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NATIONAL INSTITUTES OF HEALTH
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Dr. Donald Fredrickson Shares 3d International Medical Research Award

Dr. Donald S. Fredrickson, chief of the Laboratory of Molecular Diseases, National Heart Institute, and former Director of the NHI, will receive the Third International Medical Research Award for Heart and Vascular Research from the James F. Mitchell Foundation for Medical Research and Education.

Dr. Fredrickson will share the award with Dr. Edward H. Ahrens, Jr., of The Rockefeller University.

The awards ceremony will be held on May 17.

Research Cited

A nominating committee composed of international scientists selected the recipients for their contributions to the physiology of lipoproteins and plasma lipids and their significance in certain diseases.

The James F. Mitchell Foundation in Washington established the awards 2 years ago.

There have been three previous winners. Dr. Michael DeBakey of Houston won the first award in
(See DR. FREDRICKSON, Page 8)

Montana Field Station's Growth Described In NIAID's Rocky Mt. Lab Fact Sheet

"The Rocky Mountain Laboratory," a new fact sheet prepared by the National Institute of Allergy and Infectious Diseases, traces the growth of this Montana field station from its beginning in 1902 to today's laboratory, a 33.2 acre compound with about 160 employees.

The fact sheet tells of the first major research accomplishment of the laboratory—proving that the Rocky Mountain wood tick is the agent responsible for transmitting Rocky Mountain spotted fever to man—and of present day research efforts including work with "slow" virus infections.

Early History Told

In its early days, the Rocky Mountain Laboratory was housed in a log cabin, a woodshed, and some tents. In 1921 the laboratory was established in an abandoned school building—in the Bitterroot Valley near Hamilton, Mont.—as an official field station of the Public Health Service.

By 1924, after a long-term study of Rocky Mountain spotted fever, research at the RML advanced this baffling health problem from a disease of unknown cause to one against which a successful vaccine had been developed.

With the administration of the

original vaccine prepared from the pulverized bodies of infected ticks, the death rate from Rocky Mountain spotted fever fell rapidly, and now has been even more radically reduced through use of antibiotics.

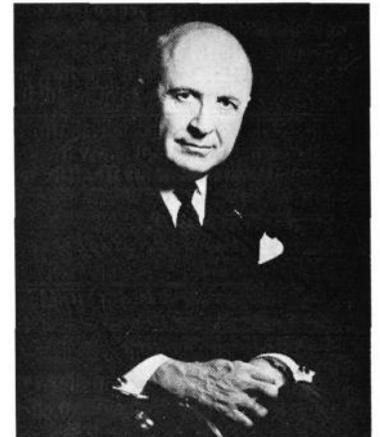
In today's laboratory, research is directed toward six major areas: chronic viral diseases, rickettsial diseases, arthropod-borne and zoonotic diseases, tuberculosis, immunology and allergy, and the structure and biology of microbial constituents.

The RML is interested in a variety of diseases that are transmitted to man by the bite of infected mosquitoes, ticks and lice, and in such diseases as tularemia, leptospirosis, and Colorado tick fever.

Studies continue on a variety of psittacosis - lymphogranuloma - trachoma (PLT) agents. These agents, widespread in livestock and

(See ROCKY MT. LAB, Page 7)

Dr. W. H. Sebrell, Jr., Former NIH Director, Receives Two Awards



Dr. W. Henry Sebrell, whose work in the field of nutrition is widely acclaimed, was the first to describe vitamin B₂ deficiency in man.

Dr. W. Henry Sebrell, Jr., former NIH Director, received two awards on April 18 in recognition of his contributions to nutrition science and the public welfare.

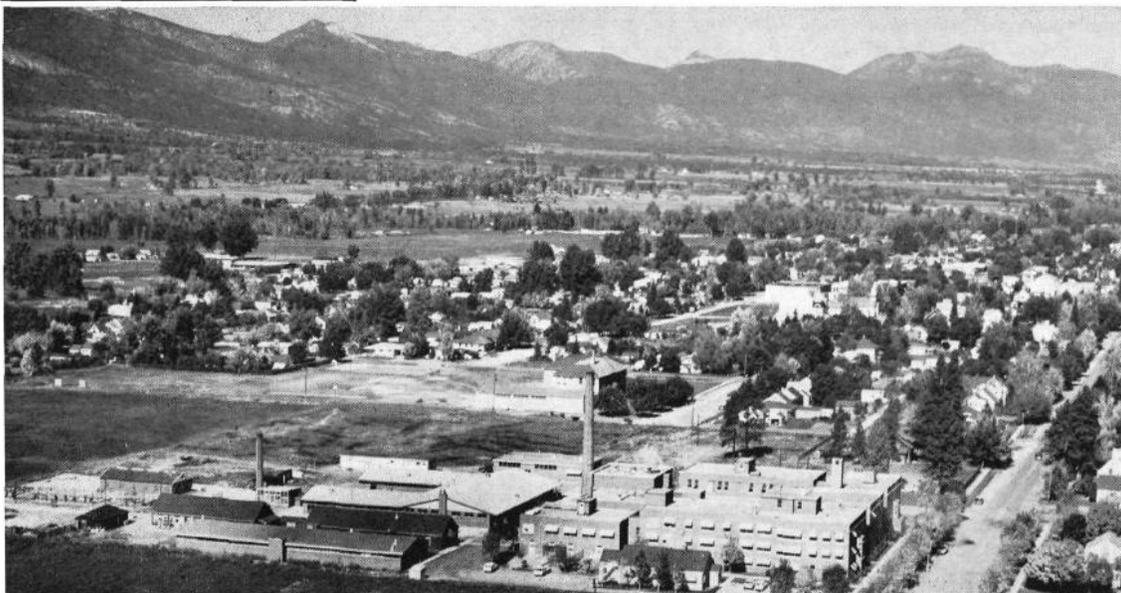
He was made a Fellow of the American Institute of Nutrition—the Institute's highest award—and was also recipient of the Conrad A. Elvehjem Award for Public Service in Nutrition. This latter award, \$1,000 and an inscribed scroll, was given to Dr. Sebrell by the Wisconsin Alumni Research Foundation.

NIH Director, 1950-55

The awards were presented to him at the annual banquet of the American Institute of Nutrition in Atlantic City.

Dr. Sebrell served as Director of NIH from 1950 to 1955. Presently he is R. R. Williams Professor of Public Health Nutrition, Director of the Institute of Nutrition Sciences at Columbia University, and nutrition consultant at St. Luke's Hospital Center, New York.

