

the



Record

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

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NATIONAL INSTITUTES OF HEALTH

Dr. Nusser Appointed NIEHS Assoc. Director Of Extramural Prog.

Dr. Wilford Lee Nusser has been appointed associate director for Extramural Programs at the National Institute of Environmental Health Sciences in Research Triangle Park, N.C.

Previously, he was chief of the Scientific Programs Branch, Office of the Associate Director for Extramural and Collaborative Programs, at the National Eye Institute.

Will Be Advisor

In his new position, Dr. Nusser will be chief advisor to the NIEHS Director, Dr. David P. Rall, for extramural activities and will coordinate all program planning in the Institute's extramural programs.

He will formulate major policies governing program activities and direct the efforts of scientists and administrators in carrying out the mission of the Institute's grant-supported programs.

Dr. Nusser received his B.A. degree in 1949 from Bethel College, his M.S. degree in 1950 from Kansas State College, and his Ph.D. in 1958 from Iowa State University.

He began his teaching experience as a fellow at State University of Oklahoma (1950-51) and later as instructor, assistant professor, and acting department head

(See DR. NUSSER, Page 7)



Dr. Nusser previously has served as acting associate director for the National Eye Institute's extramural and collaborative programs.

Grants Associates Office Plans Seminar Series

The 1977-78 weekly seminar series conducted by the Office of Grants Associates annually for its associates is tentatively scheduled to begin in September/October.

As in the past, the series is also limited to approximately 10 other NIH scientists in extramural, collaborative or intramural programs.

Topics will include the Federal Government—DHEW, NIH, other agencies, legislative and budget processes; policy and ethical considerations in biomedical and behavioral research—protection of human subjects, conflicts of interest; NIH extramural and collaborative programs—funding mechanisms, awards; and program planning and evaluation.

Interested applicants should forward a curriculum vita with the request through immediate supervisors to the B/I/D Director, who will make the final nominations.

B/I/D Directors are asked to submit no more than two nominees' names with their curriculum vitae to the Office of Grants Associates, (See ASSOCIATES, Page 2)

PHS Honors Eighteen NIH Employees At Second Annual Awards Ceremony

The contributions and achievements of 18 NIH employees were recognized at the second Public Health Service Honor Awards Ceremony. Dr. James F. Dickson III, Acting Assistant Secretary for Health, presented the awards on May 13 in the Department Auditorium. Dr. Thomas E. Malone, NIH Deputy Director, assisted with the presentations.

The PHS Superior Service Award, the highest honor for Civil Service employees presented by PHS, recognizes superior contributions of an extraordinary nature over a period of time.

Given in recognition of a single important achievement, a career notable for accomplishments in technical or professional fields, or unusually high quality and initiative, the PHS Meritorious Service Medal was presented to six Commissioned Officers.

The PHS Special Recognition Award honors an outstanding and specific contribution of meritorious benefit to the PHS having substantial impact toward the advancement of its mission.

The following cites the award re-

Drs. Krause, Neufeld, and Tabor Elected To the National Academy of Sciences



Dr. Krause (1) has authored or co-authored more than 100 scientific papers and has served as editor of the Journal of Experimental Medicine. Dr. Neufeld's research findings have revolutionized the conceptual and experimental approaches to the metabolic derangements of Hurler and Scheie syndromes.



Drs. Richard M. Krause, Elizabeth F. Neufeld and Herbert Tabor have been elected to the National Academy of Sciences in recognition of their distinguished achievements in biomedical research.

Dr. Krause, Director of the National Institute of Allergy and Infectious Diseases, is an expert in immunology and infectious disease and has focused his investigations on the genetics of the immune response to streptococcal infection.

A native of Marietta, Ohio, he received the A.B. degree from Marietta College in 1947 and his M.D. from Case Western Reserve University School of Medicine in 1952.

Dr. Krause is a member of numerous scientific groups and has served as a consultant and member of the World Health Organization's Cocal Expert Committee and the Commission on Streptococcal and Staphylococcal Diseases of the U.S. Armed Forces Epidemiological Board.

Dr. Neufeld, chief of the Section on Human Biochemical Genetics, Arthritis and Rheumatism Branch, NIAMDD, has achieved international recognition for her research contributions to the family of mucopolysaccharide storage disorders, particularly Hurler and Scheie syndromes.

She and her associates demonstrated that patients with Hurler's syndrome, a disorder characterized by skeletal deformities, mental re-

(See NAS ELECTEES, Page 8)

ipients and gives a description of their contributions.

PHS Superior Service Award

DR. THOMAS G. BOWERY, DRR—"For initiating the Minority Biomedical Support Program, implementing a internal reorganiza-

(See PHS AWARDS, Page 5)

Dr. Maxine Singer to Give Mider Lecture on May 18

Dr. Maxine F. Singer, head of the Nucleic Acid Enzymology Section, NCI, will deliver the G. Burroughs Mider Lecture at 8:15 p.m., tomorrow, May 18, in Masur Auditorium.

Members of the scientific community and the press are invited to attend.

the  **Record**

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Editor Frances W. Davis

Associate Editor Fay Leviero

Associate Editor Heather Banks

Staff Correspondents

ADA, Judy Fouche; CC, Susan Gerhold; DCRT, Frances Sarles; DRG, Sue Meadows; DRR, Jerry Gordon; DRS, Arthur F. Moore; FIC; George Presson; NCI, Dr. Robert M. Hadsell; NEI, Julian Morris; NHLBI, Bill Sanders; NIA, Ann Shalowitz; NIAID, Jeanne Winnick; NIAMDD, Pat Sheridan; NICHD, Tina McIntosh; NIDR, Sue Hannon; NIEHS, Elizabeth Y. James; NIGMS, Wanda Wardell; NIMH, Betty Zubovic; NINCDS, Jeannette Belliveau; NLM, Roger L. Gilkeson.

American University Offers Two Courses in Statistics

American University will offer Bio-Statistics and Techniques and Instruments in Bio-Analysis for the fall semester.

Bio-Statistics, a four-credit undergraduate course, will be taught at the National Naval Medical Center in Bethesda, Thursdays, 6-8:30 p.m. by Dr. Harry Rosenblatt.

A six-credit senior-level course, Bio-Analysis meets during the day at the university. To register for this class, prior approval must be obtained from the biology department (686-2177).

Registration is May 18 to July 29 and Sept. 2 and 3; for further information call 686-2504.



