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 1966.

(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 B 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)
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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

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 em-
ployee resigns or is separated for
cause, unless he has been barred
from the retirement system be-
cause 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 be-
fore reaching age 62, his wife or
other eligible dependents will re-
ceive a lump sum equivalent to the
amount he paid into the retirement
fund, plus any interest which has
accrued.

If, however, the employee sur-
vives to age 62, he may then pro-
vide a survivor annuity for his
wife and children by taking a re-
duced annuity.

Persons who leave Federal serv-
ice 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 in-
surance to a commercial plan and his
health benefits coverage to a non-
group health benefits contract.

For more detailed information
concerning rights and benefits un-
der 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 Stoen-
ner, director of the Rocky Moun-
tain 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 an-
imal caretakers at the laboratory.

As a result of this form of recog-
nition, Local 1492, NFPE, now has
the right to act for and negotiate
for all employees of the designated
unit (irrespective of their member-
ship in the organization).

Also, a representative of the em-
ployee organization is entitled to
be present at hearings on griev-
ances or adverse actions.

ANTI-RIOT PROVISION
On February 8, this column fea-
tured an article concerning a re-
striction in the current DHEW Approp-
riation 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 viola-
tion of the law.

A recent memo from the Office
of the Secretary to all HEW em-
ployees points out that this provi-
sion 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-
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.

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 Hudson’s "Spring
Blossoms" creation, a mass of pale blue and yellow roses, was judged the
prottiest. 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.

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.

Personnel Guides for Supervisors, Guide 7, Chapter IV,
As Clue in Cleft Palate

Of Chlorcyclizine Seen
Animals' Different Use

to induce cleft palate in animals and the speed with which a particular species is able to convert chlorcyclizine into norchlorcyclizine.

Dental Research investigators suggest that there is a relation between the ability of chlorcyclizine to induce cleft palate in animals and the species. Chlorcyclizine is a drug which various animals dispose of in different ways. They hoped to find a species more like man to serve as a model for further studies.

Since the anti-histamine, chlorcyclizine, produces cleft palate in rodents and certain species of carnivores, ungulates, and primates, investigators decided to compare the rate of chlorcyclizine conversion to norchlorcyclizine among these species.

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 Prado 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 is called the "Medical Committee for Human Rights" is the local chapter of the "Medical Committee for Human Rights" called the Medical Committee for Human Rights.

Although organized in 1963, the group later expanded its membership to include area physicians, area agencies, and other volunteers from the Committee.

No. 1723, may be obtained from the Superintendent of Documents, Washington, D.C. 20402, for 5 cents each. Bulk orders are $3.50 for 100 copies.

The new folder also devotes a section to pointers on how to recognize, avoid, and eliminate the insect. Freida Brevort, a chemist with the Laboratory of Toxicology, prepares a young patient for a tuberculin skin test.

ingredient in 3 Plants

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 Overreated

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

The newer folder also devotes a section to pointers on how to recognize, avoid, and eliminate the insect. Additional copies are available from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C., to June 27, 1969.

Lab Training Courses

A series of thirty laboratory courses will be offered by the National Communicable Disease Center, 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.

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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 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 (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.


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 the broad area of cancer-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 I, 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.

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 packaging, 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 can identify 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 started 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 served for 3 years, including a 2-year tour of duty in Europe.

Mr. Walker returned to Federal service as a civilian in the Reconstruction Finance Corporation in 1945, and worked in several agencies before joining DRG in 1957.

Mr. Walker’s retirement plans include gardening and fishing.

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, NIH (co-chairman).

(Continued from Page 4)

COMMITTEE VOLUNTEERS MEDICAL AID TO CITY

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 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 Parasite 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 malarial 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.

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 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.

Dr. Taylor was a member 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 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. 1750, the catalogue is available from the Government Printing Office, Washington, D. C. 20402, at a cost of $5.25.

May 1968 Senior Citizen Month

Edward 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 NIH

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, NIH. 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, Kana.

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.

Dr. Charles Sebrell

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 B6 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.

Monograph on Refractive Anomalies of the Eye

Published by NINDB

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.

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 oncoviruses 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. Nettkins, 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 infections so greatly affect 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 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—effect 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 adenyl 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 adenyl 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 adenyl cyclase activity, which was maximal about 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 adenyl 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 Biologies 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 biomedical 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.

Laboratory research and testing, 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 biological products.

The brochure (PHS Publication No. 1744) may be obtained from the DBS Information Office, Building 29, Room 328, Ext. 63343.

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

The brochure (PHS Publication No. 1744) may be obtained from the DBS Information Office, Building 29, Room 328, Ext. 63343.

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. Elden L. Eagles, assistant director, NINDB, and William G. Hardy and Frances I. Catlin, Johns Hopkins University, note the extraordinary complex anatomic, physiologic, and psychologic bases of communication, holding hearing to be the most fundamental.

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 foods 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 that 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 commonly added to our snack foods in the past.

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 support 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 improved 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 file of toxicological information” called for by the President’s Science Advisory Committee.