Dr. Sebrell is also associated with a number of research programs dealing with malnutrition in developing countries. He is a member of the Malnutrition Panel of the U. S.-Japan Cooperative
(See DR. SEBRELL, Page 6)



The modern research complex of the Rocky Mountain Laboratory today stands in stark contrast to the log cabin, woodshed, and tents which housed it in 1902. This NIAID facility does research in a variety of diseases.

the NIH Record

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NEWS from PERSONNEL

DEFERRED RETIREMENT

Any Federal employee under age 62 who leaves the Federal service, or is transferred to a position not covered by the retirement system, is eligible for deferred retirement provided he has completed at least 5 years' civilian service in a retirement-covered position.

This applies whether the employee resigns or is separated for cause, unless he has been barred from the retirement system because of committing certain offenses involving the Nation's security.

Procedure Explained

Under the deferred retirement plan, annuity payments begin on the separated employee's 62nd birthday. An application should be filed about 60 days prior to that time. The amount of the annuity received will be based upon the laws and computation factors in effect at the time of separation.

In the event an employee who elects deferred retirement dies before reaching age 62, his wife or other eligible dependents will receive a lump sum equivalent to the amount he paid into the retirement fund, plus any interest which has accrued.

If, however, the employee survives to age 62, he may then provide a survivor annuity for his wife and children by taking a reduced annuity.

Persons who leave Federal service and are eligible for a deferred annuity at age 62 cannot continue their life insurance or their health benefits coverage under the regular

group plan.

Both the insurance and health benefits coverage will end 31 days after the employee's separation. During this 31-day period the employee may convert his life insurance to a commercial plan and his health benefits coverage to a non-group health benefits contract.

For more detailed information concerning rights and benefits under the deferred retirement plan, employees should contact their I/D personnel office.

SICK LEAVE

Accumulated sick leave is like money left in a savings bank which grows in value as earnings are added to it. For example, the sick leave earned at \$2.40 an hour as a GS-4 is worth \$3.24 an hour if an employee progresses to a GS-7—an increase of 84 cents an hour. This increase is even more impressive when figured on a daily rate, which contrasts \$19.20 a day at GS-4 with \$25.92 a day at GS-7.

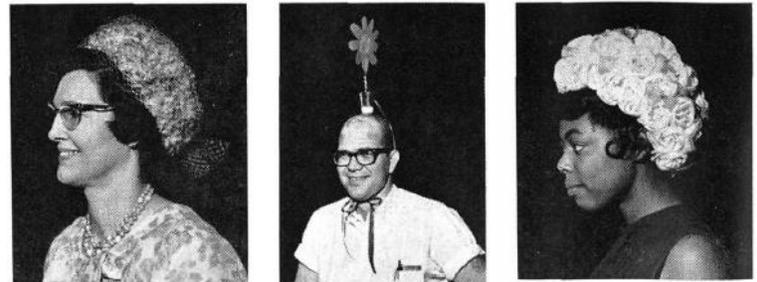
EXCLUSIVE RECOGNITION

On April 10 Dr. Herbert Stoener, director of the Rocky Mountain Laboratory, National Institute of Allergy and Infectious Diseases, Hamilton, Mont., granted exclusive recognition to Local 1492 of the National Federation of Federal Employees, for a unit comprised of all non-supervisory wage board animal caretakers at the laboratory.

As a result of this form of recognition, Local 1492, NFFE, now has the right to act for and negotiate for all employees of the designated unit (irrespective of their membership in the organization).

Also, a representative of the employee organization is entitled to be present at hearings on grievances or adverse actions,

Clinical Center Patients Model Winners In Popular Annual Easter Hat Contest



Helen Plasterer (left) won best-of-show honors with her flowered and net "Bluebells of Texas." The funniest entry was "Breath of Spring" by Don Riley (center). It was a medicine-cup flower pot from which blossomed a large red paper flower supported by a pipe-cleaner stem. The hat was held in place by green ribbons tied under the chin. Lucille Hudgins' "Spring Blossoms" creation, a mass of pale blue and yellow roses, was judged the prettiest. The contest was held in the CC's 14th floor assembly hall.



Billy Dugger's "Turtle Topper," made of brown and green burlap, was judged the most original.



Teresa Handy hugs the children's trophy. The brim of her hat forms a nest for bunnies, eggs, and chicks.

As a large audience looked on, Clinical Center patients modeled hats in the annual Easter Hat contest. Five winners are shown above. The contest is sponsored each year by the CC's Patient Activities Section. Contestants are required to design and make their entries. It is one of the most popular events for the patients, their relatives, and friends.—Photos by Ralph Fernandez.

ANTI-RIOT PROVISION

On February 6, this column featured an article concerning a restriction in the current DHEW Appropriation Act which forbids its use "to provide payments, assistance, or services, in any form" to individuals convicted of inciting or participating in a riot or any group activity resulting in damage to property or injury which is in violation of the law.

A recent memo from the Office of the Secretary to all HEW employees points out that this provision does not apply to all offenses which may have arisen from the recent disturbances, such as curfew violations. However, the memo urges any employee who may have been charged with an offense to make sure that his attorney is aware of the above provision in the Appropriation Act.

The text of the provision is quoted in the memo and supervisors should be certain that all employ-

Film Depicts Ways Adults Can Understand 1st Graders

"Who Cares About Jamie?"—a Health Education movie sponsored by the Employee Health Service—depicts a few hours in the life of a first grader. The film illustrates ways adults can comprehend and support the needs of a child at this age.

The 15-minute film will be shown at both the Clinical Center auditorium on Tuesday, May 14 from 11:30 a.m. to 12:15 p.m., and the Westwood Building, Conference Room A, on Wednesday, May 15 from 1:30 to 2:30 p.m.

ees under their supervision clearly understand its meaning. Additional information concerning the anti-riot provision is contained in the Personnel Guides for Supervisors, Guide 7, Chapter IV,

Animals' Different Use Of Chlorcyclizine Seen As Clue in Cleft Palate

Studies by National Institute of Dental Research investigators suggest that there is a relation between the ability of chlorcyclizine to induce cleft palate in animals and the speed with which a particular species is able to convert chlorcyclizine into norchlorcyclizine.

Part of the problem in finding suitable animal models of human diseases is the different rates at which various animals dispose of a drug which, in turn, probably reflects species-specific chemical pathways of metabolism.

Model Sought

Since the antihistamine, chlorcyclizine, produces cleft palate in rodent offspring when given at critical stages in pregnancy, Dr. A. J. Steffek, Dr. C. T. G. King, and A. L. Wilk, NIDR, experimented with other species of carnivores, ungulates, and primates to see whether this drug has a similar effect elsewhere in the animal kingdom. They hoped to find a species more like man to serve as an experimental model for this oral malformation.

Accordingly, they gave chlorcyclizine to pregnant ferrets, Duroc pigs, and Rhesus monkeys during the period of organ formation. Cleft palate of a somewhat different type from that in rodents occurred in two-thirds of the ferret fetuses. On the same regimen, pigs and monkeys had a high rate of abortion but no clefts.