James W. Wright (r), shift supervisor in the NIH central power plant, receives a suggestion award check from Ross Holliday, director of the Division of Engineering Services. Mr. Wright proposed a system of recovering waste heat in the power plant. Resulting plant modifications will conserve energy at an estimated \$22,000 per year and provide operating benefits.

Bond Allotments Provide Savings, Tax Advantages

Bonds make saving automatic and yield a 6 percent interest rate when held to 5-year maturity. New bond allotments or additions to existing plans are simple and convenient.

The error rate associated with starting or changing allotments is extremely low, and easily correctable, according to James C. Palma, acting assistant secretary for personnel administration.

An E bond savings program provides a tax advantage. The effective interest rate of E bonds compare favorably with the "higher interest" rates offered by savings and loan associations because bond interest is excluded from state and local taxes, whereas savings and loan interest is not.

Bond interest is not subject to Federal tax until the bond is "cashed in." Savings and loan interest is subject to Federal tax when entered into the pass book.

If a Federal employee delays cashing in an E bond until the first or second year of retirement—depending on the extent of other income sources—the interest income may not be taxed at all. If an education or trust fund is maintained for a child, the tax liability may be virtually eliminated.

Sidney Gottlieb, the NIH Savings Bond coordinator, can provide answers on tax savings, as well as other information about E bonds on Ext. 62461.

In the long run every government is the exact symbol of its people, with their wisdom and unwisdom.—Thomas Carlyle



The winds of May 8-9 swept across the NIH campus and took their toll uprooting trees and snapping branches. This pine tree lays atop the picnic bench near the Bldg. 31 patio. The Grounds Maintenance and Landscaping Section, Plant Engineering Branch, Division of Engineering Services, reported also losing a tulip poplar near Bldg. 21 and several large branches. Winds averaged 40 to 50 miles per hour, gusting to 70 miles per hour.

Computer Facility Issues User Orientation Folder

The DCRT Computer Center Branch, which supports the Central Computer Utility that supplies computing services to all B/I/D's, has published an orientation folder to familiarize potential users with its services.

The folder, "The NIH Computer Utility Yesterday and Today," describes the IBM 370 and DECsystem-10 which together form the basis for the utility.

Colorful reference cards outline computer configurations, software packages and services offered by each facility. Fees charged for services and the supporting organizational structure are also discussed.

Traces Computer History

The development of the use of computers at NIH is traced from its inception in 1958. A parallel illustrated timeline follows the expanding use of computing machinery in the U.S. beginning with the mechanical adding machine first used in 1886.

Copies of the folder are available from the DCRT Technical Information Office, Building 12A, Room 1017, Ext. 65431.

Two DRS Technicians Retire, Following 67 Years of Service

Recently, two biological laboratory technicians of the Media Unit, Environmental Safety Branch, DRS, retired with combined service of 67 years—Jamima Nestor Lenz with 34 years, and Louis Righter with 33 years. Both were honored by their friends and co-workers at an open house.

ASSOCIATES

(Continued from Page 1)

DRG, Westwood Bldg., Room 2A-03, no later than Friday, July 29, 1977.

Final selections will be made by Dr. Leon Jacobs, Acting Associate Director for Extramural Research and Training, NIH.

Nominees Will Be Notified

All nominees will be notified of final action by the end of August. Selected individuals will be asked to submit a completed Form 350 (DHEW Training Nomination and Authorization) to the Office of Grants Associates before the series begins. This will serve as official approval and will permit participants to receive training credit (a minimum of 120 hours).

For further information contact A. Robert Polcari, executive secretary, Office of Grants Associates, DRG, Ext. 67501.

NIH Singers, Madrigals Give Spring Concert on May 24

The NIH singers and the NIH madrigal singers will present a spring concert on Tuesday, May 24th at 12:30 p.m. in Masur Auditorium.

Under the direction of Lewis Norton, the NIH singers will perform a *cappella* works by Mendelssohn, Brahms, Vaughn Williams and other composers of various periods. The madrigal singers, directed by Glenn Ricart, will feature music of the renaissance.

All patients, guests and NIH employees are invited to attend this R&W-sponsored activity.

Ruth Dudley, Pioneer In NINCDS Information, Retires After 19 Years

Ruth Dudley, chief of the NINCDS Office of Scientific and Health Reports, has retired from Government service after 19 years as head of the Institute's information program.

Her distinguished career at NIH began in 1958 when she became the first woman to be appointed Information Officer of an Institute. Mrs. Dudley was a pioneer in the development of information programs at NIH including the NIH Information Intern Program. She also established the first information unit within an Institute's Extramural Program.

Pamphlets, Films Developed

Under her guidance, a comprehensive series of pamphlets, monographs, and films were developed for NINCDS which have drawn commendation and special awards.

The "Hope through Research" series has successfully translated research activities and advances into everyday language, giving thousands, and possibly millions of individuals help and hope.

Begins Monograph Series

The scientific monograph series began with plans for the publication of Dr. Carleton Gadjusek's compilation on "slow" virus research. There are now 18 in the series.

The continuing medical education program by videotape, which began in 1973, now has over 60 neurological lectures and has been seen by almost a million scientists and practitioners.

Contributions Noted

Another important contribution was her foresight in having NINCDS publications translated into Spanish to facilitate their use in Puerto Rico and with Spanish-speaking Americans.

Mrs. Dudley was the U.S. press representative to the Pan American Neurological Congress in Puerto Rico in 1968 and to the Seventh International Congress of Neurology in Rome in 1961.

Awards Cited

One of her key roles as information chief has been her long and close working relationship with more than 30 voluntary health agencies that represent many of the 40 million Americans affected by neurological and communicative disorders.

Mrs. Dudley received the NIH Superior Service Honor Award in 1975 and she and her staff received a cash award for outstanding performance from the NINCDS Director in 1975.

Mrs. Dudley's long-standing commitment to the well-being of people is reflected in her significant



Following her NINCDS career, Mrs. Dudley said she is interested in a new area of service that will "include people who are unable to enjoy this world fully because of infirmities of health and age."

accomplishments not only as head of information at NINCDS, but also as a leader in educational, religious and political activities.

From 1960 to 1966, she was a trustee of Baldwin-Wallace College in Ohio where she had earned her A.B. degree with honors in history. In 1959 she received the college's Alumni Merit Award and in 1973 she was awarded an honorary degree of doctor of humane letters from that institution.

