Dr. Earl Stadtman Wins NAS Microbiology Award

Dr. Earl Stadtman, chief, Laboratory of Biochemistry, National Heart and Lung Institute, was presented with the National Academy of Sciences Award in Microbiology. He was honored "in recognition of outstanding contributions in the field of microbial biochemistry."

The sum of $5,000 was given to him at ceremonies held yesterday, April 27, in the Great Hall of the Academy Building in Washington, D.C. Dr. Stadtman, the second recipient to win the award, was chosen by fellow members of the Academy.

Dr. Stadtman has frequently been cited for his basic studies of complex control mechanisms. He developed an integrated theory to explain how these mechanisms regulate chemical reactions occurring simultaneously within any given cell of the body at any given time.

His studies of cell metabolism are important to the understanding of how a balance is maintained between the breakdown of food stuffs to yield energy plus simple building blocks on one hand, and the utilization of energy to produce work on the other.

(See DR. STADTMAN, Page 3)

Guam Legislature Commands NINDS for Research on Prevalent Island Diseases

The Legislature of the Territory of Guam has commended the National Institute of Neurological Diseases and Stroke "for its extremely important research work in the debilitating and widely prevalent Guam diseases of amyotrophic lateral sclerosis and Parkinsonism-dementia."

NINDS has maintained its Research Center in the Guam Memorial Hospital which serves the island.

Dr. Jacob A. Brody, chief of the Epidemiology Branch, Collaborative and Field Research, NINDS, who received the Legislative citation, has headed this research program since 1966.

He designs the studies, assigns scientists to the Center, employs temporary consultants in specialized fields, and supervises a permanent Guamanian staff of medical technicians who have had 4 years of training by the U. S. Navy.

From about 8 months of the year on the island. His Bethesda office is filled with colorful posters noting "America's day begins in Guam, USA"—our westernmost territory.

Frequency Noted

The two neurological diseases occur with unusual frequency on Guam. Amyotrophic lateral sclerosis, known as "Lou Gehrig's disease" in the U. S. and as "tytico" on Guam, is characterized by progressive weakening of the muscles and usually results in total paralysis with death in 3 or 4 years.

Parkinsonism-dementia is a disorder that combines mental deterioration with progressive muscular stiffness and rigidity of the body.

Either the mental or muscular signs may occur first and progress slowly before the other symptoms appear. Death occurs within 5 years.

Parkinsonism-dementia patients with mental impairment appear apathetic and withdrawn and rarely complain of other symptoms.

For this reason their families may attribute such behavior to normal aging, although they may be only in their 40's or 50's.

Although it is similar in some respects, this disorder should not be confused with Parkinson's disease which occurs in the States.

Studies to establish a possible viral etiology for the disorders have

(See POLY I:C, Page 1)

Marston Tells Biologists Biomedical Research Is 'Ringing Success'

The biomedical research endeavors of this nation constitute a "ringing success story," Dr. Robert Q. Marston, NIH Director, told a national conference of biologists April 13.

Speaking at the Biochemistry Special Session of the Federation of American Societies for Experimental Biology in Atlantic City, N.J., Dr. Marston noted that biomedical research, with all other sciences, has been under attack and suffering from reduced support in recent years.

Nevertheless, the NIH Director told the group, the present climate for NIH programs is better than it was a year ago and this fact is reflected in the 1971 budget.

"There is continued effort inside and outside of Government to find a reasonable basis for the future level of biomedical research support," he said.

"I strongly urge that in the interim we accept, especially for basic biomedical research, a firm public policy to continue to reverse the downward trend in research support, and to maintain the program."

(See DR. MARSTON, Page 7)

Poly I:C, Helpful in Combating Viruses, May Play Role in Treating Some Diseases

By Judy Roberts

NIH Information Intern

A substance known in biochemical shorthand as Poly I:C is creating a stir among medical investigators.

It has already been proven that Poly I:C helps the body against viruses, and it may also play a role in combating systemic lupus erythematosus, a severe, sometimes fatal disease of young women.

Poly I:C, a combination of Polyinosinic acid and Polycytidylic acid, is the weapon that spurs production of interferon—the body's defense against viruses.

Scientists of the National Institute of Arthritis and Metabolic Diseases have played an important role in the development of Poly I:C and are continuing to explore its value in treating various diseases.

Studies by two other Institutes, the National Institute of Allergy and Infectious Diseases and the National Cancer Institute, as well

(See POLY I:C, Page 1)
Capable, Small Computer Leaves NIH for Haven In the Weather Bureau

Radio Programs Stress Pharmacology Research

“This Drug Age,” a series of weekly Tuesday evening half-hour radio programs developed by the American University Broadcasting Center and National Institute of General Medical Sciences, will continue the discussion on the use of drugs, stressing pharmaceutical research.