Conversion Rate Studied

Previous research showed that norchlorcyclizine, a demethylated metabolic product of chlorcyclizine, rather than chlorcyclizine itself, causes clefting.

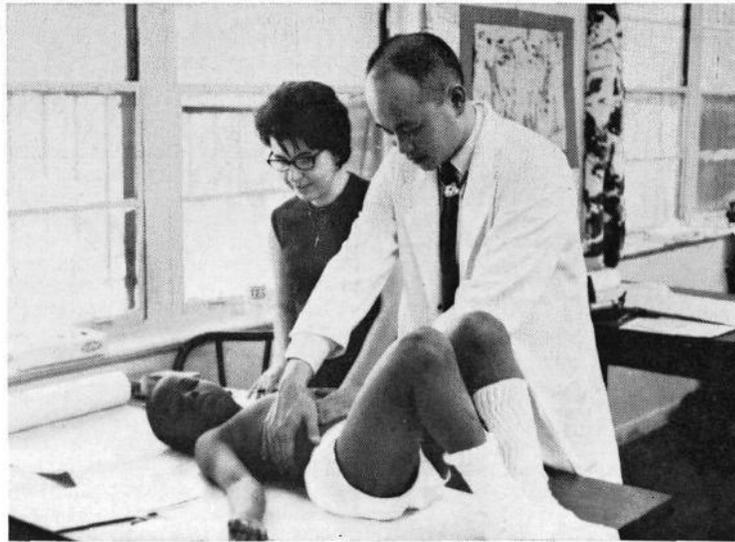
Therefore the investigators decided to compare the rate of chlorcyclizine conversion to norchlorcyclizine in non-pregnant rats, pigs, and monkeys. They measured the amount of norchlorcyclizine present in the blood at various intervals after administration of the parent drug as an indication of its rate of metabolism. The fastest conversion occurred in the rat.

Demethylation Compared

Norchlorcyclizine was found in its blood within 24 hours, whereas none could be found during this interval in either pig or monkey.

However, norchlorcyclizine appeared in the pig's blood for ten days after it had disappeared in the monkey's, showing that monkeys demethylate the drug faster than pigs.

Hippocrates' Words Move NIH Personnel To Aid City in Providing Medical Care



One of the many facets of the committee's activities is to give physical examinations and advice on the health programs of the Headstart and Pride Incorporated programs. Here, Dr. James Phang, Metabolism Branch, NCI, examines a child who will get a "headstart."

Time has neither dimmed the luster of the Hippocratic Oath nor impaired its effectiveness as an instrument for good.

That this remains true is borne out by the work of an informally organized group of NIH professional staff, area physicians, and other medical and paramedical personnel.

Formed in 1963, the area group called the "Medical Committee for Human Rights" is the local chap-

group. Approximately 75 of these are associated with NIH.

In cooperation with local civic leaders and members of the D. C. government, the group provides medical assistance in special situations for which coverage is not normally provided, or in cases where normal medical channels may be overtaxed.

Dr. Fred Heath, Deputy Director, D. C. Department of Public Health, expressed appreciation for the assistance of the Committee and commended its work, especially during the April 5-10 disturbance in Washington.

Committee Commended

He praised the group not only for the amount of work it performed but also for the quality of the care provided and for the manner in which it coordinated its efforts with the D. C. Department of Public Health, Police Department, and other agencies.

After the difficulties in Detroit last year, the group had begun to develop a plan for providing extra-hospital medical care in the event of civil disorder in the Metropolitan area.

Late Friday afternoon, April 5, members contacted officials of the D. C. Police and Health Departments to offer their services, to survey the situation, to evaluate areas of need, and to coordinate the institution of their emergency

(Continued on Page 5)

Ingredient in 3 Plants Causes Allergic Rash, NIAID Folder Warns

The leaves of poison ivy, oak, and sumac usually share the blame for causing an allergic rash and blisters which afflict millions of Americans during warm weather.

Actually, the culprit is urushiol—an ingredient found in the sap of all three plants—according to a new folder prepared by the National Institute of Allergy and Infectious Diseases.

Affects Many

Urushiol is a potent substance affecting seven of every 10 persons it touches. It causes an allergic contact dermatitis of a severity which varies with individual sensitivity and amount of exposure. As with all allergies, it is not known why some people react to urushiol while others do not.

Contact with urushiol is necessary to develop an allergic reaction. Touching a plant is the usual method of exposure. But garden tools, work clothes, roving pets, or the smoke from burning plants can provide indirect contact with the substance.

Symptoms Overtreated

Most people worry about scarring—which rarely occurs—and overtreat the symptoms. Removing all urushiol from the skin and eliminating indirect contact are most important procedures. A drying lotion usually relieves the rash and its accompanying itch, although a particularly susceptible person with a severe reaction should, of course, seek a physician's care.

The new folder also devotes a section to pointers on how to recognize, avoid, and eliminate the plants.

Single free copies of "Poison Ivy, Oak, and Sumac," PHS Publication No. 1723, may be obtained from the NIAID Information Office, Bethesda, Md. 20014.

Additional copies are available from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402, for 5 cents each. Bulk orders are \$3.50 for 100 copies.

Lab Training Courses Scheduled in Atlanta

A series of thirty laboratory courses will be offered by the National Communicable Disease Center, in Atlanta, Ga., from July 29, 1968, to June 27, 1969.

Information about these courses and application forms may be obtained by writing to the Training Office, Laboratory Program, National Communicable Disease Center, Atlanta, Ga. 30333.



Freida Brewton, a chemist with the Laboratory of Molecular Diseases, NHI, prepares a young patient for a tuberculin skin test.

ter of a national organization bearing the same name.

The Committee is coordinated by Dr. Arthur Frank, National Heart Institute, and Dr. Jesse Roth, National Institute of Arthritis and Metabolic Diseases.

Although organized in 1963, the group experienced its most rapid growth and expansion in the past year. About 200 medical, paramedical, and other volunteers from the Washington area sustain the

Dr. Martin Named Chief Of NIAMD's Section On Microbial Genetics



Dr. Robert G. Martin is known for his studies of the enzyme reactions required for histidine synthesis.

The appointment of Dr. Robert G. Martin as chief of the Section on Microbial Genetics, Laboratory of Molecular Biology, has been announced by Dr. G. Donald Whedon, Director of the National Institute of Arthritis and Metabolic Diseases. Dr. Martin will replace Dr. Bruce Ames who recently left the Institute to become Professor of Biochemistry, University of California, Berkeley.

Works on Genetic Code

Dr. Martin is known for his research on the consecutive series of reactions of the 10 enzymes required for synthesizing the amino acid histidine. These studies have further defined the chemical relationships in protein synthesis and their control.

