

## NIH COs Eligible To Win Awards For Achievement

Dr. Shannon has announced that NIH Commissioned Officers will receive official recognition for outstanding service under a program of honor awards established earlier this year by the Public Health Service.

At Dr. Shannon's direction, quarterly reminders are being sent to all Institute Directors and Divisions Chiefs regarding nominations for the awards. The first of these notices was distributed June 14.

### Medals Awarded

According to the guidelines of the PHS program, Commissioned Officers who are cited for superior performance and achievement may be awarded one or more of three medals—the Distinguished Service Medal, the Meritorious Service Medal, and the Commendation Medal.

Previously, such awards were made only to the Civil Service staff by authority of the Government Employees Incentive Awards Act of 1954.

In making the announcement Dr. Shannon said, "The members of the Commissioned Officers Corps at NIH now enjoy for the first time in the history of this institution an opportunity to receive the sort of recognition which has long been available to their Civil Service counterparts."

### Recognition Overdue

"It seems to me highly desirable that the superb accomplishments of this professional element of our staff be given . . . well-deserved and long overdue accolade."

The Distinguished Service Medal is awarded annually by the Secretary, DHEW, to candidates selected by the Surgeon General. Recipients of this medal become eligible for the President's Award for Distinguished Federal Civilian Service.

The Meritorious Service Medal and the Commendation Medal may be awarded by the Surgeon General at any time throughout the year.

## 35 Receive \$3,400 at NIH in Annual Awards Ceremony

Thirty-five employees received cash awards totaling more than \$3,400 for superior performances and suggestions at the Tenth Annual NIH Awards Ceremony, held June 14 in the Clinical Center auditorium.

### Smiling Andy Is Handy With Brush and Polish

There's a new sound in the Clinical Center barbershop. Above the usual hum of electric clippers and the staccato snipsnip of scissors, customers now hear the swish of the brush and the rhythmic slap of the polishing rag on shoes in need of shining.

The source of these sounds is Andy Carter, sole owner and smiling operator of the barbershop's new shoeshine stand.

Andy, now 24 but a veteran of seven years experience in the shoe shining field, is from Siler City, N.C. He has been in Washington and at NIH for about a month.

Head barber Simon Tovera calls Andy "a sincere and ambitious young man—the best we've ever had. I hope he'll have enough business to stay permanently," Mr. Tovera said.

The barbershop has tried to maintain shoeshine facilities in the past, each time without success.

"If enough people want their shoes shined, I'll be here forever," said Andy.



Andy shines reporter's shoes for candid photo by Jerry Hecht.

In addition, 123 employees received length-of-service pins—13 for 30 years' service and 110 for 20 years' service.

Dr. Thomas J. Kennedy, Jr., Assistant to the Director of Laboratories and Clinics, OD, and Chairman of the NIH Board on Employee Awards, welcomed the approximately 700 guests attending the ceremony, and Dr. G. Burroughs Mider, Director of Laboratories and Clinics, presented the length-of-service awards in place of Dr. David E. Price, NIH Deputy Director, who was unable to be present.

The incentive awards were presented by Dr. Jack Masur, Director of the Clinical Center.

### Develops Potential

In paying tribute to the performance award winners, Dr. Kennedy noted that the occasion was "a fitting ceremonial climax (to) the continuous day in, day out processes whereby an attempt is made to encourage the people at NIH to realize more fully their potential capacity . . ."

"This whole program," he said, "is designed to constitute an incentive to the staff to do just a little bit better job than outlined by the people who write job descriptions—to use their fertile imaginations, to generate ideas that will make things run more smoothly and less expensively."

### Progress Matches Growth

Dr. Mider told the longevity award winners that no one in the audience could ". . . fail to be impressed by the tangible, concrete evidence of growth that surrounds us on all sides. All are equally aware that this is matched by steady and inexorable progress toward our grand humanistic goal of ameliorating the impact of dread disease through research.

