

NIH



record

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE October 1, 1956 - Vol. VIII, No. 18

PUBLIC HEALTH SERVICE NATIONAL INSTITUTES OF HEALTH

TECHNICIANS GO "BACK TO SCHOOL"



(Left to right) Dr. Murray C. Brown, Chief of Clinical and Professional Education, looks on as Dr. Ross C. MacCardle, NCI, "Professor" of a special Histology course, greets John Murphy, vice president of the Technicians' Study Group, as the first fall session gets under way. Bill Stalters (far right), president of the Study Group, checks in students.

On September 13, approximately 33 laboratory technicians, mostly from NCI, resumed their studies in a special Histology course taught by Dr. Ross C. MacCardle of NCI.

The course began last spring at the request of the Technicians' Study Group, of the Laboratory of Pathology, NCI, to increase the technicians' general understanding of their work and the contribution to the total research activity. Results and reactions to the first portion of the course indicated that it should be continued through the fall.

The noncredit course was arranged through the Clinical and Professional Education Branch. Such subjects of study as mitochondria, polycythemia, fetal tissues, endocrine glands, kidney functional histology, and the biology of tumors will be included. Classes meet each Thursday from 4:00 p.m. to 5:00 p.m., and laboratory sessions are from 5:45 to 9:45 p.m.

COMPASS COURSE ENTERS THIRD YEAR

The NIH orientation program, known as the Compass course, will be offered for the 30th time beginning October 3. Nearly 3,000 employees have completed the course since it began.

The 1956-57 program continues to schedule presentations by outstanding members of HEW, PHS, and NIH. Among the speakers, Dr. Charles Armstrong leads the faculty in faithful service with his 29th appearance. Other NIH regulars include A. F. Siepert, OD; James Black and Kenneth Gettings, PSB; and Miss Mary Bertha, PB.

Other faculty assignments throughout the program have been shared by NIH Directors; by Miss Mary Switzer, Chief, Office of Vocational Rehabilitation; Dr. David Price, Assistant Surgeon General,

(See Course, Page 3)

NCI GROUP CITED FOR PERFORMANCE

Outstanding work performance over the past three years has won a group citation award of \$480 for the staff of Pathological Technology Section, NCI. The award was accompanied by letters of commendation from Dr. J. R. Heller, NCI Director.

Recommendation for the award was made by Dr. J. M. Albrecht, Section head, who cited the staff for "untiring effort and team spirit in keeping abreast of the tremendous work load of tissues submitted for processing."

Serving 67 investigators, this Section prepares research tissues for microscopic examination. Tissues include those of fish, fowl and reptiles, as well as those of mammalian origin. The monthly workload averages 1,555 bottles of tissues and 8,284 slides. During May and June of this year, the Section's production rose to 15,000 slides per month in order to meet special demands.

Staff members named in the citation are Lydia J. Broady, Margot T. Evans, Lindell V. Dove, Raymond R. Vane, Oves J. Fleener, Margaret L. Gregg, Clara A. Mauck, Marguerite A. Purvis, Hazel M. Shade, Ruby M. Thompson, Barbara J. Warner, Elizabeth L. Cantu, Charlotte V. Dove, Thelma M. Rutherford, Florence D. Voigt, Eleonore A. Wilson, DeWitt J. Womack, Edwin R. Henson, Betty J. Sanders, Pauline N. Case, Thomas J. Dettloff, Lena N. Morris, Gebhard Gsell, and Rufina V. Oustinoff. All are histopathological technicians, except Ruby Thompson, staff secretary.

The Pathological Technology Section is a service laboratory for the entire NCI, and also serves the Laboratory Aids Branch, DRS.

Computation of Aortic Blood Velocity

No. 170 in a Series



Alexander J. Mallos and Dr. Donald L. Fry measure the aortic blood velocity of a dog by using a special catheter.

A new technique for measuring the "horsepower" of the heart has been developed in NHI and may soon be applied clinically.

The discovery may make it possible for scientists to judge the reserve power of hearts of both normal persons and heart patients.

This will probably be relatively simple and should give little discomfort to the patient. At present a double-tubed catheter is inserted in the leg artery of a dog, and the difference in pressure between the two openings is converted by a special differential gauge to variations in electrical current. From this, the researchers have deduced a mathematical formula for calculating instantaneous aortic blood velocity.

If the cross sectional area of the aorta is known, the output of the heart can be calculated by multiplying the blood velocity by the area of the part of the aorta in which the measurements are taken. The researchers have verified the method experimentally in dogs and in models designed to simulate the pulsating flow of blood from the heart.

These tests show the method to be reasonably accurate and safe, and the researchers plan to apply the technique to humans in the near future.

They are now concerned with developing a more accurate system for sensing the aortic pressures from which blood velocity is calculated, as well as a time-saving electrical computer so that velocity will be recorded on a strip chart instantaneously.

An example of why the instantaneous heart output would be of value is as follows. Suppose the normal heart and the cardiac heart do the same amount of work over a relatively long period, which is likely to be the case. Previous methods measured only average values and did not distinguish functional differences between these hearts. However, the instantaneous output may vary considerably during this time. The researchers believe that the cardiac heart may not eject the blood with as great a velocity as the normal organ although the total volume may be the same with each beat.