He was one of the scientists who worked on deciphering the genetic code, and was the senior author on the first paper from Dr. Marshall Nirenberg's laboratory showing the coding of amino acids from mixed polynucleotides.

The section will continue to conduct investigations into genetic activity of viruses, and genetic control of metabolism at the molecular level, as well as gene-enzyme relationships in histidine biosynthesis.

Background Noted

After receiving the M.D. from Harvard Medical School in 1960, Dr. Martin joined NIAMD's Laboratory of Biochemistry and Metabolism. He received the B.S. degree in chemistry from Harvard College and was a Predoctoral Fellow at Peter Bent Brigham Hospital.

Dr. Martin transferred to the Laboratory of Molecular Biology in 1962.

Improved Leukemia Remission Rate Linked To New Method of Administering Ara-C

National Cancer Institute scientists have reported that a new method of administering a drug called cytosine arabinoside, or Ara-C, has produced complete remissions (temporary disappearance of all evidence of the disease) in 19 of 40 patients (48%) with acute myelocytic leukemia. This is a type of leukemia against which little progress has been made to date.

This continuing study is being conducted by NCI scientists Drs. Edward S. Henderson, Brigid G. Leventhal, and Patrick H. Henry, and by Dr. Arthur A. Serpick at the NCI-Baltimore Cancer Research Center.

Ara-C was administered to patients slowly, in intravenous doses (60 milligrams per square meter of body surface) for 4 hours a day for 4 consecutive days, then repeated at approximately one-week intervals.

Each infusion was preceded by a "priming" dose one-sixth as large as the main dose. Given in this manner, Ara-C was significantly more effective than earlier regimens using lower doses or rapid injection.

Previous Remission Rate Lower

In previous studies by the NCI and a group of 30 hospitals cooperating in anti-leukemia studies (the Acute Leukemia Cooperative Group B), complete remissions had been induced by Ara-C in less than 30 percent of patients with acute myelocytic leukemia.

The new regimen for administering the drug was developed when it was learned that Ara-C is rapidly deactivated in the blood and so quickly becomes ineffective.

Slow, continuous infusion in moderate doses allows the drug, an antimetabolite, to achieve greater destruction of leukemic cells. (Antimetabolites are drugs that closely resemble normal nutrients and act by replacing metabolites essential for cell growth.)

Of the 40 patients treated in the present study, 31 were adults



Dr. Eugene A. Confrey, Director of the Division of Research Grants (left), presents a certificate to Dora M. Leache, his secretary, commending her for excellence in her standards of work performance.

(above 15 years of age) and nine were children. Of the adult patients, 14 achieved complete remission, four had partial remissions, and 13 failed to respond.

Among the children, there were five complete remissions, one partial remission and three failures to respond. The average duration of complete remission was estimated to be at least 3 months, but exact information will not be available until a later date.

The remission rates achieved with Ara-C by Dr. Henderson and his colleagues are similar to those obtained in acute myelocytic leukemia with an anticancer antibiotic called daunomycin and with a 4-drug combination (vincristine, methotrexate, 6-mercaptopurine, and prednisolone).

However, Ara-C did not produce toxicity to bone marrow as serious as that associated with the use of the other drugs.

Research Grants Index, 1967 Edition, Available

Publication of the *Research Grants Index*, 1967 Edition, was announced recently by Dr. Eugene A. Confrey, Director of the Division of Research Grants.

The edition contains information on approximately 17,000 research projects in biomedical and health related sciences currently supported by the Public Health Service.

Purpose Stated

Designed to accelerate communication of research knowledge, the *Index* enables scientists to identify other researchers in their own and related fields and to exchange information prior to publication.

The first volume contains about 7,700 subject headings in alphabetical order, under which appear grant or contract numbers of pertinent projects, each number followed by a few descriptive words.

Individual investigators may be identified by referring to the first section of Volume II, where projects are listed by number together with citations to resulting publications. The second volume also contains a listing of general research areas and an alphabetical listing of grantee investigators.

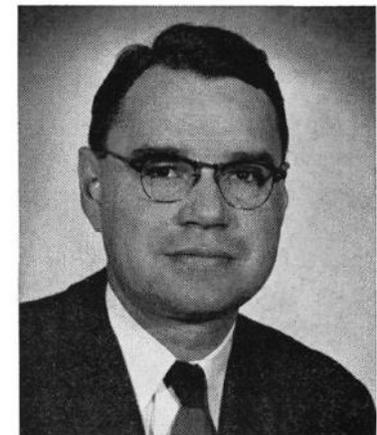
Produced by the Research Documentation Section, Statistics and Analysis Branch, DRG, the two-volume 1967 edition (PHS Publication No. 925) is available to the public from the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C. 20402, for \$10 per set.

Dr. Seligmann Appointed DBS Laboratory Chief

Dr. Edward B. Seligmann, Jr., has been named chief of the Division of Biologics Standards' Laboratory of Control Activities by Dr. Roderick Murray, Division Director.

In his new position, he will be primarily responsible for the Division's control testing program to ensure that all licensed biological products conform with standards of safety, purity, and potency.

The Laboratory of Control Activities is also responsible for the development and distribution of the U. S. standard and reference preparations used in establishing



Dr. Edward B. Seligmann's past work has included developing and standardizing snake-bite antivenins.

potency of biological products.

Dr. Seligmann came to NIH in 1959 as chief of the LCA's Reference Standards Section. Since that time he has initiated studies on freeze-drying, standardization, and stabilization of biological products.

He has been particularly interested in the development and standardization of snake-bite antivenins. Coral snake antivenin manufactured by Wyeth Laboratories was recently licensed following extensive research conducted by Dr. Seligmann and his coworkers.

A native of Buffalo, N. Y., Dr. Seligmann attended Michigan State College where he received a B.S. in 1948, M.S. in 1949, and Ph.D. in 1951. During the following 8 years, he was with the U. S. Army Chemical Corps at Fort Detrick, Frederick, Md.

Immunizations for Smallpox Postponed, EHS Announces

Smallpox immunizations, originally scheduled to begin the week of April 22, have been postponed by the Employee Health Service.

A new schedule will be published as soon as possible.

DRS Announces Issuance Of New Memorandum On Refuse Disposal

The Division of Research Services has announced that each laboratory at NIH will soon receive a new Policy and Procedure Memorandum governing the disposal of refuse.

The new PPM enlarges on the former one by including not only the disposal of animals, but also the safe and efficient packing, labeling, and collecting of all infectious and noninfectious wastes, including glassware.

Since NIH realizes that the proper disposal of animals, wastes, and glassware is a serious responsibility, non-compliance with the new policy and procedures could result in severe penalties.

According to the PPM, all GI cans containing any kind of waste material must be tagged with a new 3-part, tear-off tag, with space to pre-stamp the I/D, building, and room from which the waste material came.