The series is broadcast at 8:30 p.m. over radio station WAMU-FM, 88.5.

Programs covered such topics as: what drugs are and their effect on man; the medical and psychological reasons for taking drugs, and the legal and ethical problems involved in prescribing drugs.

On Tuesday, May 6, the program will be entitled “The Pharmacist” Listeners will hear Dr. Edward Feldman, director, Scientific Division, American Pharmaceutical Association, and Milton Skolat, who, on July 1, will be appointed Director, Pharmaceutical Services, Duke University Hospital.

Mr. Skolat was formerly chief, CC Pharmacy Department.

“Pharmacology and the Federal Government” is the topic for the Tuesday, May 12 broadcast.

Taking part in the discussion will be Dr. Byron B. Clark, director, NIGMS Pharmacology-Toxicology Program, and John J. Burns, vice-president for Research, Hoffman-LaRoche, Inc., and Dr. Leon I. Goldberg, professor of Pharmacology and Medicine, Emory University.

Programs are available to National Education Radio Network stations, Armed Forces Radio Service outlets, and the Voice of America.

and more versatile computers in Bldg. 12, it was possible to place remote terminals in the Westwood Building. Now DRG can enter jobs to remote terminals in the Westwood Building. Now DRG can enter jobs to remote terminals in the Westwood Building. Now DRG can enter jobs to remote terminals in the Westwood Building.

The capable and modern IBM 360 Model 40 computer which did yeoman service for the Division of Computer Research and Technology, has left the reservation. It was too small.

It had been installed in 1966—In DCRT’s Computer Center—to support the Division of Research Grant’s information system—IM-PAC—which establishes and maintains data on extramural research programs. But, although the computer has gone, it has not been put to pasture. Instead, arrangements were made by the General Services Administration to transfer the computer to the Weather Bureau.

Under the auspices of GSA surplus equipment, such as the Model 40, is offered to other Government agencies. Such transactions result in budgetary savings to the agencies requiring and accepting the equipment.

After DCRT had installed larger

<table>
<thead>
<tr>
<th>General Schedule Annual Salary Rates for 1970</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Grade</strong></td>
</tr>
<tr>
<td>---------</td>
</tr>
<tr>
<td>GS-1</td>
</tr>
<tr>
<td>GS-2</td>
</tr>
<tr>
<td>GS-3</td>
</tr>
<tr>
<td>GS-4</td>
</tr>
<tr>
<td>GS-5</td>
</tr>
<tr>
<td>GS-6</td>
</tr>
<tr>
<td>GS-7</td>
</tr>
<tr>
<td>GS-8</td>
</tr>
<tr>
<td>GS-9</td>
</tr>
<tr>
<td>GS-10</td>
</tr>
</tbody>
</table>

The new pay rates will be reflected in the check of April 28.

The retroactive portion will be paid some time in May, according to the Office of Financial Management.
Gebhard Gsell Retires; With NCI for 22 Years

Dr. Stadtmann

(Continued from Page I)

processes by which these building blocks are assembled into more complex cell constituents on the other hand.

These control mechanisms are vitally important to the entire organism as well as to the individual cell.

Dr. Stadtmann is noted also for discoveries concerned with mechanisms of energy transfer in biosynthetic processes, studies on the biochemical function of vitamins and their coenzyme derivatives in intermediary metabolism, and for his explanation of the pathways involved in the breakdown of complex molecules.

Dr. Stadtmann was also chiefly responsible for originating the idea of building a anaerobic chamber— the later redesigned to provide an oxygen-free environment for carrying out his research and other biological studies. This chamber, established in Building 3 in 1967, was an NIH first.

Dr. Stadtmann received both his B.S. and Ph.D. degrees at the University of California.

He has been with NHLI since 1953, and has received many honors and awards.

His latest awards include the DHEW Distinguished Service Award, DHEW Superior Service Award, and the Hillebrand Award of the Chemical Society of Washington.

Hamilton Putnam Joins NIGMS Advisory Council

Hamilton S. Putnam has been named to the National Advisory General Medical Sciences Council.

Mr. Putnam is president and treasurer of a public relations agency. Since 1949 he has been executive director of the New Hampshire Medical Society.

He was administrative assistant to the late U.S. Senator Styles Bridges.

Mr. Elson (right) spoke to I/D Vice Chairman meeting here before the U. S. Savings Bond Drive begins at NIH May 1. Dr. Kreshover is chairman of this year’s campaign.