"This progress," he added, "would have been impossible without the enthusiastic participation

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## Dr. C. C. Powell Is Named NIAID Asst. Director

Appointment of Dr. Clinton C. Powell, Deputy Chief of the Division of Research Grants, as Assistant Director of the National Institute of Allergy and Infectious Diseases was announced June 29 by Dr. Justin M. Andrews, NIAID Director. The appointment became effective July 1.



Dr. Powell

In his new position Dr. Powell will assist Dr. Andrews in the conduct of Institute business and will act as his administrative representative for NIAID research grant activities.

A PHS Commissioned Officer since 1946, Dr. Powell has had extensive experience in public health work, particularly in the field of radiological health.

### Radiology Experience Cited

From 1948 until 1951 he served as Radiation Safety Officer at NIH. In 1952 he became a Fellow in radiology at the University of Pennsylvania, where he remained until his certification in 1954 by the American Board of Radiology.

He then returned to NIH where he has served in various capacities in connection with radiological health and research grants, including Assistant Grants Branch Chief for Clinical Research and Executive Secretary of the Radiation and Surgery Study Sections, DRG.

### Serves With Navy

Dr. Powell received a B.S. degree from the Massachusetts Institute of Technology in 1940 and an M.D. degree from Boston University in 1944. After his internship at the U.S. Public Health Service Hospital in Boston, he served with the U.S. Navy as a Medical Officer until his appointment to the PHS Commissioned Corps.

Dr. Powell is the author or co-author of many publications, most of them concerned with radiological health.

# the NIH Record

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## Dr. Kelly West Named OIR Special Assistant For Scientific Affairs

Dr. Martin M. Cummings, Chief of the Office of International Research, NIH, has announced the appointment of Dr. Kelly M. West to the post of Special Assistant for Scientific Affairs.

Dr. West was formerly Associate Professor in the Department of Medicine of the University of Oklahoma School of Medicine.



Dr. West

In his new position, Dr. West will act as principal adviser to Dr. Cummings in the planning and development of NIH's overseas research programs and their coordination with the activities of other international research and scientific organizations.

### Operates Programs Abroad

Under the provisions of the International Health Research Act of 1960, the Office of International Research is responsible for the establishment and operation of NIH programs in support of research activities and research training and fellowships conducted abroad.

While at the University of Oklahoma School of Medicine, Dr. West was Program Director of the NIH Training Program in Diabetes for the University's Medical Center. He also served as Coordinator of Student Teaching and Director of the Diabetes Clinic at the Veterans Administration Hospital in Oklahoma City.

Dr. West received his M.D. degree from the University of Oklahoma School of Medicine in 1948. He is a Diplomate of the American Board of Internal Medicine and an Associate and Fellow of the American College of Physicians.

## NHI Scientists Change Ribonuclease Molecule By 'Uncoiling' Chain

The enzyme ribonuclease consists of a single chain of 124 amino acids coiled into a roughly spherical shape. It is held in this configuration by disulfide bridges connecting portions of the chain at four points. National Heart Institute scientists have "uncoiled" this chain, using reducing agents that selectively break these disulfide bridges but not the chain itself.

### 'Reorganizes Spontaneously'

The resulting molecule exhibited none of the enzymatic activity of the native ribonuclease. However, in the presence of molecular oxygen and suitable conditions of alkalinity, the uncoiled chain was able to reorganize spontaneously, regaining both its original configuration and its lost activity.

These studies are reported in two articles in the Journal of Biological Chemistry by Drs. Edgar Haber and Christian B. Anfinsen and by Dr. Fred H. White, all of the NHI Laboratory of Cellular Physiology and Metabolism.

### Acid Carries Directions

Enzymes, the protein catalysts of nearly all the body's biochemical reactions are probably made in the cells under the control of RNA. This nucleic acid carries the directions for stringing together the proper number of the proper amino acids into the proper sequence to form the protein chain or chains of the enzyme. The steps of the assembly process proceed according to a genetic blueprint built into RNA during its formation.

However, the activity of enzymes depends not only upon the basic structure of their protein chains, but also upon the manner in which these chains are coiled or folded. The NHI scientists were seeking to learn whether this property, too, is

## Colombian Strain of Malaria Found Chloroquine-Resistant

Resistance of human malaria to chloroquine has been definitely shown for the first time in a strain of *Plasmodium falciparum* which gave a poor response to normal and above-normal doses of chloroquine.

