NIH record

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

February 4, 1957, Vol. IX, No. 3

PUBLIC HEALTH SERVICE NATIONAL INSTITUTES OF HEALTH

DR. STADTMAN RECEIVES SCIENCE ACADEMY AWARD

Dr. Earl R. Stadtman, an NHI biochemist, received one of four awards given January 1 by the Washington Academy of Science for outstanding scientific contributions. Dr. Stadtman received the award for his discovery of the transacetylase enzyme and its part in the metabolism of fatty acid. The awards have been given annually since 1931 to outstanding Washington-area scientists under 40 years of age.

In 1952 Dr. Stadtman received the $1,000 Paul Lewis Laboratory Award for Enzyme Chemistry. He received his B.S. and Ph.D. degrees from the University of California and held the Leopold Wrasse Graduate Research Fellowship there for two years. Before coming to NIH in 1950, Dr. Stadtman held an AEC postdoctoral fellowship at Massachusetts General Hospital.

Dr. Stadtman and his wife, Dr. Thressa C. Stadtman, are with the Cellular Physiology Section of NIH. He is at present continuing his studies on the metabolism of fatty acids and of heterocyclic compounds.

Dr. Earl R. Stadtman

NEW CREDIT UNION OFFICERS ELECTED

Newly elected members of the Credit Union Board are (left to right) James Bouvet, Catherine Porter, Dr. Roger Cole, Zella Boteler, Bernice Storrer, and John Beglin. Others not included here are: Elizabeth Wiehle, Clydis Jones, and Robert Motley.

The annual meeting of the NIH Credit Union held January 16 featured committee reports and the election of the board for 1957.

The Credit Union reports that membership increased 24 percent last year, and the increase in assets was 32 percent. The Credit Union loaned over a million dollars to 2,495 NIH employees in 1956.

At the first meeting of the new board on January 22, the following officers were elected: Dr. Roger M. Cole, president; Dr. Francis A. Arnold, vice president; John Beglin, treasurer; and Bernice Storrer, secretary.

GRADUATE SCHOOL STARTS FEB. 18

Spring semester registration for NIH evening classes begins February 11 and continues through February 15 in the Clinical Center, Room 1-N-246, from 11:30 a.m. to 4:30 p.m. Classes will begin on February 18. The courses are offered by the Graduate School, Department of Agriculture, under cooperative arrangement with NIH and are open to Federal employees and the public.

A total of 23 courses will be offered in the fields of biological

(See Graduate School, Page 3)

New Technique For Investigating Cell Activity

No. 179 in a Series

Dr. George Z. Williams demonstrates the new ultraviolet method for investigating cell activity.

A means for investigating chemical activity within the living cell has been devised employing a new application of closed-circuit television.

Although still in the preclinical stage, this technique effectively utilizes an ultraviolet-sensitive TV camera tube developed by RCA in combination with a high-power microscope and an electronic oscilloscope. Thus quick measurements of ultraviolet absorption in healthy and abnormal cells are made possible.

The absorption of ultraviolet rays in specific and measurable quantities by different chemicals is a characteristic that has been valuable to the medical researcher. In the past, however, the examination of specimens by ultraviolet was long and laborious in the absence of a practical medium for direct observation.

The value of the new technique has been proved in studies of living cellular material. In addition to permitting rapid measurement and identification of certain chemical changes within the cells, the technique has made possible numerous other advances. It reduces cell damage and minimizes artificial absorption changes. For the first time, researchers can simultaneously observe and take motion pictures of chemical activity within living cells. Microscopic study and analysis of hundreds of living cells can be made in only a fraction of the time formerly required.

The ultraviolet equipment was assembled by Dr. George Z. Williams, Chief of the Clinical Pathology Department, CC, and Research Pathologist, NCI. It includes an ultraviolet light source, a reflecting optic microscope, TV camera with ultraviolet sensitive camera tube, a monitor, an oscilloscope, and a motion picture camera for filming images that appear on both the TV monitor and the oscilloscope.

When the system is in operation, the ultraviolet light source is focused on the specimen under the microscope. The camera is mounted over the eye-piece of the microscope. Sensitive to ultraviolet rays, the camera "sees" and transmits to the monitor an image of the cell and the action and reaction of its ultraviolet-absorbing chemicals--those chemicals normal to the cell, those introduced artificially or changes caused by disease.

Although the new technique is still in the developmental stage, it holds promise for use in medical research. It also offers possibilities as a diagnostic medium for rapid determination of specific changes in diseased cells.

Publication Preview

The following manuscripts were received by SRB Editorial Section between December 28 and January 8.

Algire, G. H. Diffusion chamber techniques for studies of cellular immunity.

Braunwald, E., et al. Dye-dilution curves from the left heart and aorta for localization of left-to-right shunts and detection of valvular insufficiency.

Burton, R. M., et al. Incorporation of galactose into galactolipids of brain tissue.

Cooper, J. R., et al. Enzymatic oxidation of pentobarbital and thiopental.

Felix, R. H. Introductory remarks of the chairman to the section on community mental health program.

Gay, W. I. Husbandry practices for the quarantining and conditioning of sub-human primates.