Mr. Elson remedied the Vice Chairman of the new 5 percent interest rate bonds now earn when held to maturity of 5 years 10 months.

He emphasized the advantages of the Payroll Savings Plan where you “pay yourself first.”

Finch Heads Committee

HEW Secretary Robert H. Finch is Chairman of the Interdepartmental Savings Bond Committee and Chairman of the HEW Campaign. Mr. Elson is the Secretary’s alternate on the committee.

Jay Ogden, Coordinator of the HEW Bond Drive, accompanied Mr. Elson and was presented to the meeting.

Ways to implement the drive were outlined by Herbert C. Christoferson, NIDR executive officer and Vice Chairman of the NIH campaign.

I/D Vice Chairman are: Marge Previtti, OD and ADA; Christine M. Morris, DDS; Raymond M. Jones, DBS; Constance Gail, NIEL; Muri R. Fautz, DRG; Ray Blackburn, BEMT; Mary E. Stone, DCRT; Geneva Larson, NIAMD; Kirk Weavers, NIDR; Dr. Robert Omata, IPC.

Also, Fred Lash, NCI; Dorsey Boyd, NAID; Norman H. Smith, NIAID; Earl Laurence, CC; James G. Hill, NEI; Charles DiGiacinto, NICHD; Daniel McMonagle, NICMS; Winston Man, NIEHS, and Chester Leslie, NINDB.

The bond drive ends June 19.
Calm Tempo of Lois Chang’s Life Today Belies Her Exciting Escape from China

It’s a long way from a temporary airport on the grounds of the Temple of Heaven in Peking to the National Library of Medicine in Bethesda, but Lois Chang has made the transition.

Her story starts over 20 years ago, December 1948, when the Communists were shelling Peking. Lois Chang, teaching in that city, had obtained a passport for the United States.

To slow the approach of the Communists in the Peking suburbs, the Chinese Nationalists destroyed the airport outside the city and erected a temporary airstrip on the grounds of a Buddhist temple.

With the influx of refugees from the North who copped on the temple grounds, the clamor for tickets grew louder. Mrs. Chang admits that she “had given up all hopes of ever leaving the city.”

However, officials sold tickets to those with worthwhile reasons for leaving the country—she wanted to study in the United States. Finally, early in January, she flew to Shanghai.

There she remained one month. Because “the Communists did not reach Shanghai until May, there were few refugees then,” Mrs. Chang explained.

Arrives in 1949

The final part of the trip was made on the General Gordon, a warship converted to a passenger ship after World War II, which arrived in San Francisco in February 1949.

As the daughter of an Episcopal minister, Lois Chang had lived in many places. Born in Foochow, China, she spent part of her childhood in British Columbia, and later in Shanghai. She graduated from the Catholic University in Peking.

In 1950, Mrs. Chang received her Master’s degree in Library Science after attending Washington University in St. Louis.

She was working in the Library of Yale University when she met and married Dr. Yao Teh Chang.

Mrs. Chang, who originally worked with Chinese medical publications, now works primarily with English material.

Dr. Earl Beck to Head U.S.-Japan Program Section in NIAID Branch

Dr. Earl S. Beck was recently named head of the U.S.-Japan Program Section of the Geographic Medicine Branch, National Institute of Allergy and Infectious Diseases.

Dr. Beck will coordinate activities in the Program. These include planning and supporting research on diseases of special importance in Asian countries.

In his previous post as assistant chief of NIAID’s Vaccine Development Branch, he was responsible for the Institute’s rubella vaccine program.

Dr. Beck taught at the University of Connecticut, Pennsylvania State University, and Ohio Northern University. Later he worked as a virologist with the Biological Laboratories at Ft. Detrick, Md.

He joined the Division of Research Facilities and Resources as a scientist administrator in 1963, and a year later came to NIAID.

Dr. Beck received his B.S. degree from Muhlenberg College, an M.S. from the University of Connecticut, and his Ph.D. from Pennsylvania State University.

He served in the U.S. Navy from 1943 to 1946.

She later worked at the Georgetown University Library and NLM in 1965 when her daughter was born.

Mrs. Chang has been with NLM since 1961. She is now a librarian in the Cataloging Section of the Technical Services Division.

She originally worked with Chinese medical publications. However, she explains, “since about 1965, Chinese works have not been allowed out of Communist China, although some do come from Formosa and Hong Kong. I now catalog English publications, too.”