A study of this strain of malaria is reported in the American Journal of Tropical Medicine and Hygiene by Dr. Martin D. Young of the Laboratory of Parasite Chemotherapy, National Institute of Allergy and Infectious Diseases, and Dr. Donald V. Moore of the Southwestern Medical School of the University of Texas.

### Infected Blood Used

Infected blood from a patient in Colombia, South America, who had not responded to chloroquine treatment of malaria was used to induce the disease in eight patients. The resulting infection was treated with chloroquine diphosphate given in oral doses of 150 mg. and of 600 mg., as well as the standard 1.5-gram dosage over a 3-day period. With the exception of one case, the parasites either were not removed, or, if removed, the infection relapsed shortly thereafter.

The parasitemias of susceptible strains disappear in less than three days by 1.5 grams chloroquine, with a relapse rate of less than two percent. Most of the Colombia strain infections treated with this dosage were either removed more slowly than the susceptible strains or not cleared at all. Furthermore, of the four cleared by 1.5 grams or 2.1 grams, three relapsed in nine to 18 days.

In 622 cases of malaria from North America and Malaya the parasitemias due to normal (susceptible) strains are eliminated in

three days or less by either 0.4 gram or 0.6 gram chloroquine given in a single oral dose. None of three patients with the Colombia strain was cleared by 0.6 gram. The fact that the drug was given under close supervision, that the urines gave a positive Haskins test for chloroquine, and that the plasma levels of the chloroquine were at therapeutic concentrations eliminates any doubts that the drug was being delivered to the parasites in the blood stream.

Because of the widespread use of this drug for the suppression and cure of malaria and especially in malaria eradication programs, where it has been in effective use since World War II, the occurrence of resistance by the parasites appears to be of considerable importance.

### Study Is Valuable

As drugs become more widely used in malaria eradication programs, the study of possible resistance in the laboratory, likewise, is of increased value.

Several years ago pyrimethamine appeared to be a very promising drug as it was cheap, and small amounts, administered weekly, had excellent effects against susceptible malaria.

In 1959 the NIH laboratory staff at Columbia, S. C., demonstrated that resistance could appear readily after the use of the drug. Resistance to pyrimethamine from malarious areas has been reported.

Similarly, there are reports from the field, of failures with chloroquine, but so far the Colombia, South America, strain is the only one shown, after critical evaluation, to be definitely resistant.



Dr. Martin Young, NIAID, examines chart showing the occurrence of drug resistance in *Plasmodium falciparum* malaria.

determined by the genetic blueprint or whether it might be due, at least in part, to the amino acid sequence of the chains.

The spontaneous reorganization

of ribonuclease indicates that the amino acid sequence alone may often be enough to determine the secondary or tertiary structure of an enzyme.

## Dr. Eagle Leaves PHS for Post At Yeshiva Univ.

Dr. Harry Eagle, Chief of NIAID's Laboratory of Cell Biology, has retired from the Commissioned Corps of the Public Health Service after 25 years' service to become Chairman of the Department of Cell Biology at the Albert Einstein College of Medicine, Yeshiva University, New York.

Dr. Eagle left Bethesda on July 1 to assume his new position, in which he will continue his research on the nutritional requirements and metabolic activities of mammalian cells.

His studies are the foundation of much of the progress in this relatively new field of inquiry. The Eagle medium for cell propagation in tissue culture is used throughout the world.

### Gives NIH Lecture

Dr. Eagle came to NIH in 1947 when he was appointed the first Scientific Director of the NCL. After two years, he returned to full-time research in NIAID. In 1959 when the NIAID laboratories were reorganized, the Laboratory of Cell Biology was created with Dr. Eagle as its Chief.

Last year Dr. Eagle was the first NIH staff member chosen to deliver the National Institutes of Health lecture.

Also in 1960 he participated in a unique experiment, sponsored by the American Cancer Society, to stimulate interest among college students in advanced work in the medical, biological and related physical sciences.