She and her late husband, Dr. Harold M. Dudley, founded the Religious Heritage of America in 1951, a non-sectarian foundation that emphasizes the great freedoms of this country and its religious heritage.

Another monument to her work with her husband is Dudley Mountain in the Antarctic named in recognition of their efforts to further scientific exploration.



The National Institute of Allergy and Infectious Diseases sponsored a program in Wilson Hall for the Institute's secretaries, administrators, and members of the NIH Women's Advisory Committee, as part of National Secretaries Week activities. Betsy Girton (second from left), principal speaker, counsels a group of NIAID secretaries on "awareness building" and being constantly alert to job and educational opportunities. Ms. Girton began her career as a secretary and is now director for continuous management education at Georgetown University.

NMAC Publishes Catalog Of Audiovisual Material

The Superintendent of Documents is accepting orders for the 1977 *National Medical Audiovisual Center Catalog: Audiovisuals for the Health Scientists*.

The *NMAC Catalog* lists 16 mm motion pictures and ¾-inch videocassettes available on short-term loan from the National Library of Medicine's National Medical Audiovisual Center in Atlanta, Ga. The materials are available for health sciences professional educational use only.

For the first time, the catalog has been computer-generated from NLM's AVLINE data base, and contains an abstract for each item listed.

All have been professionally reviewed for technical quality, currency, educational design, and accuracy.

The items are listed by subject using NLM's Medical Subject Headings and by name/title.

Scheduled publication date is mid-May (supersedes 1974 edition). Price: \$4.25 (\$5.35 foreign). Government Printing Office, Washington, D.C. 20402, Stock Number 017-052-00181-7.

Before coming to NIH, Mrs. Dudley handled information programs for the State Department, Agency for International Development, the Interstate Commerce Commission and the United States Conciliation Service. From 1946 to 1954, she was a partner in a private public relations firm which handled scientific and educational accounts.

What next? According to Mrs. Dudley, she is first going to give herself an extended vacation that will include traveling to the British Isles and the Mediterranean.

Bond Campaign Sponsors Lunch Time Show May 25

In conjunction with the 1977 U.S. Savings Bond Campaign, a lunch time entertainment show featuring a combo from the Air Force and three short movies featuring some notable Hollywood stars will take place in the Masur Auditorium on May 25.

The show will be continuously repeated from 11:30 to 1:30 to accommodate early and late lunchers.

Genetics of Cancer Is Topic of NCI Publication

The proceedings of a 3-day Conference on the Genetics of Human Cancer—co-sponsored in December 1975 by the National Cancer Institute and the National Foundation-March of Dimes—are now available in book form.

Genetics of Human Cancer is the third in a series called *Progress in Cancer Research and Therapy*, published by Raven Press, N.Y.C. Editors of the book are Drs. John J. Mulvihill, Robert W. Miller, and Joseph F. Fraumeni, Jr., of the NCI Field Studies and Statistics Program.

The book contains reviews of such topics in medical genetics as: ethnic differences in cancer occurrence; birth defects, chromosomal syndromes, and single gene disorders that predispose to cancer; immunologic factors in susceptibility; and genetic theories of cancer development.

Lab Work Presented

In addition, the book presents laboratory work in such areas as genetic markers, DNA repair, viral antigen expression, histocompatibility antigen patterns, and cellular expression of cancerous mutation.

A discussion follows on application of these concepts from medical and laboratory genetics to a more basic understanding of carcinogenesis.

A limited number of single copies of *Genetics of Human Cancer* will be available to NIH scientists through the NCI Office of Cancer Communications, Ext. 66641.

NIDR Council Gets 3 Members

Three new members have been appointed to 4-year terms on the National Advisory Dental Research Council of the National Institute of Dental Research.

They are Dr. Richard E. Bradley, dean of the College of Dentistry, University of Nebraska; Raymond B. Roig, Denmar Corporation, Anaheim, Calif., and Dr. Wallace V. Mann, Jr., dean of the School of Dentistry, University of Mississippi.

Mayo Clinic Bee Sting Studies May Help Desensitize Those With Allergic Reactions

Although this past winter has been one of unusual severity for most of the country, a small group of individuals hates to see the warming weather that signals the beginning of spring. For with the warmer temperatures comes honeybee—a menacing threat to the health of people who suffer violent allergic reactions when stung by a bee.

But help appears to be on the way . . . help which could make this summer and future summers less threatening for people allergic to bee stings.

NIAID-supported studies in progress at the General Clinical Research Center of Mayo Clinic, Rochester, Minn., are helping to find better ways of desensitizing individuals who suffer allergic reactions to bee stings.

Bee Venom Injected

According to Dr. John Yunginger—a Mayo Clinic consultant in pediatrics and internal medicine (allergy) and recipient of a NIAID Academic Award—the research involves injecting increasing amounts of bee venom into people who have demonstrated allergic reactions to stings.

Gradually increasing amounts of honeybee venom are injected into patients during 15 to 60-minute time spans of an initial 2 to 3-day treatment period until enough antibodies have been built up by the patient to tolerate the equivalent of approximately two to four bee stings. Sometimes, two or three of these initial treatment sessions may be required to reach this tolerance level.

Patients Stung

After successfully completing this initial treatment stage, the patient is readmitted about 1 month later to the Mayo Clinical Research Center, one of 84 such units supported by the Division of Research Resources.

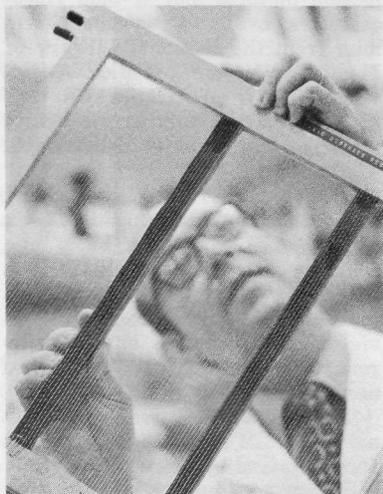
After receiving a detailed explanation of the research procedure and giving informed consent, the patient is deliberately stung by a live honeybee during this secondary treatment stage.

Patients who can tolerate the bee sting without an allergic reaction are sent home on a maintenance program which calls for them either to be stung by bees from one to four times a month or to receive periodic booster injections of honeybee venom.

Subjects Go Home

According to Dr. Yunginger, a majority of Mayo research subjects have successfully graduated to the home maintenance program, with most of this group considered to be "successfully desensitized."