Mrs. Chang’s husband is with the Laboratory of Biochemical Pharmacology, NIAID. He was one of the first scientists to grow rat leprosy bacilli in tissue culture and is now trying to grow human leprosy bacilli.

An American citizen since 1961, Mrs. Chang has never been back to the Chinese mainland. Her two brothers in this country are university professors. She has only rare contact with her two sisters who remained in China.

POLY I:C

as research by private investigators, have shown that Poly I:C-induced interferon has been effective in combating the common cold, tumors which may be virus-related, and other viral diseases.

It is also thought that Poly I:C has other therapeutic actions in the body in addition to inducing interferon.

“The discovery of Poly I:C is a fine example of basic research leading to the discovery of compounds with important clinical uses,” said Dr. David Davies, who reported the formation of Poly I:C in 1957 in studies conducted with Dr. Alexander Rich.

Dr. Davies directs NIAID’s Section on Molecular Structures of the Laboratory of Molecular Biology.

Explains Research

Dr. Davies said that when he was working with Poly I:C he had no idea that it might be important in treating diseases. His interest centered on finding a model that would throw light on the structure of ribonucleic acid (RNA) which directs the synthesis of protein.

Scientists began to investigate the effects of Poly I:C-induced inter-

Dr. Davies reported the formation of Poly I:C in 1957.

Norman Talal of NIAID’s Arthritis and Rheumatism Branch are collaborating with Dr. Samuel Baron, NIAID, in a series of studies using Poly I:C.

These researchers have discovered a method that theoretically could be useful in treating patients with systemic lupus erythematosus. Lupus usually affects women of childbearing age causing skin rash, fever, pleurisy, and often fatal kidney disease.

Dr. Steinberg said the treatment for human lupus would be based on recent research with a strain of New Zealand mice that naturally develop a lupus-like disease which has been used as a research model for human lupus. These mice carry a murine leucemina virus which had been thought important in causing the disease.

Antibodies Form

When NIH researchers gave Poly I:C to the New Zealand mice from the time of conception, they found that the mice were dying more quickly in spite of interferon levels adequate to protect against murine leukemia viruses. Poly I:C was causing formation of antibodies in these mice.

This discovery triggered the use of cyclophosphamide—a drug that kills sensitized cells. Cyclophosphamine given 24 hours after Poly I:C led to the death of cells sensitized by Poly I:C and reduced the formation of antibodies directed against nucleic acids.

These are the cells considered important in accelerating the course of the disease.

Combined Poly I:C-cyclophosphamide therapy worked even in older New Zealand mice already ill with kidney disease.

Thus, the possibility exists that it could mask lupus in persons who are predisposed to the disease but do not yet have it, according to Dr. Steinberg.

This theoretical could arise from the widespread use of Poly I:C to treat viral infections. Steroid hormones and other drugs might be brought to bear on the unmarked lupus disease.
NIH Scientists Present Cancer Research Papers At Meeting in Phila.

National Cancer Institute scientists presented 45 papers on aspects of cancer research and treatment at the 61st Annual Meeting of the American Association for Cancer Research on April 9 to 11 at the Sheraton Hotel in Philadelphia.

Dr. Abraham Cantarow, Association president, gave the presidential address. The NCI researcher’s topic was “The Bole of the Association in a Changing World.”

Dr. Paul H. Levine and a team of NCI scientists reported on results of the antigen-antibody tests for herpes-type virus (Epstein-Barr or EB virus) among patients with Hodgkin’s disease, a cancer of the lymph system usually affecting young adults.

This is the same virus associated with Burkitt’s lymphoma, a cancer that occurs most often among African children.

Blood Serum Samples Used

For the study, blood serum samples were obtained from 105 patients treated at NCI—63 with Hodgkin’s disease—42 with other cancers of the lymph system. Normal serum samples were used as controls.

By indirect immunofluorescence tests, investigators detected larger amounts of antibody levels to EB virus in the blood serum of patients with Hodgkin’s disease than those with other types of lymph cancer, and in normal controls.

Those patients treated for Hodgkin’s disease had higher levels of antibody than newly diagnosed untreated patients.

Among the untreated patients, those with more advanced disease and whose tissue samples showed fewer white lymphocyte type cells, had higher levels of EB antibody than patients with less advanced disease.

Survival outlook was also related to EB antibody level in blood specimens of Hodgkin’s disease patients.

In a 2-year follow-up study, seven patients with low levels of EB antibody at time of admission to NCI were alive and free of disease symptoms without continued therapy. Nine of the 20 patients with high EB antibody levels had died.

All patients with early clinical stages of disease and low EB antibody levels were surviving; three of six patients with comparable clinical stage of disease, but higher antibody levels, died.

