. A. in 1958 he spent a year at the Glasgow School of Art, Glasgow, Scotland. He received his M. A. from Johns Hopkins University's Department of Arts as Applied to Medicine, one of seven such schools in the

country. He began working for NIH on his graduation from Hopkins in June of 1961.

Mr. Smith is married to the former Susan B. Parriott. They have one son.



Herb Smith created this bust of Hippocrates for the National Cancer Institute's exhibit, "Landmarks in the History of Cancer Research." It was first sculptured in Plasticene clay. Then, through casting processes, converted into the final product of polystyrene plastic, antiqued to appear as old bronze. This resulted in a lightweight, durable model that could be easily shipped with the exhibit.



This wire model of a chick embryo, constructed by Mr. Smith, was used as part of an exhibit panel that demonstrated the use of the chick in studies of the effect of drugs on embryonic development.—Photos by Ed Hubbard.

Dr. Zubrod, NCI, Named To New FDA Committee On Investigational Drugs

Dr. Charles G. Zubrod, Director of Intramural Research of the National Cancer Institute, has been appointed to the Food and Drug Administration's new Advisory Committee on Investigational Drugs.

The eight-member committee will bring to the FDA the views of scientists throughout the country, and will call attention to the problems faced by investigators in meeting their requirements on the investigational drug regulations.

Other members of the committee are Dr. Walter Modell of Cornell University Medical School, Dr. Edward Kass of Harvard Medical School, Dr. Sidney Merlis of Central Islip Hospital, Dr. John A. D. Cooper of Northwestern University Medical School, Dr. Joseph F. Volker of University of Alabama Medical Center, Dr. John Adriani of Tulane University, and Dr. Harold Hodge of the University of Rochester.

Light Opera Association Presents 'Mikado' Here

The Montgomery Light Opera Association presented Gilbert and Sullivan's "Mikado" last Thursday night in the Clinical Center auditorium free of charge for the enjoyment of CC patients, NIH employees and their families and friends.

John Burr directed the performance which was arranged by the Patient Activities Section of the Clinical Center.

William B. Page Is Chief of New Office in DRFR

Dr. Frederick L. Stone, Chief of the Division of Research Facilities and Resources, has announced the appointment of William B. Page as Chief of the Division's Architectural and Engineering Office. Established in May of this year, the new Office will assist institutions with all phases of planning modern health research facilities.



Mr. Page

In his previous position as Assistant Chief for Construction, Division of Research Services, Mr. Page assisted in coordinating the planning and construction of a multi-million-dollar program of facilities including NIH laboratories, the new surgical wing of the 500-bed Clinical Center, administrative buildings, NIH field service laboratories in Lexington, Ky., and in Puerto Rico, and the Public Health Service's National Library of Medicine.

Services Described

In his new position, Mr. Page and his staff of architects and engineers will augment the capability of the Division of Research Facilities and Resources to assist institutions in improving their research environment.

The Architectural and Engineering Office will provide consultative services during pre-planning and planning stages of research facility construction and renovation.

It will also assist the Division's Branches with professional review and cost analysis of grant applications for construction and renovation of buildings, clinical research centers, animal quarters, and computer, biomedical engineering and other research resources.

Long-Range Plans

Long-range plans of the Office include studies to determine standards for efficient, economical design of modern biomedical research facilities, including animal quarters; criteria for modular size of research laboratories; and engineering guidelines for cost evaluation of research facilities.

A further objective is the development of new concepts in research facility design incorporating contemporary construction materials and methods, and technological advances in electronics and environmental control.

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A Commissioned Officer of the Public Health Service, Mr. Page has specialized in civil, sanitary and electronic engineering. From 1949 to 1958 he was assigned to the PHS Arctic Health Research Center at Anchorage, Alaska, where he conducted research in arctic and sub-arctic environmental engineering problems, including the design of water systems and experimental housing for Alaskan conditions. He was Chief Engineer of the Center from 1955 to 1958 when he transferred to NIH as Assistant Chief of the Division of Research Services.

Mr. Page was Chief of the Environmental Services Branch, Division of Research Services, from June 1960 to December 1961. Under his direction the Branch broadened its professional competence in controlling environmental factors in NIH laboratories, the Clinical Center, and animal quarters.

Background Cited

A native of Windham, Me., Mr. Page is a graduate of the University of Maine and received his M.S. in Sanitary Engineering from Harvard Graduate Engineering School. He took special training in electronic engineering at Bowdoin College, Harvard University, and Massachusetts Institute of Technology.