Allergic reactions to bee stings affect about one-half of one percent of U.S. citizens and result in at least 40 deaths each year in the U.S.



Dr. John Yunginger peers through a grid of thin wires—an important part of the device he uses in obtaining honeybee venom. The Mayo physician uses the venom to help in desensitizing individuals who suffer allergic reactions to bee stings.

Most of the Mayo research subjects are members of beekeeper's families, which, according to Dr. Yunginger, makes them ideal patients because of their sophisticated knowledge of bees and their great motivation to overcome their allergy to stings.

An unusual aspect of the Mayo study has been the process by which researchers have collected the honeybee venom. In the past, extracts of the whole honeybee body have been used as desensitization agents.

Bees Induced to Sting

About 2 years ago, laboratory procedures were established for accurately measuring levels of serum antibodies to honeybee whole bodies, honeybee venom, and venom components and it was determined that the whole body extracts were the least effective in diagnosing or treating insect allergy.

In order to collect the needed honeybee venom, the Mayo investigators followed the example of a research group in Buffalo, N.Y. and built a device which induced honeybees to sting and discharge their venom for collection purposes without losing their stingers—the normal occurrence after a sting, usually resulting in death for the honeybee.

The venom collection device involves a portable power supply box hooked to a grid of thin wires. A glass plate is located underneath the grid and a thin transparent plastic wrap completely surrounds the glass plate.

"We take this apparatus to the beeyards," Dr. Yunginger explains, "and a bee landing on the grid immediately receives an electrical impulse from the power supply box.

"The electrical impulse induces the bee to sting reflexively. The bee's stinger goes through the thin transparent plastic wrap material and the venom is deposited on the glass plate underneath.

"When the electrical impulse is completed, the bee retracts the stinger through the thin plastic wrap without losing it . . . and we have our honeybee venom deposited nicely on the glass.

Precautions Are Important

"Of great importance are the appropriate advance precautions provided by the Clinical Research Center facilities for patients who may suffer severe reactions to the venom during the first and second stages of the study," Dr. Yunginger says.

Working with Dr. Yunginger on the project are Dr. Gerald J. Gleich, director of NIAID's Asthma and Allergic Disease Center at Mayo Clinic, and Dr. Barry R. Paull, a resident in the Mayo Graduate School of Medicine.

The Mayo group is one of several teams of investigators collaborating in a study of insect sting allergy under the auspices of NIAID.

Dr. Benirschke Appointed To DRR Grants Council

Dr. Kurt Benirschke, director of research at the San Diego Zoological Gardens and chairman of the department of pathology, School of Medicine, University of California, San Diego, has been appointed to the National Advisory Research Resources Council.

Before coming to the U.S. in 1949, Dr. Benirschke received his M.D. degree from the University of Hamburg, Germany. In 1960, he became professor and chairman of the department of pathology at Dartmouth Medical School where he served for 10 years.

He has served on various NIH study committees and HEW special committees since 1961.

NIH Administrators Hold Seminar on Extramural Programs at Tex. College

A seminar on administration of NIH extramural programs was recently conducted at the Baylor College of Medicine, Houston, Texas, by Steven C. Bernard, deputy director, Division of Contracts and Grants (DCG), OD, and a team of NIH administrators.

Participants, which included 150 representatives from nearly 20 institutions that receive NIH grant support, consisted primarily of administrative staff in grants management, financial management, and policy and procedures development.

Topics Discussed

The NIH panelists discussed the following during the 2-day seminar: NIH extramural organizational relationships; NIH extramural trend study; prior approval regarding use of NIH grant funds; and administrative and reporting requirements of recombinant DNA.

Other topics included administrative and reporting requirements related to grants involving human subjects; animal costs; NIH/grantee interface system; consultant costs; equipment management; indirect costs; time and effort reporting, cost transfers and audit resolution; and changes in the PHS grants policy statement and current developments in the grants world.

Participants Listed

The NIH representatives were Solomon Eskenazi, chief, Statistics and Analysis Branch, DRG; Helen Schroeder, assistant policy and procedures officer, OERT; James Pike, chief, Grants Operations Branch, NHLBI.

Also, Donald Clark, chief, Office of Grants and Contracts, NICHD; Donald Spencer, assistant director, DCG; Albert Cleveland, chief, Federal Assistance Accounting Branch, DFM; and Richard Powers, chief, Financial Advisory Services Branch, DCG.

Also present were nine NIH and one NIMH grants management representatives who conducted two open sessions for grantee staff.



NIH panelists at the Houston seminar included (l to r) Mr. Pike, Mr. Cleveland, Ms. Schroeder, Mr. Bernard, Mr. Eskenazi, Mr. Spencer and Mr. Clark.

PHS Superior Service Awards



Dr. Bowery



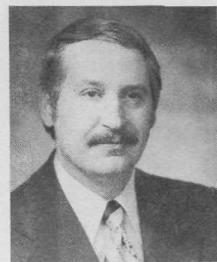
Dr. Cohen



Dr. Chu



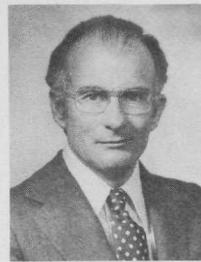
Dr. Edelhoch



Dr. Flamm



Dr. Kretchmer



Dr. Webster

PHS Meritorious Service Medals



Dr. Barkley



Dr. Goldberger



Dr. Kohn



Dr. O'Connor

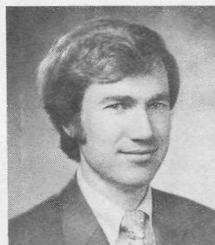


Dr. Richards



Dr. Takemoto

PHS Special Recognition Awards



Dr. Blot



Mr. Green



Dr. Nelson



Dr. Schwartz



Mr. Weiss

PHS AWARDS

(Continued from Page 1)

tion, and evaluating the scientific mission of the DRR, NIH."

DR. LOUIS A. COHEN, NIA-MDD—"For applying innovative techniques to the solution of important problems relating to enzyme action, protein structure and function, drug development, and metabolism of organic molecules."

DR. ELIZABETH WANN CHU, NCI—"For leadership and scientific contributions to cytopathology and to the high standards of diagnostic cytopathology for patients in the Clinical Center, NIH."

DR. HAROLD EDELHOCH, NIAMDD—"For continued research excellence in the field of physical chemistry of proteins, and for outstanding contributions to the knowledge of the chemistry and structure of thyroglobulin."