### Counsels Students

Dr. Eagle, with professors from Harvard, Columbia and Yale universities, gave lectures at four universities and counseled students interested in careers in research.

Before coming to NIH, Dr. Eagle spent an 11-year period in Baltimore, first as Director of the PHS Venereal Disease Research Laboratory at Johns Hopkins Hospital and as head of the same group when it was renamed the Laboratory of Experimental Therapeutics to reflect change in research emphasis.

During that time he was Adjunct Professor of Bacteriology at the Johns Hopkins School of Hygiene and Public Health.

His early work in syphilology produced many contributions to the scientific literature as well as the



Dr. Eagle

## Dr. Anderson Receives Honorary D.Sc. Degree

Dr. Evelyn Anderson, Chief of the Section on Endocrinology in NIAMD's Laboratory of Nutrition and Endocrinology, was awarded an honorary Doctor of Science degree by the Woman's Medical College of Pennsylvania in Philadelphia on June 13.

In presenting the honorary degree, Dr. Marion Fay, President and Dean of the Woman's Medical College, commended Dr. Anderson for her many contributions to the field of endocrinology. "We are especially proud," she said, "of the fine combination of clinical and fundamental research which has made Dr. Anderson's work so vital, so distinguished, and so valuable."

Dr. Anderson, who joined the NIAMD staff in October 1947, has combined her official duties with those of visiting professor of physiology at Howard University since 1955.

She has written approximately 100 articles on the results of her studies in endocrinology and is an active member of the Endocrine Society. She has served that organization as Vice-President, Chairman of the Membership Committee, and as a member of the editorial board of their official journal, *Endocrinology*.



Dr. Evelyn Anderson, NIAMD (left), receives honorary D.Sc. degree from Dr. Marion Fay, President and Dean of the Woman's Medical College of Pennsylvania.

### AFGE Local Meets July 10

Plans for a campaign to increase membership and a discussion of amendments to its constitution will feature the next monthly meeting of Lodge 1690, American Federation of Government Employees, according to the union's announcement.

The meeting will be held next Monday, at 8 p.m., in Wilson Hall.

serologic test which bears his name. During his career to date, Dr. Eagle has published over 250 manuscripts.

Special recognition accorded Dr. Eagle during his PHS career includes an honorary Master of Sci-

## Breakdown of Atrium's 'Booster Pump' May Lead to Congestive Heart Failure

National Heart Institute studies indicate that the function of the atrium as a "booster pump" for ventricular filling importantly affects ventricular performance and heart output. They also suggest that atrial failure may be a more important factor in congestive heart failure than previously supposed.

The booster pump action of the atrium serves to fill the ventricle adequately without the necessity of unduly high venous blood pressure. When the atrium contracts vigorously and efficiently, it propels a larger volume of blood into the ventricle.

Being presented with more blood, the ventricle pumps more blood. Its stroke work also increases because the increased volume elongates its muscle fibers and causes them to contract more forcefully. Moreover, the vigorous atrial contraction, by emptying the atrium more com-

pletely, leaves in its wake a lower pressure to be overcome by the venous blood that fills the atrium during its relaxation phase.

NHI scientists have studied how such factors as heart rate and autonomic nerve stimulation, by altering the activity of this booster pump, also affect ventricular performance and heart output.

The studies were carried out by Drs. S. J. Sarnoff, J. P. Gilmore, and Jere H. Mitchell, of the NHI Laboratory of Cardiovascular Physiology. Their findings were reported by Dr. Mitchell at the annual meeting of the American College of Cardiology in New York.

### Contractions Unbalanced

The studies showed that, as heart rate was increased, the duration of the ventricular pumping stroke (systole) increased relative to the total cardiac cycle while the time available for the ventricle to relax and receive blood from the atrium decreased steadily. Atrial contraction thus tended increasingly to encroach on ventricular contraction, and was eventually taking place partially or even completely against a closed mitral valve.

As a result, mean atrial pressure rose. Since mean atrial pressure must be exceeded in moving blood into the atrium, this increased the toll levied on the venous system for atrial filling. However, because of dwindling atrial pumping efficiency, less blood was actually being moved into the ventricle.