Under conditions of stress, it is likely that these differences will be greatly augmented, since the normal heart will continue to increase its output commensurate with the body demands for blood supply. The cardiac heart, under the same stress, will probably reach a plateau above which it cannot increase the output.

These studies are being conducted by Dr. Donald L. Fry, Alexander J. Mallos, and Alfred G. Casper, of the Clinic of General Medicine and Experimental Therapeutics, NHI.

NIH RECORD

Published by
Scientific Reports Branch
National Institutes of Health
Room 212, Building 8
Bethesda 14, Maryland

OLiver 6-4000

Ext. 2125

Publication Preview

The following manuscripts were received by SRB Editorial Section between August 15 and August 31.

Avigan, J. Modification of human serum lipoprotein fractions by organic solvent extraction.

Bak, A. F. A unity gain cathode follower.

Bell, J. A. Summary of discussion on criteria for etiologic association of prevalent viruses with prevalent diseases.

Bell, J. F., et al. The behavior of rabies virus in ticks.

Biometrics Branch, Staff, NIMH. Patients in mental institutions, 1953. Part II. Public hospitals for the mentally ill.

Bragdon, J. H., et al. Some effects of carbohydrate feeding on serum lipids and lipoproteins in the rat.

Bunim, J. J., et al. Connective tissue (collagen) diseases.

Burstone, M. S. The cytochemical localization of esterase.

Fry, D. L., et al. An evaluation of three types of respiratory flowmeters.

Gillette, J. R., et al. The oxidation of drugs by liver microsomes: on the role of TPNH and oxygen.

Goodkind, M. J., et al. Alterations in cardiovascular and renal hemodynamic function following hypophysectomy in the dog.

Hueper, W. C. The role of environmental agents in human carcinogenesis.

Isbell, H. Preliminary clinical assessment of drugs used in mental illness.

Isbell, H., et al. Studies on the diethylamide of lysergic acid (LSD-25). II. Effects of chlorpromazine, azacyclonol, and reserpine on the intensity of the LSD reaction.

Johnson, D. F., et al. Determination of individual adrenocortical steroids in urine.

Jude, J. R., et al. Differential cardiac warming during hypothermia.

Kaplan, N., et al. Pyridine precursors of mouse liver diphosphopyridine nucleotide.

Keitel, H. G., et al. Depression of the circulating protein-bound iodine concentration in the absence of clinical hypothyroidism during testosterone administration.

Kelly, M. G., et al. Effect of incubation with rabbit serum on toxicity and tumornecrotizing action of polysaccharide from *S. marcescens*.

Mickelsen, O. Age changes in body composition.

Narvaes, E., et al. Post-operative water and electrolyte changes in natives of high altitudes.

Rabinowitz, J. C., et al. Formiminotetrahydrofolic acid and anhydroformyltetrahydrofolic acid as intermediates in the formation of N^{10} -formyltetrahydrofolic acid.

Rall, D. P., et al. Reduction of febrile response to bacterial polysaccharide following incubation with serum.

Schaefer, E. S., et al. Quantification of maternal behavior and consistency of mother-child interaction.

Scow, R. O., et al. Effect of hypophysectomy on diabetes in the "totally" pancreatectomized rat.

Smith, R. L. Recorded and expected mortality among the Chinese of Hawaii and the United States with special reference to cancer.

Specht, H., et al. Work efficiency and respiratory response of trained underwater swimmers using a modified SCUBA.

Spicknall, C. G., et al. The complement fixation test in the diagnosis of amebiasis.

Spyropoulos, C. S., et al. The influence of changes in temperature and pressure on the nerve fiber.

Steinberg, D., et al. The measurement of radioisotopes.

Tabor, H., et al. Intermediate steps in the formylation of tetrahydrofolic acid by formiminoglutamic acid in rabbit liver.

Thompson, D. D., et al. Renal reabsorption of phosphate in normal human subjects and in patients with parathyroid disease.

Thompson, D. D., et al. Effects of phosphate leading and depletion on the renal excretion and reabsorption of inorganic phosphate.

Topper, Y. J. On the mechanism of action of phosphoglucose isomerase and phosphomannose isomerase.

Utz, J. P., et al. A diagnostic virus laboratory for a clinical service.

Venditti, J. M., et al. Combination treatment of advanced leukemia (L 1210) in mice with amethopterin and 6-mercaptopurine.

Williams, F. P., Jr., et al. An evaluation of the efficacy of stylomycin, phenothiazine, cadmium anthranilate and the piperazine compounds for the removal of oxyurids in mice.

Woods, M. The influence of succinate and 2:4 dinitrophenol on the respiratory activity of mouse cancers and normal tissues.

Wynder, E. L., et al. Lung cancer in women. . . a study of environmental factors.

Zipkin, I., et al. The relation of salivary sodium, potassium, solids, and ash concentration to dental caries experience in 5-6 and 12-14 year old children.