DR. W. GARY FLAMM, NCI—"For vigorous leadership in reshaping the philosophy and methods for assessment of environmental carcinogenic hazards on a national and international scale."

DR. NORMAN KRETCHMER, NICHD—"For exceptional accomplishments in the development and interagency coordination of programs of the National Institute of Child Health and Human Development, NIH."

DR. HENRY deFOREST WEBSTER, NINCDS—"For imaginative use of the living tadpole nervous system to study cellular mechanisms of CNS myelin breakdown, regeneration and the myelinotoxicity of human cerebrospinal fluid."

PHS Meritorious Service Medal

DR. W. EMMETT BARKLEY, NCI—"For extraordinary accomplishments in development, implementation and continuing management leadership of research safety programs."

DR. ROBERT F. GOLDBERGER, NCI—"For experimental and theoretical contributions to the understanding of biological regulatory mechanisms as they operate on gene expression in both simple and complex organisms."

DR. LEONARD D. KOHN, NIA-MDD—"For significant research

concerning membrane structure and function; the biosynthesis of collagen; the mechanism of exophthalmos and Graves' disease; and for outstanding studies on thyrotropin hormones."

DR. GREGORY T. O'CONNOR, NCI—"For outstanding accomplishments in the development and implementation of programs to fulfill the international role mandated by the National Cancer Act."

DR. CHARLES S. RICHARDS, NIAID—"For pioneering work in genetics of the snail resulting in the development of a schistosome resistant strain, thus suggesting a new approach to controlling human schistosomiasis."

DR. KENNETH K. TAKEMOTO, NIAID—"For intensive characterization of the oncogenic potential of two new papovaviruses and their relationship to a widely-recognized animal tumor virus."

PHS Special Recognition Award

DR. WILLIAM J. BLOT, NCI—"For his innovative epidemiological studies of the geographic patterns of cancer mortality in the U.S.,

which have provided new leads to environmental determinants of cancer."

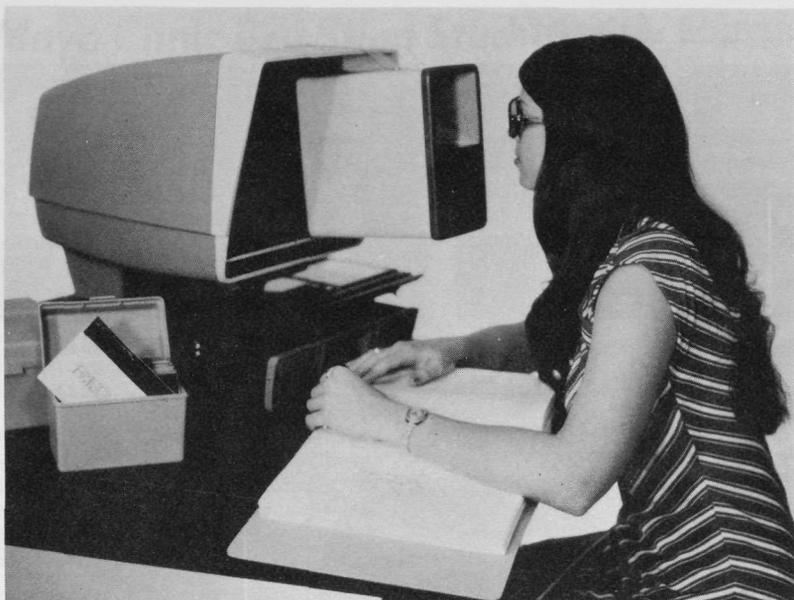
MR. MICHAEL V. GREEN, CC—"For developing a computerized nuclear medicine angiographic method for evaluating heart function."

DR. KARIN B. NELSON, NINCDS—"For outstanding research on cerebral palsy and seizure disorders, particularly for work on predictors of epilepsy in children who have experienced febrile seizures."

DR. SAMUEL M. SCHWARTZ, NHLBI—"For outstanding contributions to the review process as Associate Director for Review, Division of Extramural Affairs, NHLBI."

MR. WILLIAM WEISS, NINCDS—"For significant contributions in organizing and directing the biometric and epidemiologic programs, NINCDS."

Following the ceremony, a reception for award recipients, their family members, and Department, PHS, and NIH officials was held in the HEW South Portal Building.



Compiled at NIH by Richard J. Feldmann of the Computer Center Branch, DCRT, AMSOM is a significant advance in macromolecular graphics—a biomedical research tool incorporating all of the latest data on protein and nucleic acid X-ray structure in a 3-dimensional format.

New Microfiche Technique—AMSOM—Is Aid in Viewing 3-D Protein Structures

A perception of the three-dimensional structure of proteins is a key ingredient in understanding their functioning. Conventional journals publish only a few stereo drawings with each structure report.

Until the power of computer graphics and the space reduction capabilities of microfiche were brought to bear, macromolecular graphics were expensive and difficult to use.

Now the Division of Computer Research and Technology, and Tracor Jitco, Inc. of Rockville, Md., have contracted to provide an inexpensive and easy-to-use microfiche package under the name AMSOM (Atlas of Macromolecular Structure on Microfiche).

Contains Bibliography

Using 650 microfiche, which incorporate 110,000 text and graphics pages, AMSOM presents 69 distinct molecules in 98 structural states.

The index volume contains a complete bibliography for the 69 currently determined structures and identifies 150 structures which are under investigation.

Synoptic drawings point out important structural features, and 12 appendices provide a collection of global statistics and features.

AMSOM graphic microfiche provide molecular depth perception by application of a unique polarizing stereo box and viewing glasses. The average stereo perception time is approximately one second.

Map Drawings Included

Stereo views are macroscopic (eight views about each axis, mid-scope 15 angstrom radius, and microscopic 10 angstrom radius) with three orthogonal views of each residue.

Map drawings of number and type of amino acids are included in all views.

AMSOM text microfiche provide structure coordinates, bend coordinates, phi-psi angles, and possible hydrogen bonds; distances, angles, and torsion angles, within each residue; and distance from each residue atom to all atoms within 10 angstroms of the alpha carbons.

AMSOM permits viewing of microfiche images for extended periods with virtually no eye fatigue.