Antibody Levels Compared

Levels of antibody to other types of herpes virus did not appear related to presence or absence of Hodgkin’s disease.

When all the blood samples were tested for antibodies to four other herpes viruses, no differences in antibody level between patient and control groups were found.

Although the number of patients in the study is small, findings suggest that Hodgkin’s disease should be viewed as possibly induced by EB virus.

However, data on Hodgkin’s disease and Burkitt’s lymphoma do not rule out the possibility that the virus is an incidental passenger to both diseases.

Other NCI Researchers Noted

The NCI researchers working with Dr. Levine were Drs. Dharam B. Ablashi, Costan W. Berard, Paul F. Carbone, and Deward E. Wiggens.

In another session Drs. Harold T. Wepsic and Herbert J. Rapp, NCI Biology Branch, described a technique which allows them to transfer tumor immunity among an inbred strain of guinea pigs.

This method may help scientists transfer tumor immunity from cancer patients to help them fight their disease.

Their technique confines immunity by injection of cells from immunized animals into the hearts of animals not immunized. The injection was usually well tolerated.

The line of guinea pigs used by the researchers, like human beings, is capable of developing delayed hypersensitivity reactions on the skin which can be read in 24 hours, as contrasted with weeks or months for other tests.

The investigators said similar techniques might be adapted for cancer patients by perfusing tumor-immune cells fractions into the arteries surrounding tumors.

Other NCI scientists presenting papers were Drs. Donald L. Morton and Dr. Heine Hansen.

Dental Institute’s Beetle Colony Useful In Preparation of Dry Bone Specimens

By Sue Hanon

In spite of all rumors to the contrary, the beetles are alive and well and certainly are working together at the National Institute of Dental Research. Not the Beetles from Liverpool, but a colony of Dermecesta beetles that aid in scientific research.

The larvae of these beetles perform a very useful function in preparing excellent dry bone specimens quickly and thoroughly removing all soft tissues.

Until this method was adopted, researchers at NIH stripped tissue by hand or used papain digestion, both of which were much less satisfactory and more time consuming.

About 12 years ago, the Smithsonian Institution presented NIDR with a small glass jar containing the original colony of approximately 1,000 dermecesta beetles.

As the use of the beetles in the preparation of skeletal specimens increased, the colony grew in numbers, and the original male-female quarters were soon obsolete.

NIDR’s present colony is estimated at over a million beetles and it is maintained in a stainless steel, temperature-controlled, walk-in box. The beetles require no water but must be fed continuously.

This tireless army of small, unimpressive, black insects can clean as many as 300 rat heads in 4 to 7 days.

Other Tasks Described

Other assignments that they have successfully completed include the preparation of skeletal tissues from the animal kingdom, ranging through horse, cow, buffalo, pig, monkey, possum, wolf, bear, rabbit, hamster, guinea pig, and mouse.

Raymond S. Catlett, medical biologist in the Laboratory of Biological Structure, has been commended by NIDR and other institutions for his assistance in starting both research materials and Clinical Center pathology specimens using the dermecesta beetles.

Facilities such as the Walter Reed Army Medical Center and the Johns Hopkins University call upon NIDR for the services of the beetles in special projects.

Upon request, NIDR has shipped smaller starter colonies of beetles to grantees institutions throughout the United States.

Blood Bank at CC Reports On Units Donated in March

The Clinical Center Blood Bank reports that 384 units of blood were received from NIH donors in March, CC patients received 1,549 units.

Joining the Galaun Donor Club were: Wayne A. Broadhurst and Frank J. Lipsery, both of ODA.

Dial the CC Blood Bank, Ext. 64508, for an appointment to donate. Benefit from the new pay plan.

R&W Discount Books Offer Movie Coupons, Price Cuts to Members

The 1970 Discount Books of the NIH Recreation and Welfare Association—containing for the first time coupons for movie tickets—are being distributed to members.

Those employees who have already joined R&W in 1970 may pick up the Discount Book at the closest Association facility upon presentation of their membership card.

Employees who wish to join the R&W will receive the Discount Book and membership card upon payment of the annual fee of $1.

Formas Improved

A committee of R&W members redesigned its format and were responsible for its new, eye-appealing cover.

Up to $10 may be saved on movie theatre tickets. The book has eight coupons to Roth’s Theatres, admitting two for the price of one.

Discounts listed range from such items as cars for $100 over cost and driving lessons to wigs, restaurants, or tropical fish.

Another first this year for the R&W, several merchants in Montgomery Mall are offering discounts to Association members.