He is a member of the American Society of Civil Engineers, American Public Health Association, The Royal Society of Health, American College Health Association, and American Association for the Advancement of Science.

The present staff of the Architecture and Engineering Office consists of two architects and two engineers. They are:

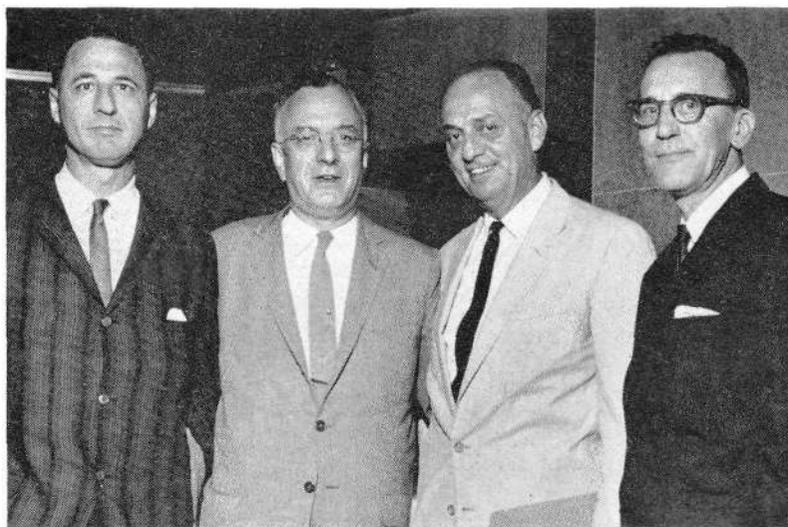
Staff Listed

T. Gordon Young, architect, who joined the Health Research Facilities program in 1959 and was active in this field of work before joining the Architecture and Engineering staff.

William E. Cissell, Jr., engineer, who was previously with the Research Facilities Planning Branch, DRS, and subsequently was Staff Engineer for the Regional Primate Research Center Program, originally in the National Heart Institute and now in the Division of Research Facilities and Resources. In his new position he is primarily concerned with animal facilities.

True Staffenhagen, engineer, who was formerly with the Department of Interior, Fish and Wildlife Service, and was responsible for the design and construction of a number of their field laboratories.

David R. Crawford, architect, who recently joined the Architecture and Engineering staff and was previously associated with the firm of Edward H. Noakes and Associates in Bethesda, Md.



Participants at the recent seminar in observance of NIDR's fifteenth anniversary are (left to right): Dr. Seymour J. Kreshover, NIDR Associate Director in Charge of Research; Dr. G. Burroughs Mider, NIH Director of Laboratories and Clinics; Dr. Luther L. Terry, PHS Surgeon General, and Dr. Francis A. Arnold, Jr., NIDR Director.—Photo by Sam Silverman.

NIDR ANNIVERSARY

(Continued from Page 1)

dental academicians in 1957."

Two other seminar participants, Dr. Seymour J. Kreshover, NIDR Associate Director in Charge of Research, and Dr. Leland C. Hendershot, Editor of the Journal of the American Dental Association, discussed the Institute's role in developing research, and the communication of research findings.

Dr. Kreshover emphasized NIDR's major responsibility in the broadening horizon of modern dental research and asked for an end to the traditional separation of dental research from the total scope of the medical sciences.

Major Responsibility

He pointed out, however, that "the accomplishments of dental scientists in closing the artificial separation of dental research from other biomedical research fields must not cause us to lose sight of our continuing major responsibility to fulfill our categorical mission to society and the scientific community."

Dr. Hendershot told the assembly that "additional research is still necessary if Americans are to win their battle over dental disease" and suggested that "improving the flow of scientific knowledge among dental researchers will help considerably in this effort."

Noting that dentistry is one of the few areas of science that does not provide researchers with a comprehensive abstracting service, he expressed hope that an abstract journal of all available literature on dental research might be published soon.

Dr. Francis A. Arnold, Jr., NIDR Director, presided at the seminar and publicly welcomed Mrs. H. Trendley Dean, widow of the Institute's first Director.

Peyton Stapp Is Detailed To DRG as Ass't Chief

Peyton Stapp, Chief of the Program Analysis and Statistics Branch of the Office of Program Planning, OD, was detailed to serve as an Assistant Chief in the Division of Research Grants, effective June 17.