Structure Classes Noted

Structure classes included are: heme proteins; non-heme iron proteins; proteases, precursors, and their inhibitors; dehydrogenases; nucleases; immunoglobulins; peptide hormones; kinases and mutases; lectins; carbohydrases; isomerases; other proteins; deoxyribonucleic acids; and ribonucleic acids.

The complete package includes microfiche, stereo box, glasses (with case) and index volume. A microfiche viewer and data tape are also available.

NIH staff members can obtain the AMSOM atlas and microfiche viewer (under a blanket contract) by sending a memo stating requirements, CAN and custodial numbers, to Richard J. Feldmann, DCRT, Bldg. 12A, Room 3009.

Every generation revolts against its fathers and makes friends with its grandfathers.—Lewis Mumford

Human Bone Marrow Successfully Autotransplanted By NCI Scientists for Treatment of Lymphomas

Researchers at the National Cancer Institute have recently reported encouraging results with autotransplantation of human bone marrow. This technique may permit the use of more toxic, larger doses of chemotherapeutic agents to combat lymphoma, cancer of the lymph glands.

Chemotherapeutic agents destroy, sometimes permanently, bone marrow cells of patients, rendering them incapable of white blood cell manufacture and defenseless against subsequent infection.

Drs. Frederick R. Applebaum, John L. Ziegler, Arthur S. Levine, and Albert B. Deisseroth, following encouraging work with animals, have successfully modified methods to remove and preserve some of a patient's bone marrow cells and then re-inject these spared cells after high-dose chemotherapy.

The marrow is removed under general anesthesia from the patient's large bones by hypodermic needle any time from 1 to 24 weeks before chemotherapy.

It is then washed, filtered, and frozen at -120°C (-284°F). Thirty-six hours after the end of chemotherapy, the marrow is quickly thawed and injected.

In the NCI study, this marrow autotransplantation procedure was performed on nine patients with malignant lymphoma. Six other lymphoma patients received identical chemotherapy but no marrow transplants. Chemotherapy consisted of four antitumor agents: BCNU, cytosine arabinoside, cyclophosphamide, and 6-thioguanine (BACT).

The white blood cell count fell to zero in each patient following BACT therapy. Patients receiving the marrow transplants, however, had regenerated some white blood cells by 10 days and were approaching normal in 20 days.

The patients getting BACT therapy alone lagged at least 1 week behind in achieving similar white blood cell counts.

All patients showed evidence of tumor regression following BACT therapy. In eight, the response was only transient, the tumors regrew and the patients died within 4 months of treatment.

In seven patients, six of whom had received the marrow transplant, complete remission was achieved. Three of these patients have since relapsed, while three remain in complete remission 9-29 months since therapy.

Previous clinical experience has found that lymphoma patients in relapse, resistant to conventional chemotherapy—as were the patients in this study—usually die within 3 months.

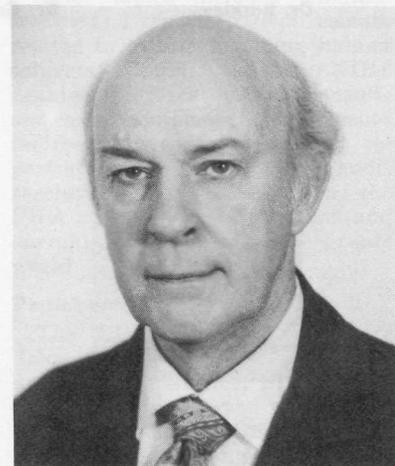
It may be possible to apply marrow autotransplantation to the treatment of a variety of cancers; whether such an application will result in therapeutic benefit remains to be seen.

Dr. K. Milner Retires; Rocky Mountain Lab. Commissioned Officer

Dr. Kelsey Milner was honored by fellow employees at NIAID's Rocky Mountain Laboratory on his recent retirement as a U.S. Public Health Service Commissioned Officer after 26 years' service.

A native of Kansas, Dr. Milner received his Ph.D. from Tulane University, New Orleans. In 1951, he was assigned to the Rocky Mountain Laboratory, but was immediately detailed to the 64th Field Hospital, U.S. Army, Korea, to investigate enteric diseases.

Upon his return, he resumed service with RML, where he re-



Dr. Milner has written 56 scientific publications—two-thirds of which have been on research of microbial endotoxins.

maintained—with the exception of 1 year—until retiring.

In 1961-62, Dr. Milner was assigned to assist in research on pertussis vaccine at the Karolinska Institutet, Stockholm, Sweden.

Dr. Milner is internationally recognized for research on the composition and biological properties of microbial endotoxins. He is considered a special authority on the bioassay of these bacterial products.

Receives Award

In 1975, he was awarded the PHS Commendation Medal for his "outstanding research on the relationship between structure and biological activity of bacterial endotoxins and for his leadership in establishing standardized bioassay systems for these materials."

Dr. Milner is a member of the editorial boards of the *Journal of Infectious Diseases* and *Infection and Immunity*.

Multi-Discipline Workshop Recently Held Here on Collagen Metabolism in the Liver

More than 100 scientists from the U.S. and several other countries attended a Workshop on Collagen Metabolism in the Liver, recently held at NIH. The 2-day conference, sponsored by the National Institute of Arthritis, Metabolism, and Digestive Diseases and the National Institute of Alcohol Abuse and Alcoholism, brought experts in liver disease together with eminent researchers in collagen metabolism.

Most of the basic work in collagen has been done by investigators in the area of bone metabolism and wound healing. Studies of the dy-



L to r: Dr. Jerome Gross of Massachusetts General Hospital discusses progress in studies of liver disease with workshop co-chairmen Drs. Popper and Piez.

namics of the normally collagen-poor liver have only recently evoked interest.

The potential for rapid and important progress in this area now exists by utilizing the information from the collagen chemists.

In chronic liver disease, especially in fibrosis and cirrhosis, the collagen content of the liver increases markedly, and ways to retard or reverse collagen formation would have profound clinical implications.

During the opening session, investigators presented the latest information on the chemistry of the various collagen types, with special emphasis on those found in fibrotic liver and on a precursor form of collagen, procollagen.

The immunochemistry of collagen—mapped by the development of specific antibodies as research tools—was presented, and a need for provision of such antibodies as research tools was pointed out.

Other topics of discussion were the biosynthesis of collagen, the degradation of collagen, and the organization of collagen into its characteristic structure.

During the second day, hepatologists presented the various features of liver disease, especially alcoholic liver disease and drug-induced liver disease.