Members of the Parklawn R&W Association, composed of Public Health Service employees, will also receive the Discount Book. The NIH R&W is assisting this organization to obtain members.

The Parklawn Association is independent and not chartered under the NIH R&W.

Dr. Morton took part in a special symposium on “Immune Reactions to Cancer in Man.” His paper was titled “Sarcomas and Other Tumors.”

The symposium was headed by Dr. Herbert F. Outig, Memorial Sloan-Kettering Cancer Center in New York. The Center is partially supported by NCI funds.
Hwang Named to NICHD

Post as Administrator

Dr. Joseph C. Hwang has been appointed health scientist administrator in the Perinatal Biology and Infant Mortality Branch, National Institute of Child Health and Human Development.

He came to NIH in 1965 as a member of D RG's Grants Associates Program and, later, was appointed senior evaluation scientist for Parasitology and the Microbiological Sciences.

Prior to his NICHD appointment in 1964 Dr. Hwang was awarded a NIH Fellowship which enabled him to conduct research on the effects of malnutrition among children in Central American countries.

He was chief of the Scientific Evaluation Section, Office of Research Analysis and Evaluation, DRE.

Before joining NIH, Dr. Hwang was senior research parasitologist with the USDA in Beltsville.

He has also served as adjunct professor in the Biology Department at American University, and as medical parasitologist at Children's Hospital, Washington, D.C.

In 1964 Dr. Hwang was awarded an NIH Fellowship through Louisiana State University for research on the effects of malnutrition among children in five Central American countries.

Dr. Hwang received his M.S. in zoology and a Ph.D. in entomology from the University of Maryland.

Dr. Clifton Appointed
To NIAMD Council

Dr. James A. Clifton has been appointed to a 3-year term on the National Advisory Arthritis and Metabolic Diseases Council.

Dr. Clifton is professor of Medicine and vice-chairman of the Department of International Medicine, University of Iowa.

He was attending physician at the Veterans Administration Hospital in Iowa City from 1952 to 1965. Since then he has served as consultant to the hospital.

Dr. Clifton, recently elected president of the American Gastroenterological Association, was on the editorial board of Gastroenterology from 1964 to 1968.

He was an NIH consultant on the Gastroenterology and Nutrition Training Grants Committee, serving as committee chairman.

Diagnostic Ultrasound Can Provide New Highly Useful Tool to Speech Scientists

Diagnostic ultrasound can be a highly useful tool to the speech scientist, according to researchers at the University of Wisconsin. Their studies were supported by the National Institute of Neurological Diseases and Stroke.

The technique can provide the investigator with information on various physiological aspects of the vocal tract during speech without the use of devices in the tract itself.

It can provide unique information in many respects, is safe, and places no encumbrance on speech production.

Provides New Possibilities

Used separately or in combination with other monitoring techniques, diagnostic ultrasound can provide new research possibilities in both normal and pathological speech physiology by monitoring various physiological parameters within the head and neck during speech production.

Clinical studies were made over a 3-year period using diagnostic ultrasound to provide information on the configuration and motion pattern of the vocal tract in normal and abnormal speech production.

The process, similar to sonar ranging, uses a piezoelectric crystal to both generate and detect the sound field.

One instrument (A-scope display) was used to measure the pharyngeal wall depth, and the other (B-scope display) to scan the trachea, make time-motion study of the moving lateral wall, and conduct Doppler monitoring of vocal-fold velocity.

Significant advantages of ultrasonic diagnostic tests are safety, rapidity, and that they involve no discomfort to the patient.

In certain instances ultrasonics was shown to provide much of the same information as radiography without the radiation hazards which have limited its use.

Techniques Explained

The technique of A-scope display is valuable primarily in locating the lateral pharyngeal wall.

The B-scope display, which presents a two-dimensional view, is used in the Time-Motion study to outline the neck wall, thyroid, and trachea, identify moving interfaces, and permit measurement of the extent of such motions, which is of utmost importance in studies of speech physiology.

The work by C. A. Kelley, F. D. Minifie, and T. J. Hixson, University of Wisconsin, was reported in the Journal of Speech and Hearing Research.

Lucy Alexander Retires, Ends 20 Years Service

In Fed 'I Government

Lucy B. Alexander, secretary to Robert L. Kingler, Deputy Director of the National Heart and Lung Institute, is leaving NIH after 20 years of Federal service.

Mrs. Alexander came to NIH's Financial Management Branch in 1951, and later worked in the Division of Research Grants.

Prior to this she worked in the D. C. Public Library and served as a communications officer in the Navy Department from 1942 to 1946.