Mr. Stapp, who will continue to direct the activities of the Program Analysis and Statistics Branch, will assist in developing a plan to provide a stronger organizational base for further development of DRG's data processing and statistical operations.

Units that will come under his direct supervision at DRG are (1) Research Documentation, (2) Statistics and Analysis Branch, (3) Reports and Records Section of the Career Development Review Branch, (4) Data processing activities of the Research Grants Review Branch, and (5) the Grantee Institution Profile Study.

Experienced in Data Processing

An economist-statistician, Mr. Stapp has had wide experience in the data processing field. Prior to becoming Chief of OPP's Program Analysis and Statistics Branch in August 1962, he served as Regional Statistician and Director of the Statistical Division of the United Nations' Economic Commission for Latin America in Santiago, Chile.

In addition to his United Nations post, he also has served as Assistant Chief of the Division of Statistical Standards of the Bureau of the Budget; as Deputy and later Acting Chief of a United States Mission to the Japanese Government, advisory to the establishment of a statistical system in that

Dr. Coatney Arrives in Pakistan for Testing Of Anti Malarial Drug

Dr. G. Robert Coatney, Chief of the Laboratory of Parasite Chemotherapy of the National Institute of Allergy and Infectious Diseases, was scheduled to arrive in Karachi, Pakistan on June 27 to complete arrangements for the field-testing of the new long-acting, anti-malarial drug, CI501.



Dr. Coatney

An internationally recognized authority on malaria, Dr. Coatney will discuss preparations of the project with Dr. M. K. Afridi, a consultant on malaria to the Pakistani Government and an outstanding authority on malaria and with representatives of the University of Maryland's International Center for Medical Research and Training (ICMRT), which is located in Lahore, Pakistan.

Field trials of the new drug will use the facilities of the University's Center.

Field Tests Planned

Dr. Coatney said he expects the actual field-testing to begin by the first of next year. The project will run approximately 30 months.

Dr. Coatney will be in Pakistan for about 10 days, after which he will visit the Laboratory of Parasite Chemotherapy's Far East Research Project in Kuala Lumpur, Malaya.

The Far East Research Project, headed by Dr. Don E. Eyles, is investigating the possibility of the existence of a monkey-mosquito-malaria cycle of malaria in nature.

Drs. Eyles, Coatney, and Morton Getz, all of NIAID, demonstrated the existence of such a cycle in the laboratory in 1960.

Prior to returning to this country next week, Dr. Coatney will stop in Saigon to discuss malaria eradication problems with members of the Agency for International Development's Malaria Eradication Project in South Vietnam.

Before arriving in Pakistan Dr. Coatney met with the British Medical Research Council in London to discuss problems of tropical medicine.

country; as Acting Deputy Director of a United Nations Statistical Office surveying statistical systems in the Far East; and as Head of an Advisory ICA statistical group in the Philippine Islands.

A native of Hardin, Mo., Mr. Stapp is a graduate of the Universities of Missouri and Michigan,

Dr. Michael B. Shimkin Retires From PHS; Will Teach at Temple Univ.

Dr. Michael B. Shimkin, Associate Director for Field Studies of the National Cancer Institute, retired from the Public Health Service yesterday (July 1). He has accepted a position as Professor of Medicine at Temple University School of Medicine and Chief of Cancer Biology at the affiliated Fels Research Institute.



Dr. Shimkin

As Associate Director for Field Studies since 1960, Dr. Shimkin has directed research on the etiology of cancer, the statistical aspects of cancer occurrence and the end results of treatment, and the casual relationship of environmental factors to the onset of human cancer.

Dr. Shimkin has been an NCI staff member for most of his Public Health Service career, starting in 1938 as one of the original Research Fellows of NCI. He also served as Scientific Editor of the Journal of the National Cancer Institute from 1955 to 1960.

Steps Up Schedule

Under his direction the Journal was rescheduled from a bimonthly publication to a monthly, and he initiated the series of NCI monographs—collections of papers on specific aspects of cancer research.

He also served as Assistant Chief of Clinical Activities of the Cancer Chemotherapy National Service Center 1956-60, as member of many advisory committees of the American Cancer Society, and as Co-chairman of the Fourth National Cancer Conference.

Dr. Shimkin has been concerned with studies of the mounting evidence implicating cigarette smoking in the causation of lung cancer which has shown an alarming increase of incidence in the past 30 years. In this connection, he served as a member of the Study Group on Smoking and Health established in 1956 to review scientific evidence on the problem.