Untagged cans are not to be removed from laboratories or pick-up areas. The purpose of the tag is to ensure the safe and efficient handling of various types of refuse.

Labeling Explained

By using the whole tag or the appropriate section of the tag, the person responsible for labeling the can identifies its contents as having either (1) no animals and no infectious material; (2) noninfectious dead animals; or (3) some kind of infectious material.

The individual investigator or supervisory animal caretaker is responsible for insuring that the handle of each GI can is properly tagged.

The PPM provides separate instructions for the reprocessing or disposal of soiled laboratory glassware (including plastic items).

The laboratory head, branch chief, or food area manager is responsible for insuring that all persons handling animals, garbage, and other waste material collected in GI cans, and all persons using laboratory glassware are familiar with the requirements of this PPM.

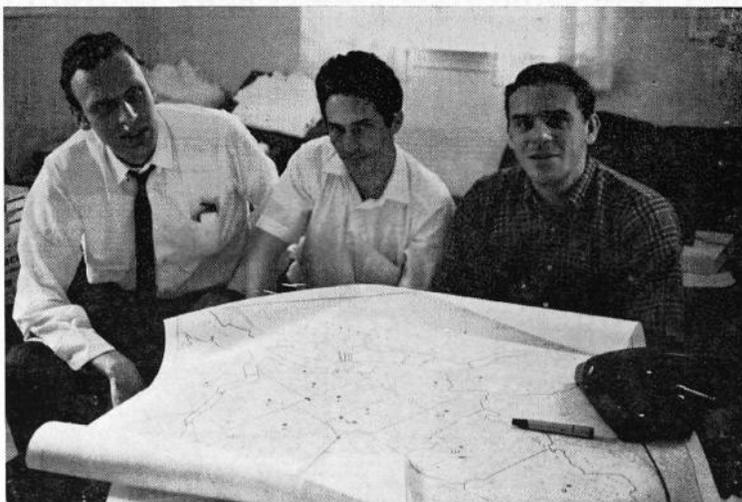
To assist in implementing this responsibility, instruction sheets, designed for posting in laboratories and other appropriate areas, will be distributed.

Burk L. Walker, DRG, Retires From Federal Service

Burk L. Walker, budget officer in the Division of Research Grants, retires this month after 33 years in Government service.

In 1935 he accepted his first position in the Federal service, working as an auditor for the Department of Agriculture. In 1942 he entered the U. S. Air Force. He

COMMITTEE VOLUNTEERS MEDICAL AID TO CITY



Members of the Medical Committee for Human Rights take a break after performing a post-mortem on the group's operation during the recent crisis in Washington. In the foreground is a police precinct map which was used in organizing their activities. They are (from left) Dr. Jesse Roth, NIAMD (co-chairman), Dr. Henry Metzger, NIAMD (treasurer), and Dr. Arthur Frank, NHI (co-chairman).

(Continued from Page 3)

assistance plan.

At 6:30 that evening Committee chairmen met to coordinate the operation which resulted in the placement of two physicians around the clock at the Court of General Sessions, at 10 of 14 police precinct headquarters, at the District Court, and at some of the large refugee centers. Also, additional nurses were placed at D. C. General Hospital.

A Life Saved

In one dramatic episode, a Committee physician saved the life of a soldier who had been kicked in the trachea. Police rushed the physician to the scene where the soldier had lapsed into a state of respiratory, then cardiac arrest. The immediate mouth-to-mouth resuscitation and heart massage administered by the Committee physician reversed imminent death.

Dr. Henry Metzger, NIAMD, a spokesman for the group, emphasized its dependence on the close cooperation of police and health officials, as well as the tremendous number of offers of aid from the entire community.

Committee coordinators during the disturbance were Drs. Jesse Roth and Sidney Wolfe, NIAMD.

Dr. William Wiese, NIAID, worked in cooperation with D. C.

authorities in formulating the initial plans for the handling of medical emergencies and initiated liaison between city officials and the group.

Dr. Charles Greenblatt, NIAID, coordinated the arrangement and transportation of nurses to D. C. General Hospital. Dr. Leon Kass, NIAMD, was responsible for the round-the-clock presence of physicians at police precinct headquarters. Clyde Crumpacker, NIAID, was charged with the responsibility of having physicians present at the U. S. District Court.

Dr. Michael Oxman, NIAID, arranged for the presence of physicians at the Court of General Sessions. Dr. Paul Plotz, NIAMD, was in charge of supply logistics—including obtaining drugs and equipment from the D. C. Department of Public Health and from an area drug store chain. Many physicians used their own supplies. Dr. Winthrop Churchill, NCI, was responsible for the presence of physicians and nurses at the main refugee centers.

Other Activities Noted

In addition to supplying medical aid during crises, including the "Peace March" at the Pentagon last fall, the Committee works to improve medical care in prisons and detention homes. In the past the group has given physical examinations and advised in the health programs of the Headstart and Pride Incorporated programs.

Presently, Committee members are examining the problem of lead poisoning and are helping to evaluate the medical and nutritional status of underprivileged areas. They also are working with community groups and the D. C. Health Department to create a neighborhood health clinic in the

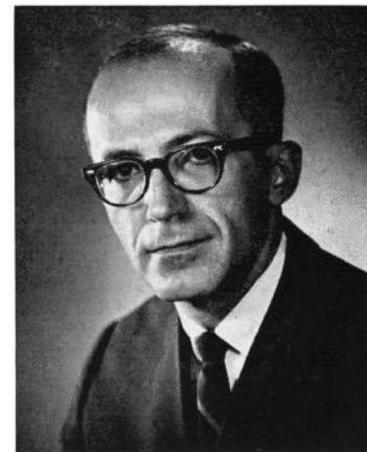
Dr. Peter G. Contacos, NIAID, Receives Medal For Studies on Malaria

Dr. Peter G. Contacos, malariologist of the Laboratory of Parasitic Chemotherapy, National Institute of Allergy and Infectious Diseases, received the PHS Commendation Medal at a special ceremony in Atlanta, Ga., on April 16.

The award was given to Dr. Contacos for his "exceptional ability in the evaluation of antimalarial drugs in human volunteers, for pronounced success in establishing the importance of the simian malarial parasites as infectors of man, and for his exceptional leadership and participation in team research."

The award, given to members of the Commissioned Corps, was presented by Dr. G. M. Jeffery, chief of the Laboratory of Parasitic Chemotherapy at Bethesda, in behalf of Surg. Gen. William H. Stewart.

Dr. Contacos is head of the LPC's section on primate malaria at Atlanta and Chamblee, and the unit on malaria of lower primates at Chamblee. These field stations of the LPC evaluate antimalarial drugs through the volunteer program at the Federal Penitentiary. Various malarial parasites, and mosquito vectors are studied.