### Atrial Action Increased

At any given heart rate, the action of the atrial booster pump was increased by sympathetic nerve stimulation. This shortened the duration of atrial and ventricular contraction relative to the total cardiac cycle and thus effectively increased the time available for adequate ventricular relaxation and filling.

Vagal stimulation, however, decreased the pumping action of the atrium by depressing the vigor of its contraction. Again, mean atrial pressure rose (from the larger volume of blood still remaining in the atrium after its contraction), but again less blood was moved into the ventricle.

These findings suggest that failure of the atria, as well as the ventricles, may be an important factor in congestive heart failure. The mean atrial pressure would be higher as atrial pumping action declined, and this would increase the back pressure in the venous feed lines. Thus, atrial failure could contribute to the elevated systemic venous pressure and to the pulmonary edema that often accompany congestive heart failure.

## Dr. Bronson Becomes Chief of Blood Bank

Dr. William R. Bronson was named Chief of the Clinical Center Blood Bank, Laboratory of Blood and Blood Products, DBS, effective July 1.

He succeeds Dr. Allan Kliman who has returned to Harvard Medical School as instructor in medicine following two years' service with the PHS in the Division of Biologics Standards, NIH.

Dr. Bronson, formerly associated with the Strong Memorial Hospital in Rochester, N. Y., joined the DBS staff in July 1960. Since then he has served as supervisor of the CC Blood Bank.

In his new position, Dr. Bronson is responsible for the operation of the CCBB. Besides providing blood for patient care, this operation includes various research activities within the division and the coordination of the blood services which this DBS section provides for NIH scientists engaged in clinical and laboratory studies.

Dr. Bronson received a doctorate degree from Yale University, the first Eli Lilly Award in Bacteriology, the Alvarenga Prize of the College of Physicians of Philadelphia, the Presidential Certificate of Merit, and membership in the American Academy of Arts and Sciences. In 1959 he was chosen to give one of the Harvey Lectures.



Dr. Bronson



The recipients of superior performance awards presented at the Tenth Annual NIH Awards Ceremony in the CC auditorium, June 14, are pictured here with a few of those who participated in the presentations. All identifications are left to right. Top row: Donald C. Earp, Melvin R. Tonkins, Ruth C. Hill, Charles H. Williams, Sgt. John F. Miller and Dr. Thomas J. Kennedy, Jr., Chairman of the NIH Board on Employee Awards; Wilda H. Mitchell, and Jimmie C. Skinner who is being congratulated by Dr. Justin M. Andrews, Director of NIAID. Bottom row: members of the Radiation Safety Office, Plant Safety Branch, recipients of a group award, are James H. Austin, Donald W. Driver, Richard Dorman, Mardalee B.

Dickinson, John C. Dewey, Yvonne E. McIntosh, and Joseph M. Brown, Jr. NIH fire-fighters, with their group award checks, are Charles O. Poole, Joseph E. Mercer, Sheldon J. Jenkins, John B. Debnam, Jr., William F. Coleman, Milton R. Mullican, Vincent B. Napoli, Charles K. Keys, and Chief Norman C. Anders. Group award winners from the Research Facilities Planning Branch are Dora M. Leache, Barbara R. Hetherington, Constance M. O'Mara, and Dorothy E. White. Dr. Jack Masur, CC Director, congratulates Nettie G. Burdette on her incentive award.—Photos by Bob Pumphrey. Pictures of additional award winners will be published in the next issue of the Record.

## AWARDS

(Continued from Page 1)

of each and every segment of the NIH staff."

Music for the ceremony was provided by the NIH Orchestra under the direction of Mark Ellsworth, concertmaster of the National Gallery Orchestra.

Individual awards for superior performance were presented to the following:

Wilda H. Mitchell, Management Analyst in the Management Policy Branch, OAM, "for resourcefulness and adaptability in a series of highly technical assignments."

Sgt. John F. Miller, Guard Supervisor, Plant Safety Branch, OAM, "for tactful and courteous competence and a high degree of cooperation in a difficult area."