Conclusion Published

The group published a report in 1957 which concluded that "the sum total of scientific evidence establishes beyond reasonable doubt that cigarette smoking is a causative factor in the rapidly increasing incidence of human epidermoid carcinoma of the lung."

Dr. Shimkin was born in Russia and received his M.D. degree from the University of California School of Medicine. After an NCI fellowship at Harvard, he received a PHS Commission in 1939 and was as-

New Self-Service Store Opens in Westwood Bldg.

A self-service store operated by the Supply Management Branch for the convenience of NIH employees in the Westwood Building was scheduled to open yesterday (July 1) in Room 51 on the ground floor of the building, located at 5333 Westbard Ave., Bethesda.

The new store's stock of more than 650 office- and general-use items corresponds to that offered in the self-service store which SMB opened last July in Building 31, Rm. B1E. Shelf displays and check-out services in the two stores also are similar.

A charge-plate, which may be obtained from the various Administrative Offices, is necessary for shopping in either store. Charge-plates previously issued for the Building 31 store may now be used in both stores.

The Westwood store is open Monday through Friday from 9:30 a.m. to 3:30 p.m.

Both stores are subsidiary units of the Property and Supply Section, headed by Thomas V. White, and its Supply Unit under the direction of Lewis D. Brown.

signed to the NCI in Bethesda.

Between 1941 and 1943 he was assigned to the Tumor Clinic at the PHS Hospital in Baltimore. During part of 1943-44 he was a consultant to the Office of Scientific Research and Development and a member of its Medical Mission to the Soviet Union.

In 1944 he headed one of the three public health teams covering the Third Army area in Europe, and during hostilities set up rescue operations for prisoners in several German concentration camps.

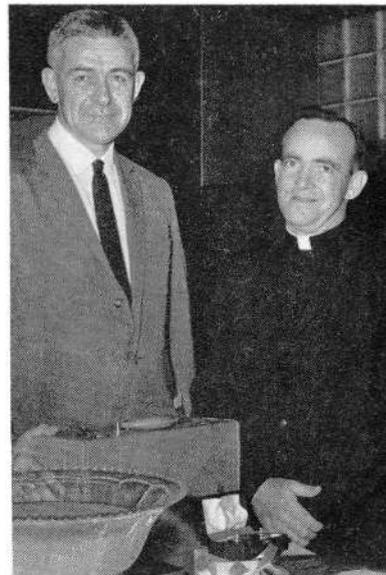
Other Experience Listed

In 1945-46 he was Assistant Chief of the Office of International Health Relations, PHS. During this time he organized the structure of the new activity in international public health, had administrative supervision over the Liberian Public Health Mission, and helped in the formulation of the United States concepts of the World Health Organization. In 1946 he was Adviser to the United States Delegation at the International Health Congress of WHO.

Dr. Shimkin was assigned in 1947 to the University of California School of Medicine in San Francisco where he organized and directed the Laboratory of Experimental Oncology of NCI. He was also at that time Clinical Professor of Medicine (Oncology) at the University of California School of Medicine and Visiting Oncologist at the San Francisco Hospital. He returned to NCI in Bethesda in 1954 as Chief of the Biometry and Epidemiology Branch.

2 Clinical Center Chaplains Honored on Eve of Departure for New Positions

The Rev. William R. Andrew and the Rev. Francis J. Veith, Protestant and Catholic chaplains, respectively, at the Clinical Center with a combined total of 13 years' service, have resigned their posts to assume other vocational responsibilities. Successors have been selected and will begin their duties soon.



Their faces bespeak their calling. Clinical Center Chaplains William R. Andrew and Francis J. Veith are pictured with some of the gifts presented by friends and colleagues at the recent farewell party in their honor.—Photo by Ed Hubbard.

CC Schedules Series of Outdoor Band Concerts

The first Clinical Center outdoor band concert of a planned summer series was held June 20, featuring the U. S. 2nd Army Band under the direction of Capt. Hal Gibson.

Other Armed Forces bands will be featured throughout the summer, playing classical, semi-classical and popular music, marches and show tunes.

Clinical Center patients, NIH employees, and families and friends of both are invited. The concerts will be held on the patio east of the Clinical Center auditorium. In case of rain, they will be held in the auditorium. The next concert by the U. S. Marine Band will be Thursday, July 11, at 7:30 p. m.

POLIO VACCINE

(Continued from Page 1)

some degree of immunity, even a single dose of the trivalent vaccine would confer some immunity to all types of polio."