She was in the Division of Research Services from 1961 to 1962 and then joined NHLI where she remained until her retirement.

Mrs. Alexander and her husband, who will soon retire from the Montgomery County Police Department, plan to move to Myrtle Beach, S. C., where they are building a house.
level—that is, current dollars plus inflation—even during these times of difficult constraints.

Dr. Marston shared the platform with Dr. William M. McElroy, Director of the National Science Foundation. More than 20,000 scientists attended the FASEB session.

Cites Need to Participate

Dr. Marston urged the biomedical community to welcome the present “rather agonizing reexamination of the nature and level of support” for research and to participate actively in it.

If scientists do not, he said, “the distortions and outright mistakes that are being perpetrated may stand in the way of the very goals we seek in the names of science and humanity.”

He included in these goals “the future progress and even the survival of mankind.”

Dr. Marston observed that future historians will consider this era as a time when biomedical research was held up as a model for causes such as education, organization and delivery of health services, and the salvaging of the environment.

And for this reason, Dr. Marston continued, the historians may understand that “…some of us became confused or angry or frustrated by what we perceived as at least a failure to take this fact of success into account.”

Dr. Marston predicted that if the nation is ready to cope seriously with major long-range domestic problems, biologists are ready to change emphasis where indicated, and mobilize new resources in order to achieve major national objectives.

Stressors Biologists Role

But biologists, Dr. Marston said, are not “…economists or sociologists or political scientists or politicians. . . . We should be asked to serve primarily in our areas of expertise.”

Dr. Marston discredited a widely held “myth” that scientists “if they really wanted to” could solve social problems as easily as they have others, such as decoding DNA.

Those who believe this myth ask “If scientists can build an atomic bomb why can’t they build a basic approach to cure cancer?” he said.

This thought is based on confusion between the nature of the advanced fundamental knowledge of engineering or technological feats.

The biomedical scientist’s realistic time scale and the unpredictability of acquiring new basic knowledge is often interpreted by non-scientists as arbitrary or indifferent, Dr. Marston observed.

Brands Charges False

Dr. Marston also branded as false other charges that have been made opposing the support of science. These include the views:

That biomedical science has distorted the nature of medical schools because faculty members are unresponsive to the urgent needs of their institutions; that the quest for total knowledge and its transmission to future generations has been “oversold;” and that biomedical research is not relevant to the health of the world’s people.

“These generally false accusations must not go unchallenged,” he declared.

“More knowledge, not less, is requisite to improve future health service to universality, progress, and to the education of future generations.”

For the future, knowledge and wisdom in the area of health is almost totally dependent on the basic research conducted by the scientific community, he observed.

Throughout history, he said, investment in the future rather than attention to immediate problems has required exceptional leadership, tolerance, foresight and dedication.

These qualities,” Dr. Marston noted, “are not lacking among the research community and the friends of biomedical science.”

The NIH Director Robert Q. Marston (center) hears HEW Undersecretary John G. Veneman (r) congratulate Dr. James R. Slagle, DCRT, after the Departmental Honor Awards Ceremony on April 10. Dr. Slagle was named one of the Ten Outstanding Young Men of 1969 by the Jaycees. Richard L. Seggel (l), NIH Associate Director for Administration, and Dr. Earl R. Stuedman, NHLI, received Diplomatic Service Awards, and Dr. Margaret Pittman, DBS, won the Federal Woman’s Award.

GUAM

(Continued from Page 1)

been under way for several years and have so far proved negative. However, investigations continue, using new techniques as they are devised.

Recently, researchers have found evidence of a major error of dopamine metabolism in patients with Parkinsonism-dementia and suggestions of this same error in amyotrophic lateral sclerosis patients.

NINDS physicians have begun treating Parkinsonism-dementia patients with L-Dopa, a new drug that aids dopamine metabolism.

For the first time in Institute history on Guam clinical improvement in the invariably progressive course of this disorder has been noted.

A number of treatment regimens used by patients with amyotrophic lateral sclerosis have been unsuccessful in halting that disorder. As new medications become available which may be useful therapeutically they are systematically tested in ALS patients on the island.

Scientists Study Veterans

NINDS epidemiologists have followed veterans and construction workers from the United States who spent more than a year on Guam and find no increased incidence of either disorder.

They are also studying Guam natives who migrate to California to see whether they bring these disorders with them.

Studies to find some environmental factor on Guam which might cause these disorders have so far proved negative.

Besides his devotion to research work, Dr. Brody also likes to talk about the beauty and history of the island.