Donald C. Earp, Truck Driver with the Office Services Branch, OAM, "for chalking up a remarkable record for safe driving."

Ruth C. Hill, Grants Assistant, Research Grants Review Branch, DRG, as "a noteworthy example of unusual competence, contributing immeasurably to the smooth operation of the Biochemistry Study Section."

Melvin R. Tonkins, Photographic Laboratory Technician, Photography Branch, DRS, "for maintaining outstanding productivity and at the same time discharging his assignment with alertness, efficiency and economy."

Nettie G. Burdette, Secretary in

the Information Service, Office of the Director, CC, "for material enhancement of the stature of NIH in its relations with the public by repeated demonstrations of warm understanding and courtesy in an important contact area."

Jimmie C. Skinner, Research Technician, Laboratory of Parasite Chemotherapy, Columbia, S.C., "for exceptional devotion to duty and an extraordinary high level of technical competence on the malaria research program of the National Institute of Allergy and Infectious Diseases."

Charles H. Williams, Clerk in the Laboratory of Chemistry, NIAID, "for overall excellence of performance, with significant contributions to the work of the scientific personnel of his Institute in the field of graphic arts."

### 6 Make Suggestions

Awards for suggestions "for scientific and technical devices and procedures which have significantly improved safety conditions and reduced the costs of operations at the NIH" were presented to Celeste Meininger, Office of Program Planning, OD; John Greene, Duplicating Shop, Internal Operations Branch, DRG; Annette U. Moffitt, Review Branch, Research Fellowships, DRG; Walter C. Clark, Medical Arts Section, DRS; Redrick T. Rice, Library, DRS; and Lillian S. Oksner, Program Development, NIMH.

A group award for "outstanding

competence in the establishment and maintenance of the NIH radiation safety program at maximum effectiveness" was presented to the following employees of the Radiation Safety Office, Plant Safety Branch, OD:

Joseph M. Brown, Jr., Deputy Radiation Safety Officer for NIH; James H. Austin, John C. Dewey, Mardalee B. Dickinson, Richard Dorman, Donald W. Driver, John R. Howley, and Yvonne E. McIntosh.

### Fire-Fighters Cited

Another group award, "for an extraordinary record of accomplishment in the fire prevention program at the NIH," was presented to the Fire Department, Plant Safety Branch, OD.

Its members are Norman C. Anders, Chief; Charles K. Keys, Vincent B. Napoli, Milton R. Mullican, William F. Coleman, John B. Debnam, Jr., Sheldon J. Jenkins, Joseph E. Mercer, and Charles O. Poole.

The following members of the Research Facilities Planning Branch, DRS, received a group award for "top-flight administrative and clerical assistance to professional staff members engaged in the dynamic construction program at NIH": Dorothy E. White, Special Assistant; Constance M. O'Mara, Secretary; Barbara R. Hetherington, Secretary; and Dora M. Leache, Clerk-Stenographer.

The Chemical and Drug Distribu-

## NIH Credit Union Pays Semi-Annual Dividend

The Board of Directors of the NIH Federal Credit Union has declared the current year's first semi-annual dividend at the rate of 4 1/4 percent per year. The dividend will be posted to members' ledger accounts as of July 5, 1961.

Credit Union members are invited to bring or send their passbooks to the Credit Union office during the week of July 10 for posting of the dividend.

The Board of Directors also reported that as of May 31, 1961, Credit Union memberships totaled 5,800 and assets \$1,805,000; loans amounted to \$1,507,000, and shares totaled \$1,705,000.

As part of its regular annual audit, the Credit Union has mailed verification forms to all its members. Members who have not received the form are advised to communicate directly with James J. Sanders, Certified Public Accountant, 8007 Norfolk Ave., Bethesda 14, Md. Mr. Sanders' telephone number is OL 6-1116.

tion Unit, Cancer Chemotherapy National Service Center, NCI; and the staff of the Journal of the National Cancer Institute, were cited for superior performance. Earlier they had received cash awards in ceremonies in their respective offices. (See the *Record*, Vol. XIII, No. 8.)