Dr. Peter G. Contacos received a Commendation Medal for his "exceptional ability" in malaria research.

Anacostia area of Southeast Washington.

During the "Peace March" at the Pentagon last fall members of the group were present in case of a medical emergency.

Similar plans are underway for the upcoming "Poor Peoples March on Washington." The Committee will staff a number of medical and first aid stations throughout the area to provide care for participants on a round-the-clock basis.

Those interested in joining may write to the Medical Committee for Human Rights, c/o 3410 Taylor Street, Chevy Chase, Md. 20015.

Biological Data Published On 204 Arboviruses With NIAID Support

Arboviruses—viruses transmitted to man and animals by mosquitoes and ticks—are the subject of a 908-page *Catalogue of Arthropod-Borne Viruses of the World* published recently under sponsorship of the National Institute of Allergy and Infectious Diseases.

The catalogue contains important biological information about each of the 204 viruses listed, such as source and manner of isolation, physical, chemical, and antigenic characteristics, natural and experimental host range, geographic distribution, and frequency and symptomatology of human infection.

The new volume was compiled by Dr. Richard M. Taylor of the University of California at Berkeley after 8 years of intensive collaboration with scientists from many parts of the world.

An epidemiologist and virologist, Dr. Taylor was a member of the international health division of the Rockefeller Foundation for 32 years.

Data as of Feb. '67

For some time, Dr. Taylor has collected the arbovirus information provided by investigators and has served as a one-man "clearing house" in passing on informal reports—in the form of a working catalogue—to others in the field.

The published catalogue incorporates the data, as of February 1967, taken from the working catalogue.

NIAID has provided financial support since 1962 for the working catalogue which is used by laboratories and institutes actively engaged in arbovirus research.

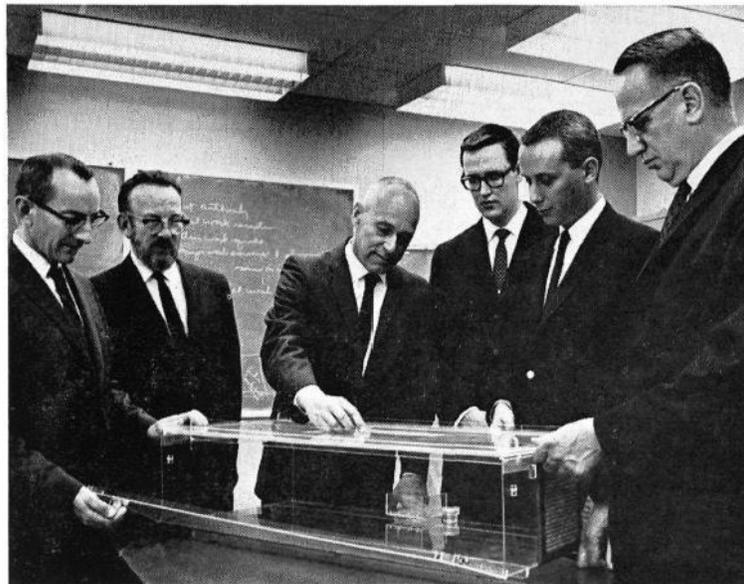
The published catalogue is expected to have even wider distribution among those engaged in arbovirus research and will serve as a valuable reference for schools of medicine, veterinary medicine, and public health.

Listed as PHS Publication No. 1760, the catalogue is available from the Government Printing Office, Washington, D. C. 20402, at a cost of \$5.25.

May 1968 Senior Citizen Month

President Johnson has designated May 1968 as Senior Citizen Month. In doing so, the Chief Executive called upon "the Federal, State and local governments, in partnership with private and voluntary organizations, to join in community efforts to give further meaning to the continuing theme of this special month: Meeting the Challenge of the Later Years."

DRS Environmental Services Reorganized



Edwin M. Lamphere (third from left), chief of the DRS Environmental Services Branch, and his staff inspect an isolator for animal surgery that was developed by the branch. They are (from left): Warren V. Powell, Albert S. Gates, Mr. Lamphere, Roger L. DeRoos, Dr. Donald G. Fox, and Dr. Lloyd G. Herman.—Photo by Tom Joy.

Chris A. Hansen, Director of the Division of Research Services, has announced the reorganization of the DRS Environmental Services Branch.

Under Edwin M. Lamphere, chief, the branch structure now consists of three sections: Laboratory Section, headed by Dr. Lloyd G. Herman; Biological Control Section, headed by Warren V. Powell; and Engineering and Sanitation Section, with Mr. Lamphere as acting head.

In Mr. Lamphere's office, staff positions also were established for research and development officer, Dr. Donald G. Fox; facilities liaison officer, Albert S. Gates; and training officer, Roger L. DeRoos.

James Gardner Named Adm. Officer for NHI

James C. Gardner has been appointed Administrative Officer for the National Heart Institute.

In his new job, Mr. Gardner will be responsible for providing administrative management services for the Artificial Heart-Myocardial Infarction Program and the Office of the Director, NHI. He had previously served as Personnel Officer to the Institute since October 1966.

Prior to his last assignment, Mr. Gardner served as personnel management specialist for the Institute following tours with the National Institute of Arthritis and Metabolic Diseases, the General Services Administration, and the Federal Prison Bureau, Leavenworth, Kans.

Monograph on Refractive Anomalies of the Eye Published by NINDB

A new monograph, *Refractive Anomalies of the Eye*, has been published by the National Institute of Neurological Diseases and Blindness. The publication is a report of an Institute-sponsored workshop, and contains papers by authorities from the professions of optometry and ophthalmology.

Research Reviewed

The document is intended to stimulate new visual research. It explores the present state of knowledge, diagnostic and therapeutic techniques, promising avenues for research, clinical importance of refractive anomalies, and recommended areas for new research.

In a preface to the report, Dr. Richard L. Masland, NINDB Director, noted that refractive anomalies are among the most widespread of all health impairments, and that, paradoxically, there are few active research programs to explore their underlying mechanisms.

Efforts Intensified

Hyperopia (farsightedness), myopia (nearsightedness), astigmatism, aniseikonia (a condition in which the image seen by one eye differs in size and shape from that seen by the other eye), and presbyopia (vision impairment due to aging) were identified as abnormalities in need of increased study.

A limited number of copies of *Refractive Anomalies of the Eye*, (PHS Publication No. 1687) are available for free distribution by NINDB to investigators, clinicians, and others with a working interest in the field.

Copies are also for sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402 (40 cents).

DR. SEBRELL

(Continued from Page 1)

Medical Science Program administered by the Office of International Research, NIH, and Chairman of the Protein Advisory Group of the UNICEF agencies: World Health Organization and Food and Agriculture Organization.

Dr. Sebrell's research in vitamins—he was the first to describe vitamin B₂ deficiency in humans—and other fields of nutrition, has earned him many honors.