The new product, to be given in two doses eight weeks apart, is a balanced combination of the three monovalent vaccines; that is, the amount of each strain included is based on the characteristics of the virus strains and on their combined action.

In order to obtain a mixture that

The Clinical Center represents a challenging and constantly changing "parish" in itself, with a formidable annual patient load of approximately 4,000 persons.

Chaplain Andrew has become a member of the staff of the Pastoral Institute, 3000 Connecticut Avenue, N. W., Washington, a newly formed organization devoted to achieving a maximum of useful collaboration between clergymen and the medical profession.

The Pastoral Institute is interdenominational and functions as a clinic with a medical staff. It assists clergymen in meeting counseling problems for individuals and families, provides mental evaluations, and has an education division and an alcoholic division.

Successors Named

Successor to Chaplain Andrew, who came to NIH in 1955 as the first full-time chaplain, will be the Rev. LeRoy G. Kerney of Houston, Tex. He will arrive in September.

Father Veith, who was Catholic chaplain at NIH for five years, now has a parish at Ridge, Md., near Point Lookout. He will be succeeded shortly by the Rev. John N. McFee, who formerly served at St. Thomas More parish in Southeast Washington.

Dr. Jack Masur, Clinical Center Director, at a farewell party for the chaplains, presented gifts to them from their friends here and expressed appreciation for their services and their dedication to the patients from the early days of the Clinical Center program.

Dr. Masur also read messages from Dr. James A. Shannon, NIH Director, commending the chaplains for having met the spiritual needs of the patients and their families, "bringing hope and reassurance in times of tribulation."

Rabbi Joseph Brandiss, who has been a chaplain at the Clinical Center for six years, continues in his post here.

will produce a favorable "take" for all three types of polio, considerably more of the Types 1 and 3 vaccines are included than of the Type 2.

The vaccine has been extensively tested in accordance with Federal regulations, and has been found to induce antibodies in at least 90 percent of those who completed the two-dose schedule.

This is the first trivalent oral poliovirus vaccine to be licensed in this country, although such vaccines have been routinely used in both Great Britain and Canada.

Dr. K. S. Cole, NINDB, To Spend Next Year At Univ. of California

Dr. Kenneth S. Cole, Chief of the Laboratory of Biophysics of the National Institute of Neurological Diseases and Blindness, has been appointed Regents Professor of



Dr. Cole

Medical Physics for the coming fall semester on the Berkeley campus of the University of California.

The appointment was announced June 24 by University President Clark Kerr and Chancellor Edward W. Strong. Dr. Cole, a pioneer in the field of biophysics, will serve at Berkeley while on leave from his present post at NIH.

AEC Supports Research

His stay at Berkeley will extend through the 1963-64 academic year. In the spring semester he will be engaged in research supported by the U.S. Atomic Energy Commission at the University's Donner Laboratory of Medical Physics.

A research scientist in biophysics over a 35-year period, Dr. Cole has been a leader in the application of physics knowledge to problems of biology.

Among his noted studies on living cell membranes are those on the giant axon of the squid, which have measured and helped to explain the electrical impulses associated with body nerve action.

The position of Regents Professor was established in 1952 to bring men and women of outstanding accomplishment to universities for a semester or year. Among those appointed in past years have been C. P. Snow, Aldous Huxley, James B. Conant, Jean Renoir, and Jascha Heifetz.

To Conduct Seminar

As Regents Professor, Dr. Cole will conduct a graduate seminar in bio-electricity and will be available for lectures and for discussion and consultation with students and faculty in several departments at Berkeley. He will also spend some time at the U.C. Medical Center in San Francisco.

Accompanying Dr. Cole during his stay at Berkeley will be his wife, Elizabeth Roberts Cole, who is presently serving as Chief of the Education Section of the U. S. Commission on Civil Rights. She is a 1923 graduate from the Berkeley campus and holds a Doctor of Jurisprudence degree from U.C. School of Law at Berkeley.

Born in Ithaca, N.Y., Dr. Kenneth Cole graduated from Oberlin College, Ohio. He received the Ph.D. degree in physics at Cornell University in 1926.