Grim, E., et al. The contributions of normal and anomalous osmosis to the osmotic effects arising across charged membranes with solutions of electrolytes.

Hollister, W. G. Five years experience with lay discussion leaders in mental health education.

Hendler, R. W., et al. A cytological study of the albumin-secreting cells of the hen oviduct.

Hughes, J. R. Post-tetanic potentiation.

Hyde, R. W., et al. General characteristics of the roles of therapeutic personnel.

Jackson, E. L. The synthesis of beta-(3-methoxy-2, 6-dinitrophenyl)-D, L-alanine and beta-(3-methoxy-4, 6-dinitrophenyl)D, L-alanine. Proof of the structures of two isomeric dinitro-m-tyrosines.

Kelly, M. G., et al. Strain differences in local hemorrhagic response (Shwartzman-like reaction) of mice to bacterial polysaccharides.

Lauria, D. B., et al. Sulfonamides in experimental histoplasmosis.

Mehler, A. H. Final chapters of Enzyme Chemistry Book will be published by the Academic Press in 1957.

NIAMD Clinical Staff. Galactosemia.

Peterson, R. E., et al. The physiological disposition and metabolic fate of cortisone in man.

Rubin, P., et al. The radiotoxic effects of S35 in growing cartilage.

Sato, Y., et al. Conversion of steroidal alkaloids, tomatidine and solasodine into dihydrosapogenins.

Schneider, W. C., et al. Some studies on the deoxyribosidic growth requirement of Lactobacillus acidophilus R-26.

Shacter, B. Interrelations in respiratory, phosphorylative, and mitotic activity of Ehrlich ascites-tumor cells: Influence of sulfhydryl reagents.

Shy, G. M., et al. Collimation detection of brain tumors with Zn-65, Zn-69, I-131, As-74.

Sievers, M. L., et al. Indirect gastric secretory studies: A comparison of tubeless gastric analysis and plasma pepsinogen determination as screening procedures.

Sjoerdsma, A., et al. Malignant carcinoid--a new metabolic disorder.

Sokoloff, L. The pathology of gout.

Stephenson, J. L. The automatic recording of weight and temperature for vacuum sublimation studies.

Stoenner, H. G., et al. A new species of Brucella isolated from the desert wood rat, Neotoma lepida Thomas.

Vercammen-Grandjean, P. H., et al. Eight new chiggers from East Africa and a new genus, Trombigastia (Acarina: Trombiculidae).

Vishniac, W., et al. Enzymatic aspects of photosynthesis.

Wikler, A. The relation of psychiatry to pharmacology.

Williams, R. H. Editorial note on some social dimensions and repercussions of psychotherapy.

Windle, W. F. Neurological and psychological deficits of asphyxia neonatorum.

Zubrod, C. G. Transfer of drugs from blood to brain, muscle and cerebrospinal fluid of S. Acanthias, G. callarias, and R. catesbiana

Lt. Reynolds Chosen Guard of the Month

The January Guard of the Month award has been presented to Lt. Frederick D. Reynolds, Sr. Lt. Reynolds joined the Guard Section in 1948. Promoted to guard supervisor in 1953, he served as an acting lieutenant and conducted orientation classes for new members of the Guard Section.

Since his promotion to lieutenant in 1956, Lt. Reynolds has completed the American Red Cross Instructors Course in first aid. He recently conducted a first-aid class for guard members.

Lt. Reynolds received this honor because of the outstanding work he has done in conducting these classes, and his teaching and leadership abilities.

GRADUATE SCHOOL Contd.

sciences, physical sciences, statistics, languages, and administration.

Among the new courses to be offered in the spring semester are Medical Mycology, Pathology of Infectious Diseases, Nucleotides and Biological Syntheses, Radioisotopes and Their Application in the Medical Sciences, Elementary Glassblowing, Chemistry and Biological Activity of the Steroid Hormones, Advanced Topics in Biochemistry, Theoretical Basis of Organic Chemistry and Molecular Structure in Biological Systems.

Classes will be held at NIH after work hours. Tuition is $12 per credit hour, which may be paid in two installments. Courses are offered on four levels: noncredit, undergraduate, advanced undergraduate, and graduate. The Graduate School does not grant degrees, but a student may, in most cases, transfer his credits to a degree-conferring institution by special arrangement.

Courses are selected by NIH Advisory Committees, and instructors chosen by them include NIH staff members. The program is administered by the NIH Office of Clinical and Professional Education. For further information regarding the program, call ext. 2427.

NIH RECORD

Published by
Scientific Reports Branch
Division of Research Services
National Institutes of Health
Room 212, Building 8
Bethesda 14, Maryland
OLiver 6-4000 Ext. 2125

NIH Spotlight

Robert S. Pumphrey

The shutter snaps, the bulb flashes, and another photograph records an event in the daily life at NIH. To Bob Pumphrey, a medical photographer who specializes in public relations photography, the process has been more complex. He has been busy considering the lighting, the background, the exposure, and the composition of his photograph.

In the 11 years Bob has been with the NIH Photo Lab, he has learned a lot about professional photography, and he is still learning. Each picture he takes is a new challenge; each situation must be handled differently. It takes practice, know-how, and hard work to be a good photographer, and Bob is one of the best.