His awards include the Joseph Goldberger Award of the American Medical Association, the Research Medal of the Southern Medical Association, and the Mead Johnson Award of the American Institute of Nutrition.



Chris A. Hansen, Director, Division of Research Services (left), congratulates Lawrence W. Lance, DRS management analysis officer, at recent retirement luncheon in his honor, as Mrs. Lance looks on. Mr. Lance, who completed 30 years of Federal service, was presented with several gifts by his coworkers, including a handsome pair of binoculars.—Photo by Tom Joy.

NIDR Scientists Report Viral Infection Reverses Immune Response in Mice

In studying the effects of viruses on the immune system, National Institute of Dental Research scientists have found that, in addition to the usual stimulation of antibodies against viral protein and the less common suppression of the immune response by some oncogenic viruses which destroy lymphoid tissue, viruses can also stimulate the formation of antibody against ordinarily tolerated nonviral proteins.

Autoimmune Response Possible

These findings, by Drs. S. E. Mergenhagen, A. L. Notkins, and S. F. Dougherty, Laboratory of Microbiology, NIDR, point to the possibility that even mild viral infections could trigger an autoimmune response to a body protein.

In an earlier study, the scientists noted that lactic dehydrogenase virus (LDV) enhances the ability of mice to produce antibody to unfiltered human gamma globulin (HGG), probably by increasing the number of germinal centers.

In their current research, the investigators showed that acute LDV infection so greatly affects the immune response that conventional mice will produce antibody against HGG, a substance which usually induces tolerance when it has been "biologically" filtered or ultracentrifuged to remove immunity-inducing aggregates.

Antibody Measured

Using the antigen elimination and passive hemagglutination techniques to measure antibody production, the investigators found that mice showed complete or partial tolerance to filtered or ultracentrifuged HGG and only three of 15 animals produced antibody to uncentrifuged HGG.

However, when the mice were acutely infected with LDV before receiving filtered or unfiltered HGG, nearly all of them produced antibody to both forms of HGG. They also found that bacterial endotoxin similarly enhanced antibody formation to the HGG.

More Research Needed

Because viruses may play a role in stimulating autoimmune responses, it is important to see if other viruses can stimulate antibody production to ordinarily tolerated proteins.

Furthermore, because viruses oncogenic for mice frequently are contaminated with the LDV, these findings may have significant implications in experimental cancer research.

Findings Back Theory Hormones May Act On Target Cells by Common Mechanism

Research by scientists of the National Institute of Arthritis and Metabolic Diseases has now shown that parathyroid hormone and vasopressin have identical modes of action within the kidney but that they act at anatomically separate sites—the former in the cortex and the latter in the medulla.

It has been known that the pituitary hormone vasopressin activates the enzyme adenylyl cyclase in the kidney, thus increasing the urinary excretion of cyclic 3', 5'-adenosine monophosphate (3',5'-AMP).

Recently, the investigators, Drs. L. R. Chase and G. D. Aurbach, Metabolic Diseases Branch, demonstrated that parathyroid hormone also increases urinary excretion of cyclic 3',5'-AMP and postulated that this hormone also may act by a similar enzymatic mechanism.

Their new finding supports the theory that hormones may exert their effect on widely different target cells by a common mechanism. Further work in this area is under active investigation.

Plasma membrane fractions prepared from the cortex and medulla of rat kidneys were assayed for adenylyl cyclase activity by the investigators by measuring the conversion of labeled adenosine triphosphate to cyclic 3',5'-AMP. The

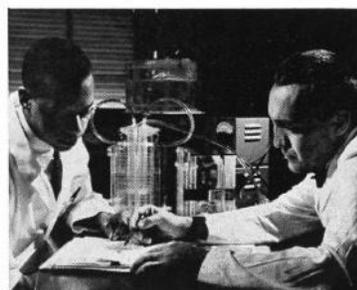
effect of adding parathyroid hormone or vasopressin to these homogenates then was determined.

The addition of parathyroid hormone to homogenates of renal cortex caused a marked increase in adenylyl cyclase activity, which was maximal at 5 minutes and involved 30 percent of the total available enzyme.

Conversely, addition of vasopressin to homogenates of renal medulla had a like effect, with a maximum effect at 5 minutes which involved 25 percent of available enzyme. Parathyroid hormone only slightly stimulated the medulla, and vasopressin, the cortex.

These results support the conclusion that cyclic 3',5'-AMP mediates the action of parathyroid hormone on the kidney and show that parathyroid hormone and vasopressin stimulate adenylyl cyclase activity at anatomically separable areas within the kidney. The findings also gain significance in view of the knowledge that cyclic AMP mimics the effects of vasopressin *in vitro*.

New Brochure Describes DBS Mission



Laboratory research studies and techniques described in the illustrated brochure issued recently by the Division of Biologics Standards include studies on control procedures for the manufacture and storage of human blood and its derivatives (left) and the fractionation of complex biological products used in studies of standard reference preparations.—Photos by Roy Perry.

Environmental Health Problems Discussed by Dr. Paul Kotin

A paper on environmental health problems by Dr. Paul Kotin, Director of the Division of Environmental Health Sciences, was read at a symposium at North Carolina State University in Raleigh.

The meeting inaugurated a new addition to the university's biological sciences building. Part of the funds for this building came from NIH.

Dr. Douglas H. K. Lee, DEHS associate director for Scientific Information, read Dr. Kotin's speech at the symposium. His paper discussed the existing environmental hazards that present new types of health problems.

The exacting task of protecting the public against unsafe or ineffective vaccines, serums, and other biological products is the subject of a booklet issued by the Division of Biologics Standards.

The illustrated brochure highlights the research opportunities related to the DBS mission—the control of biological products.

Photographs illustrate animal tests, laboratory techniques, and research-related control and test procedures, all of which are an essential part of DBS's responsibility for maintaining standards of quality and safety of biologics.

The brochure (PHS Publication No. 1744) may be obtained from the DBS Information Office, Building 29, Room 323, Ext. 63343.

ROCKY MT. LAB

(Continued from Page 1)

birds, are responsible for a large number of disabling diseases in man.

One of the larger and more vigorous programs of the Rocky Mountain Laboratory involves the immunologic aspects of tuberculosis and the structure and chemical composition of mycobacterial antigens.

Much work at the RML is aimed at "slow virus" diseases—those which have long incubation periods, insidious onset, and pathologic changes different from those found in acute infectious diseases.

Although much of the slow virus work at RML is concerned with animal diseases, the research is applicable to human diseases. Kuru, for example, a disease among natives in New Guinea, has been shown by NINDB investigators to be caused by a slow virus.

Single copies of the fact sheet, "The Rocky Mountain Laboratory," are available from the Information Office of the NIAID.