Animal Models Debated

Animal models (rat, dog, primate) useful in studying the development of fibrosis and cirrhosis were debated. Factors which influence hepatic fibrosis to increase or to decrease were mentioned.

Further directions for research include: better understanding of regulatory mechanisms, cell types and interactions, types of collagen and their biological turnover times, the basement membrane and carbohydrate interaction, better sera for the identification of types of collagen, and the possibility of using changes in turnover time as approaches to both diagnosis and treatment.

The meeting was chaired by Dr. Hans Popper, Gustave L. Levy Distinguished Service Professor of Mt. Sinai School of Medicine, N.Y.C., and Dr. Karl Piez, chief of the Laboratory of Biochemistry, National Institute of Dental Research. Co-organizers were Dr. Sara Kalser, NIAMDD Liver Disease Program, and Dr. Kenneth Warren, NIAAA Extramural Research Branch.

Dr. Goldberg Will Present Morality Lecture, June 6

Dr. Lawrence Goldberg, professor of education and social psychology, Harvard Graduate School of Education will speak on Moral Development Theory and Psychiatric and Medical Practice on Monday, June 6, in Bldg. 31, Conference Room 10 from 3 to 5 p.m.

The meeting, open to all interested, is sponsored by the Committee on Science and Human Values. Comments and questions from the audience will be welcomed.

Dr. Goldberg is the author of many original articles and papers on moral development. His work is supported by the Human Learning and Behavioral Branch, NICHD.

DR. NUSSER

(Continued from Page 1)

of physiology (1954-60) at the College of Osteopathy, Des Moines, Iowa.

Dr. Nusser served as a post-doctoral research trainee at Emory University School of Medicine from 1960 to 1963. In 1964 he was named head, department of physiology and professor of neuroanatomy at the College of Osteopathy in Iowa, a post he held until joining the NIH grants associate program in 1966.

Accepts Position

He accepted the position of health scientist administrator (arthritis program director) with the National Institute of Arthritis, Metabolism, and Digestive Diseases in 1967 and later held the post of acting chief of the Scientific Programs Branch.

In 1974, he was selected chief of the NEI Scientific Programs Branch to develop and administer its research grant and training activities supported by NEI.

NIH Visiting Scientists Program Participants

4/24—Dr. Victor Marquez, Venezuela, Laboratory of Medicinal Chemistry and Biology. Sponsor: Dr. John Driscoll, NCI, Bg. 37, Rm. 6D24.

4/24—Dr. Richard Pau, United Kingdom, Laboratory of Physical Biology. Sponsor: Dr. Leo Levenbook, NIAMDD, Bg. 6, Rm. 137.

4/24—Dr. Kazuo Yamaguchi, Japan, Laboratory of Molecular Biology. Sponsor: Dr. Jun-ichi Tomizawa, NIAMDD, Bg. 2, Rm. 304.

4/27—Dr. Robin Shirkey, New Zealand, Environmental Toxicology Branch. Sponsor: Dr. Carl M. Schiller, NIEHS, Research Triangle Park, N.C.

4/28—Dr. Hiroshi Kimoto, Japan, Laboratory of Chemistry. Sponsor: Dr. Louis A. Cohen,

Dr. Strominger Speaks On Histocompatibility

Dr. Jack L. Strominger of Harvard University's department of biochemistry and molecular biology spoke on human histocompatibility antigens on April 25 in Masur Auditorium in honor of the 80th birthday of Dr. Sanford Rosenthal, an expert in traumatic shock who retired from NIAMDD in 1961.

The major histocompatibility complex (MHC), Dr. Strominger noted, is a genetic region which encodes the primary barrier to transplantation in man and in all other species which have been studied.

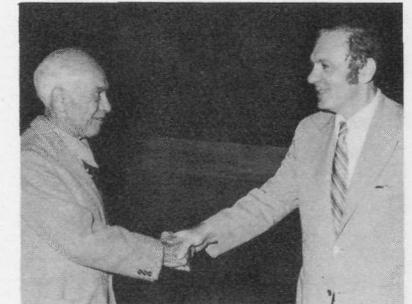
First Identified in Mice

It was first identified through mouse-breeding investigations which later led to identification of H-2, the second transplantation region discovered and the strongest barrier to transplantation in this species.

At least 15 genetic loci determine the ability of mice to exchange grafts, he said—little is known about minor loci.

The existence of other loci, Dr. Strominger continued, greatly increases the complexity of graft acceptance.

He pointed out that one of the



Dr. Strominger (r), who delivered his talk before "a full house," greets Dr. Rosenthal.

most interesting, incompletely solved problems is why pregnant females do not reject the commonest graft, the fetus in utero.

Dr. Rosenthal, former chief of NIAMDD's Laboratory of Pharmacology and Toxicology, is well-known for studies of the pathophysiology of burn, hemorrhage and trauma.

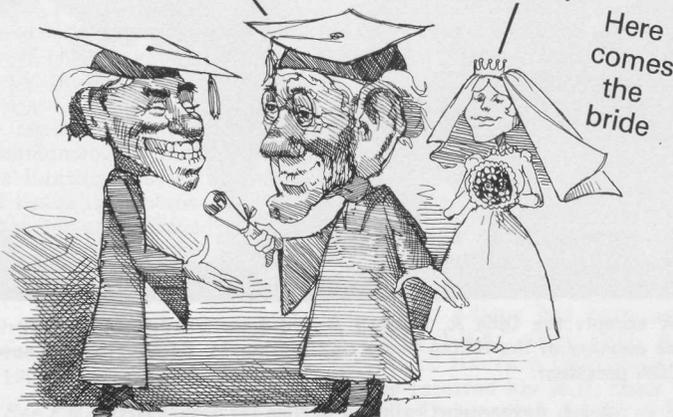
His accomplishments include the development of the bromsulfalein test in 1925, still performed as a liver function test. He and Dr. Hugo Bauer, NIAMDD, first prepared Diasone, a drug used more recently for leprosy treatments.

NIAMDD, Bg. 4, Rm. 328.

4/29—Dr. Nicholas Illsley, United Kingdom, Environmental Toxicology Branch. Sponsor: Dr. Robert L. Dixon, NIEHS, Research Triangle Park, N.C.

4/29—Dr. Hiroyuki Shimatake, Japan, Laboratory of Molecular Biology. Sponsor: Dr. Martin Rosenberg, NCI, Bg. 37, Rm. 4E14.

Congratulations doctor!
I'm so happy our parents had the foresight to buy U.S. Bonds so we didn't have to borrow the money.