Bob is kept busy taking pictures for use in NIH exhibits, magazines, and the NIH Record. As public relations photographer, he takes pictures of visitors, ceremonies, and dozens of other NIH events. Knowing how to get along with people is 90 percent of his job, Bob emphasizes. Most people are self-conscious when they are being photographed, and a good cameraman must be able to put his subjects at ease to obtain the best results.

Bob first became interested in photography during the two years he spent in the Navy. After his discharge he enrolled in the National School of Photography, where he received a diploma in black-and-white and color photography. Bob then came to NIH, and after some time as a darkroom attendant he was promoted to a full-time photographer. Since then, Bob's enthusiasm and sincere interest in his field have induced him to take Department of Agriculture courses in advanced photography, salon techniques, art, and composition. He is planning to enroll in other courses in the future.

After the day's work is over, Bob often takes photographic field trips with friends, or attends meetings of the National Photographic Society to learn new techniques and fine points to improve his pictures. Bob finds photography a field of many challenges. It is closely related to art, chemistry, and mathematics, and is so complex one can never stop learning. His work is so rewarding, Bob says, because a photograph is something permanent, a lasting record of a situation which could not otherwise be captured.

Bob has other interests besides photography. A native Marylander, he dislikes the bustle of cities, and enjoys spending a quiet weekend fishing on Chesapeake Bay, or deep-sea fishing. Last summer he and his wife and two children spent two weeks in Miami, Florida, fishing and swimming. He is an enthusiastic gardener and likes to see things grow.

Bob's keen sense of humor, ready wit, and contagious liveliness, combined with his love of photography and people, should ensure success in anything he attempts.

NEW SHORTHAND CLASSES BEGIN

Shorthand refresher courses will again be offered to NIH employees beginning Monday, February 18, and will continue three times a week through May. Participants must be able to take at least 80 words per minute.

Those applying for the nominations will be given a pretest on Wednesday, February 6, in Wilson Hall. The pretest for those who can take dictation at the rate of 80 words per minute will be given at 8:30 a.m., and the test for dictation at 100 words per minute at 9:45 a.m. Participants are requested to bring a stenographer's notebook and pen or pencil.

Application must be made to the Training Section, Personnel Branch, Building 1, Room 21, on or before February 4. Additional information may be obtained by calling Dr. C. S. Dayton, Ext. 641 or 642.

TECHNICIANS COMPLETE HISTOLOGY COURSE

Technicians pose with (front row left to right) Dr. Ross C. MacCardle, J. M. Albrecht, Dr. H. L. Stewart, and John J. Murphy, after successfully completing a 5-month histology course.

Twenty-four NIH technicians, chiefly from NCI, successfully completed a five-month course in physiological histology sponsored by the technicians in the Laboratory of Pathology, with the support of Dr. H. L. Stewart. Diplomas will be given to each student and a record placed in his personnel file. Drs. J. R. Heller and H. L. Stewart addressed the students at a brief ceremony last week.

This special noncredit course was initiated free of charge last April in response to a voluntary request by the NCI Technicians' Study Group for more opportunity to increase their knowledge of the tissues with which they work. It was held once a week in the evening, and taught by Dr. Ross C. MacCardle of the Laboratory of Pathology, NCI.

This is the first full laboratory course that has been offered at NIH. The curriculum consisted of a study of theories of staining and fixation of normal and experimental tissue, and of a general survey of the function and structure of tissues, including the biology of some tumors.

The material covered such matters as the mucosal block theory of iron absorption, the role of pitressin in the renal reabsorption of water in diabetes insipidus, and polycythemia.

Dr. Murray C. Brown and Joseph A. Staton, of the NIH Professional and Educational Branch, organized the official administrative aspects of the course.

Invitation Extended

Dr. Charles G. Zubrod, chairman of the NIH Medical Board, extends an invitation to all NIH employees to attend the first evening meeting of the Clinicopathologic Conference in the Clinical Center Auditorium, February 7, at 8:30 p.m. The program will be presented by the staff of NIAMD.

BRITISH SCIENTIST JOINS NINDB FOR SIX MONTHS' TOUR

Dr. Ronald Melville Norman of Bristol, England, has been appointed visiting scientist in NINDB, effective January 7. Dr. Norman is on leave of absence from the board of the Southwestern Regional Hospital in England and from his duties as a neuropathologist at Frenchay Hospital in Bristol. He is also a lecturer in neuropathology at Bristol University.

During his six months' tour of duty with NINDB, Dr. Norman will serve as a consulting neuropathologist in conjunction with the large-scale collaborative study of brain damage in the perinatal period. The study, which is being coordinated by NINDB, concerns the cause and nature of cerebral palsy, mental retardation, and allied diseases.

Dr. Norman has had 20 years of experience in staff, research, and administrative posts in the mental health field. He is author or co-author of some 30 publications dealing with research on the neuropathology of cerebral palsy and mental retardation.

NIH WINTER SCENE

Snow and NIH hills combine to offer winter sports for the young in age and spirit. The NIH director's house is in the background.

GPO 919886