Communicative Disorders Discussed in Monograph Published by NINDB

Information concerning the communicative disorders has been collected in a new monograph, *Public Health Aspects of Hearing, Language, and Speech Disorders*, published by the National Institute of Neurological Diseases and Blindness.

The monograph, intended as an aid in developing community programs, reviews statistics on the prevalence of communicative disorders and discusses their extremely damaging effects at all age levels, with particular emphasis on disorders occurring in pre-school and school-age children.

Perinatal causes of communicative disorders, drug toxicity, adult disease, the effects of noise, and hearing loss associated with aging are reviewed in a chapter on prevention.

Hearing Fundamental

In the introduction, the authors, Drs. Eldon L. Eagles, assistant director, NINDB, and William G. Hardy and Francis I. Catlin, Johns Hopkins University, note the extraordinarily complex anatomic, physiologic, and psychologic bases of communication, holding hearing to be the most fundamental.

Single copies of the 28-page document, PHS Publication No. 1754, may be obtained free from NINDB while a limited supply lasts. Copies are also available from the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C. 20402, at 25 cents per copy.

DR. FREDRICKSON

(Continued from Page 1)

1966. The second award, in 1967, was given to Dr. Armand J. Quick of Milwaukee and Dr. Paul A. Owren of Oslo.

They shared honors for their discoveries of unknown facts in blood coagulation. Their findings opened up a whole field of research.

This year, the Foundation is marking its seventh anniversary. Its research is largely financed by a grant from the NHI.

Dr. Tage Astrup, Director of Research for the Foundation, heads the International Nomination Committee.

BHM Programs Prepare Nurses for Research And Research Training

In a recent report on programs of the Bureau of Health Manpower's Division of Nursing designed to prepare nurses for research and research training, Dr. Faye Abdellah discussed how successfully the program's goals had been achieved.

Dr. Abdellah, chief of the Research Grants Branch of the Nursing Division, made her report at a meeting of the National League for Nursing Council of Baccalaureate and Higher Degree.

Of 89 nurses who completed their doctoral study with Special Nurse Fellowships support, 78 were engaged in nursing research or a research training activity.

Only one of 68 nurses who received educational support under the nurse scientist program had previously been employed in research.



Dr. James Lieberman, Director, National Medical Audiovisual Center, NLM, Atlanta, Ga., recently received the Theta Sigma Phi Award of the National Professional Society for Women in Journalism and Communications for his "outstanding service in the field of communication."



Shown here with DHEW Secretary-designate Wilbur J. Cohen (second from left) at recent Departmental Honor Awards Ceremony are: (from left) Dr. J. E. Rall, NIAMD, recipient of the Distinguished Service Award; Mr. Cohen; Mrs. Marshall Nirenberg, who accepted the Distinguished Service Award for Dr. Nirenberg, NHI; and Guerry R. Smith, DRG, who received a 40-year Length of Service Award. Two others honored but not available for the picture were Dr. Carl M. Eklund, recently retired from NIAID, who received the Distinguished Service Medal, and Howard Brubach, NIAMD, recipient of a 40-year Length of Service Award.—Photo by Ed Hubbard.

Vast Resources of NLM Aid Scientists, Educators, Regional Medical Libraries

Over 130 years ago, the nucleus of the National Library of Medicine evolved. At that time—1836—it was called the "Library of the Surgeon-General's Office," and was under the aegis of the Army. The Library developed as a national resource under Dr. John Shaw Billings, Librarian from 1865 to 1895.

Renamed the "Army Medical Library" in 1922 and "Armed Forces Medical Library" in 1952, it became a part of the PHS, DHEW, in 1956 under legislation introduced by Senators Lister Hill and John F. Kennedy, and was transferred to the NIH April 1.

According to Dr. Martin M. Cummings, Director of the National Library of Medicine, "the Library has become much more than a traditional repository of published information, it has become a dynamic information center, utilizing the latest technologies to speed the flow of biomedical information to scientists, educators, and practitioners."

Includes Atlanta Center

NLM has some 500 employees, of which 135 are in Atlanta at the Library's National Medical Audiovisual Center. The NLM collection now totals about 1,500,000 items.

The Library's computer-based MEDLARS (Medical Literature Analysis and Retrieval System), the foremost application of computer technology to library operations, produces *Index Medicus* and other bibliographic tools.

NLM's Extramural Programs, authorized by the 1965 Medical Library Assistance Act, provide sup-



Dr. Martin M. Cummings, Director of the National Library of Medicine, received the DHEW Distinguished Service Award from Secretary-designate Wilbur J. Cohen, at the recent Annual Awards Ceremony. Dr. Cummings was cited for his "outstanding performance as a medical educator and administrator . . ."

port to help the Nation's medical libraries expand their vital services to the health community.

Included are programs of assistance for construction, resources, training, research, and the development of Regional Medical Libraries. In June 1967 an award was made to the Countway Medical Library of the Harvard Medical School and Boston Medical Society, establishing that institution as the first Regional Medical Library.

NLM's Research and Development Program is planning a Center to support the development of the emerging national biomedical communications network.

The Center will implement im-

Fish Protein Concentrate Added to Sweets May Combat Tooth Decay

Those cookies and candy bars people love to eat may one day be made into nutritional boosters that also fight tooth decay. This possibility is suggested by results of experiments with fish protein concentrate (FPC) underway at the National Institute of Dental Research.

FPC is a diet supplement to provide protein to undernourished areas of the world.

Dr. Robert M. Stephan of NIDR has found that FPC and other fish meals used in food to which sugar has been added reduces the sugar's ability to cause tooth decay in laboratory rats.

Should the nearly tasteless FPC work as well in humans, it could be added to snack foods to make them more nutritious and less cariogenic.

When another sugar (glucose or corn syrup) was given separately in drinking water instead of mixed into food with FPC, there was not as much protective effect.

This suggests that the FPC products have to be mixed with snack foods to exert maximum protection, and the local effect on the teeth may be due to basic fish proteins as well as the mineral content.

Approved for Use

FPC has been approved for use in this country, but its greatest potential as a complete protein supplement is expected to be in the malnourished parts of the world.

If the sugar-FPC mixture proves to counteract sugar's decay-causing activity in man as it does in the rat, addition of FPC to snack foods would also be helpful in this country to reduce caries.

In another experiment, Dr. Stephan found that mixing skim milk powder with sugar did not check decay as much as the FPC even though little decay occurs on a milk powder diet alone.

This, too, supports the conclusion that FPC may protect against caries more than the protein food supplements which have been commonly added to our snack foods in the past.

proved systems and modes of biomedical communication. Through technology already introduced, access has been provided to computer-based files comprising more than one million references to journal articles.

The Library's Specialized Information Services program has been assigned the Department's responsibility for establishing the "computer-based file of toxicological information" called for by the President's Science Advisory Committee.