He notes that it was first “discovered” in 1521 by Magellan.
Report Explores Ways Biomedical Engineering May Aid Health Care

Biomedical engineering inevitably will play a greater role in the Nation’s efforts to devise better methods for delivery of health service, the National Institute of General Medical Sciences concluded in a recently issued publication.

The 90-page report, Biomedical Engineering Development and Production, explored ways to effectively coordinate available resources for research, development, production, and distribution of medical devices.

The report is the product of a year-long exploratory study of potential contributions to be made in biomedical engineering by education, financial and manufacturing, and marketing institutions in the Chicago industrial region.

The NIGMS-sponsored study was carried out by the Biomedical Engineering Resource Corporation, a nonprofit organization formed under auspices of the Governor of Illinois’s Science Advisory Council.

Findings Apply Elsewhere

While the findings deal specifically with the Chicago area, they are applicable to other regions.

Automation is necessary to speed and improve the viability of laboratory testing as a basic source of information for physicians in diagnosis and treatment of disease, according to Dr. James F. Dickson III, NIGMS’s director for biomedical engineering programs.

Automation also reduces unit costs of patients’ tests and time spent in the hospital for tests.

Dr. Dickson said the Chicago study was done to find ways to surmount problems which retard the successful pursuit of medical instruments systems development, from their initial concept through successive stages of research and development.

Cancer Drug, Mithramycin, For Inoperable Testicular Tumors, Wins FDA Approval

A drug long under study for the tumors and certain other conditions related to physicians, it is called mithramycin, and it will be marketed under the trademark Mithramycin by the Pfizer Laboratories Division, Chas. Pfizer & Co., Inc. Approval of the drug by the U.S. Food and Drug Administration was published officially in the Federal Register.

The drug was discovered by Pfizer scientists, and developed in collaboration with the Cancer Chemotherapy Program of the National Cancer Institute. It is an antibiotic derived from a soil organism of the Streptomycetes genus.

Mithramycin is a highly complex chemical substance requiring special handling in shipping and storage. It will be supplied as a freeze-dried preparation for intravenous injection that must be stored at refrigerator temperatures below 10 degrees Centigrade.

Mithramycin will be available to specialists treating cancer. For indigent patients, Pfizer will provide the drug free of charge.

Testicular cancer occurs relatively infrequently, accounting for about 750 deaths a year in the United States. As in the case of most drugs of this kind, Mithramycin is effective in eventual deployment to the health care scene.

Among problems considered in the study were: enabling legislation and licensing procedures, supply of risk capital, assignment of patient rights, and provision of required professional and technical manpower.

Single copies of the report may be obtained from the Information Office, NIGMS, Bethesda, Md. 20014.

NCl Issues Supplement To Book on Compounds

A new listing of substances that have been tested for their ability to produce cancers has been published by the National Cancer Institute.

The 655-page volume, which covers the period 1954 through 1969, is the second supplement to the NCI publication, “Survey of Compounds Which Have Been Tested for Carcinogenic Activity.”

The authors are Dr. Philippe Shubik, Eppley Institute for Research in Cancer, Cancer Institute, and a professor of the University of the Pacific School of Dentistry. He has also lectured extensively throughout the U.S.

Latest Participants in NIH Visiting Scientists Program Listed Here

4/1—Dr. Franz Oesch, Switzerland, Laboratory of Chemistry. Sponsor: Dr. John W. Daly, NIAMD, Bldg. 4, Rm. 227.

4/1—Dr. Violetta C. Sunderland, U.S., National Center for Prevention and Control of Alcoholism. Sponsor: Dr. Jack H. Mendelson, NIMH, St. Elizabeths Hospital, Washington, D. C.

4/9—Dr. Shri Pati Shukla, India, Intermediary Metabolism Section. Sponsor: Dr. Bertram Sacktor, NICHD, Gerontology Research Center, Baltimore, Md.

Dr. Gunnar Ryge Elected To Office of Dental Research Association

Dr. Gunnar Ryge, Division of Dental Health, has been elected Vice-President of the International Association for Dental Research for 1970-71. He is associate director for Applied Research and Training at the Dental Health Center in San Francisco.

Dr. Ryge, who is a native of Copenhagen, Denmark, received his dental degree in 1939 from the Royal Danish Dental School.

In 1949 he came to the U.S. to do work in his field at the National Bureau of Standards. Later, he attended Marquette University where he received his M.A. in Physics and Mathematics.

Dr. Ryge is a lecturer at the University of California Medical Center, School of Dentistry, and a professor at the University of the Pacific School of Dentistry. He has also lectured extensively throughout the U.S.