NCI Modifying Mammography Guidelines Used in Screening Women Aged 35-49

The National Cancer Institute has announced that it is modifying guidelines for the operation of its nationwide Breast Cancer Detection Demonstration Project by specifying the use of X-ray mammography for screening women 35 to 49 years of age for breast cancer.

The changes, which become effective immediately, will end routine use of mammography in screening women 35 to 49 years of age, except for the following situations, where benefits are believed to outweigh the small risks involved:

- A personal history of breast cancer.
- A history of breast cancer in the immediate family (mother/sisters).

These specific reasons for using mammography contrast to more general guidelines issued to project directors Aug. 23, 1976. Although the August guidelines did not recommend routine use of mammography for women under 50, they also did not recommend withholding mammography if a woman and her physician agreed it was in her best interest based on interpretation of risk factors.

Dr. Diane J. Fink, Director of NCI's Division of Cancer Control and Rehabilitation, said the modifications are based upon a joint recommendation of three expert groups and on a review of the use of mammography within the projects since the August 1976 guidelines were issued.

Groups Assess Method

The three expert groups, appointed by NCI to assess the benefits and risks of using mammography in routine screening, recommended in their final report that "routine screening of women under 50 years of age be discontinued."

It is not known how many of these mammographic examinations could be considered routine, or how many were performed because of special circumstances.

In addition, women participating in the projects are self-selected, or come into the screening projects for specific reasons, including high risk or suspicion of breast cancer, Dr. Fink said. These women also are more likely to be recommended for a mammographic examination.

The guidelines continue to state that "women 50 years of age (current age) or older may be given mammographic examination as a part of the screening process provided that appropriate informed consent is obtained."

The three expert groups recommended that further NCI support of mammography in breast cancer screening of women over 50 be concentrated on validating its use through clinical trials.

Those reports have not been completely evaluated and will be part of an NIH Breast Cancer Screening consensus meeting in early

September 1977 to assess all data on benefits and risks of breast cancer screening, including mammography.

This meeting will determine future NCI activities regarding mammography. It will be held after the Institute receives the report of a fourth working group, now assessing data collected within the current breast cancer screening project.

NAS ELECTEES

(Continued from Page 1)

tardation, and early death, lack a protein found in normal blood plasma and certain cellular extracts—a protein they named "Hurler corrective factor."

The term derives from studies which revealed that the basic biochemical flaw could be corrected by replacing the missing protein in cells cultured from patients with the disease.

Dr. Neufeld received her Ph.D. in comparative biochemistry from the University of California at Berkeley in 1956. After several years on that staff in both a research and lecture capacity, she joined the Laboratory of Biochemistry and Metabolism of the NIAMDD in 1963. She has served in her present position since 1973.

Dr. Tabor, chief of the Laboratory of Biochemical Pharmacology, NIAMDD, has investigated histidine, an amino acid, and has provided fundamental information on its metabolism in animal and bacterial cells.

Through these studies, he has demonstrated the mechanism by which this metabolism occurs and has made many significant contributions to basic knowledge of the enzymes involved in these reactions.

His research on histidine has led to the development of a diagnostic tool for disease resulting from folic acid deprivation.

Dr. Tabor has carried out extensive studies in the field of polyamines. Together with Dr. Sanford M. Rosenthal and Dr. Ceila White Tabor, he established the biosynthetic pathway for spermine and spermidine and showed that these polyamines are distributed in microbial and animal tissues.

Dr. Tabor received his M.D. degree from Harvard University in 1941. He joined the PHS Commissioned Corps in 1943 and was assigned to NIH later that year.

He has held his present position since 1962 and concurrently serves as chief of the Section on Pharmacology within that laboratory.

NLM Annual Report Is Now Available for FY 1976

Copies of the National Library of Medicine's annual report, *NLM Programs and Services*, covering fiscal year 1976, are available without charge. Send a small self-addressed mailing label (no postage necessary) to: Office of Inquiries, ATTN: Report/76, National Library of Medicine, 8600 Rockville Pike, Bethesda, Md. 20014.

NINCDS Sponsors Meeting On Epidemiology Studies

The National Institute of Neurological and Communicative Disorders and Stroke and the Georgetown University School of Medicine jointly sponsored a meeting May 15-17 on neurological epidemiology.

The meeting concentrated on the Guillain-Barre syndrome, multiple sclerosis, stroke, poliomyelitis, hearing impairment, encephalitis, Reye's syndrome, and dementia.

In addition, other diseases such as cancer, diabetes, and heart disease which can affect the nervous system were discussed. Emphasis was given to applying this information to the practice of neurology and neurosurgery.

A study conducted by the House Committee on Interstate and Foreign Commerce in 1975 helped to underline the importance of epidemiologic studies, and produced a number of recommendations, including increased training and support of epidemiology.

These studies represent an invaluable tool for researchers, permitting them to identify unusual patterns and trends in disease occurrence, measure its economic impact, and forecast future needs.

Dr. N. Shock Receives Ollie A. Randall Award

In recognition of his outstanding service on behalf of the elderly, Dr. Nathan W. Shock recently received the Ollie A. Randall Award, the highest award of the National Council on the Aging. The presentation was made during a special evening program "praising age" at the NCOA's 27th annual conference in Washington, D.C.

The Ollie A. Randall Award, established in 1963 by the NCOA board of directors, recognizes those who lead in advancing the cause of aging, enabling the older person to live a dignified, healthy and productive life.

The NCOA is the Nation's leading organization for professionals in aging. It serves as the central national resource for planning, information, technical consultation and materials on older persons.

Compiles Bibliography

Dr. Shock has been an outstanding pioneer in gerontology and numbers among his accomplishments the founding of NIA's Gerontology Research Center in 1941, and the compilation of a comprehensive bibliography of aging.

He was one of the first to alert the U.S. of the need to study problems of the old, and began such studies himself with the PHS.

Recently named as the eleventh Scientist Emeritus of NIH, where his work continues, Dr. Shock is recognized as a leader in medical aspects of aging.

His achievements have been recognized by numerous societies. Among his awards are the DHEW Distinguished Service Award and the first annual award for meritorious contributions to research by the Gerontological Society.



Dr. Shock accepts the Ollie A. Randall Award from Dr. Inabel Lindsay (r), committee member of the NCOA board and Mother M. Bernadette de Lourdes, O.C., NCOA president.