Four members of the Flying Dentists' Association stand with Dr. Francis A. Arnold, Jr., Director of the National Institute of Dental Research, in front of the Institute's new exhibit "The Expanding World of Dental Research." Left to right are Dr. Norman Salisbury, Bakersfield, Calif.; Dr. James Fowler, Little Rock, Ark., President-elect of the Association; Dr. Arnold, Dr. Grant J. Rohrbach, Pottstown, Pa., President; and Dr. John Copeland, Wichita, Kans. NIDR presented a scientific program here June 18 for 85 members of the Association who were in Washington for the group's annual convention. The national organization has 250 members, all of whom belong to the American Dental Association and hold private pilots' licenses. Most Association members use their planes in their practices.—Photo by Sam Silverman.

NIAID Scientists Report 6-TG May Be Useful In Treating Nephrosis

Two investigators at the National Institute of Allergy and Infectious Diseases recently reported on a drug which may be a useful therapeutic agent alone or in combination with steroids in the treatment of nephrosis.

The drug, 6-Thioguanine (6-TG), a purine antimetabolite, may prove to be a substitute for steroids or permit lower doses in nephrotic patients with limited steroid tolerance.

Achieves Remissions

The antimetabolite produced complete remissions in six of seven cases which previously required high dosage of steroids for control. In two of these, remission occurred on 6-TG alone, and four recovered on 6-TG plus a lower dose of prednisone than was previously required for remission. Ultimate use of 6-TG, however, will be determined by studies of its toxic effects.

Remissions have been sustained in two cases for several months after treatment, and relapses in four cases have been successfully re-treated. Improvement was characterized by disappearance of proteinuria and an increase in serum albumin.

Five additional patients resistant to steroids who were treated with 6-TG failed to respond even to marrow-suppressing doses. Both groups of nephrotics treated with the drug experienced reduction in the serum immune globulins as well

NEW FINANCING

(Continued from Page 1)

CSC Chairman John W. Macy, Jr., described the proposal as "a systematic method by which the Government can meet its obligation to its employees who have earned or are earning retirement benefits."

Although employees, by law, have been contributing a percentage of their salaries to the Retirement Fund since the system was established in 1920, it has been only since July 1957 that the employing agencies have been contributing systematically to the fund.

Direct appropriations to the fund made before that time were not enough to meet the Government's obligations.

The new method of systematic financing also assumes a continuation of the present level of retirement benefits.

If any new or increased benefits were provided, they would not become effective and no benefits would begin to accrue until after funds had been appropriated to cover the estimated past service liability.

as isohemagglutinins.

The similar pattern of response of patients to steroids and 6-TG suggests a similar action of these agents on the renal lesion.

Dr. Sheldon M. Wolff, Laboratory of Clinical Investigations, NIAID, and Dr. Howard C. Goodman, Laboratory of Immunology, NIAID, reported this study at the annual meeting of the American Rheumatism Association in Atlantic City.

Dr. Anfinson Appointed Chief of New NIAMD Chemical Biology Lab

Dr. Christian B. Anfinsen, biochemist and recognized authority on protein structure and metabolism, has been appointed Chief of the recently created Laboratory of Chemical Biology at the National Institute of Arthritis and Metabolic Diseases.



Dr. Anfinson

Dr. Anfinson also will be the director of NIH's Research Associate Program, which brings young physicians to NIH for two years of training in biomedical research. He assumed his new duties on June 24.

Formerly associated with NIH as Chief of the National Heart Institute's Laboratory of Cellular Physiology and Metabolism, Dr. Anfinson has been for the past year Professor of Biological Chemistry at Harvard Medical School, the institution from which he received a Ph.D. in biochemistry in 1943.

Studies Protein Molecules

Dr. Anfinson has studied intensively the structure, biosynthesis and function of protein molecules, particularly those having enzymatic properties.

His recent work has involved studies on the synthesis and properties of ribonuclease, an enzymatic protein essential to metabolism.

These studies, part of a continuing series of investigations of protein biosynthesis, are basic to an understanding of metabolic diseases, which affect the structure and synthesis of the body's proteins.

Primarily responsible for the generally accepted theory that the secondary structure of proteins is determined by amino acid sequence, Dr. Anfinson's research has won him recognition as a world authority on protein structure and metabolism.

Conducts Research Abroad

A native of Monessen, Pa., Dr. Anfinson studied at Swarthmore College and the University of Pennsylvania before entering Harvard Medical School.

Since his selection as a Markle Scholar at Harvard Medical School early in his career, Dr. Anfinson has been variously honored.

He received a Rockefeller Foundation Public Service Award to do research in Denmark, a Guggenheim Fellowship for research in Israel, and travel awards from the International Union of Pure and Applied Chemistry and the National Science Foundation. He was elected last April to the National Academy of Sciences.