Zipkin, I., et al. The chromatographic separation of fluoride and phosphate.

DR. FREUND JOINS NIAID STAFF AS CONSULTANT

Dr. Jules Freund recently joined the NIAID staff as a special consultant, and will assist in establishing its new allergy-immunology program. He is Chief of the Division of Applied Immunology at the Public Health Research Institute of the City of New York.

Dr. Freund's long experience in immunology will be utilized in selection and evaluation of young investigators and in immunology research.

NJH Spotlight



Elizabeth Koepnick

Vivacious, red-haired Elizabeth Koepnick, secretary in the Employee Health Service, is probably one of the best-known people on the NIH reservation. In the course of a single day, she sees as many as 110 employees and directs them to nurses or doctors for advice on health matters.

Betty might almost be called an official greeter too, for she records all new employees when they come into the Health Unit for pre-employment physical examinations.

Born in Rochester, New York, Betty came to the Washington area when she was only two years old. She attended Holy Cross Academy and, when her schooling was finished, married and settled down to being a housewife. She is the mother of two children, Marie, 16, and Ward, 15, who are both in high school.

In 1950 Betty decided to enter the business world and came to NIH as a clerk-typist in NCI. After two years she transferred to the Health Unit.

Betty is an ardent R & W supporter, but because of her household duties has little time to participate in many activities. Last year, however, she did join the bowling team and liked the sport so much that she rejoined the NIH league this fall. She says she isn't much of a bowler yet, but hopes by the end of the season to be up with the better keglers.

Vacation time finds Betty and her family at Ocean City, Maryland, where they enjoy the sun, the salt water, and the boardwalk.

Occasionally, during the winter months, Betty manages to get up to

USDA AWARDS SCHOLARSHIPS TO 3 AT NIH

Out of 35 one-course scholarships awarded by the U. S. Department of Agriculture to employees in the Washington area, three went to NIH employees.

The three employees are William J. Stalters, NCI; Miss Sylvia Bunting, CC; and David McCarthy, NIAMD. Mr. Stalters will take Human Relations in Administration; Miss Bunting, Biochemistry; and Mr. McCarthy, First Year College Chemistry.

The candidates were nominated for scholarships through their Institutes, and final selection was made by the USDA Graduate School Scholarship Committee.

Because of an active USDA night school program on the Reservation, NIH was allotted approximately 10 percent of the scholarships offered Government employees in this area.

**Make Your UGF
Pledge Today**

COURSE Cont'd

PHS; and Allen Pond, Assistant to the Special Assistant for Health and Medical Affairs, HEW.

The new series will be offered monthly during the fall and spring. To keep step with the growing NIH, minor revisions in content and presentation are made each month upon suggestions of orientation officers and evaluations by preceding classes.

Old employees can attend these programs through arrangement with their orientation officer or by calling the Office of the Chief, Clinical and Professional Education, Ext. 2427.

New York to see a few shows and do some shopping. She has no preference when it comes to Broadway plays, for she likes heavy drama as well as musical comedies.

J. M. MITCHELL JOINS DRS STAFF

Joseph M. Mitchell has been appointed Administrative Officer, DRS, effective September 10.

Mr. Mitchell brings more than 15 years' government experience to his new assignment. His most recent position before joining NIH was comptroller with an Ordnance group in Kaiserslautern, Germany.

After graduating from the University of Maryland with first honors from the College of Military Science in 1941, Mr. Mitchell joined Government service. He has served with the War Production Board, the War Assets Administration, the National Security Agency, and the National Bureau of Standards.



J. M. Mitchell

During World War II, Mr. Mitchell spent two years with the Army Air Force in North Africa, and, during the Korean conflict, served as an intelligence officer.

He is a native of Chevy Chase, Maryland, and attended local public schools.

Firemen of the Month

Robert Shibler and Samuel Carter have been selected jointly as Firemen of the Month. Both have been recently appointed Acting Captains of the NIH Fire Department.

Mr. Shibler was born in Lake Lynn, Pennsylvania, and joined NIH in July 1953. Mr. Carter was born in Darnestown, Maryland, and joined NIH in March 1954.

Their appointments as Acting Captains were made on the basis of experience, dependability, judgment, punctuality, attitude, and willingness to accept responsibility.

NIH FIRE DEPARTMENT



Members of the NIH Fire Department stand beside the latest in fire fighting equipment. These men are ready to assist in any emergency.

As part of Fire Prevention Week, October 7 through 13, members of the NIH Fire Department will put on a series of demonstrations.

Although this marks Fire Prevention Week, the NIH Fire Department stands ready for all emergencies 365 days a year. So far this year, they have responded to 255 emergency calls including first aid and chemical spills and fires.

Building wardens, safety committeemen, Plant Engineering craftsmen, and members of the volunteer brigade combine their talents to assist the NIHFD. At present, 275 building wardens are now being trained by Fire Marshal Kenneth W Gettings.

DR. SARA BRANHAM BACK FROM EUROPE

Dr. Sara Branham, Laboratory of Bacteriological Products, DBS, returned recently from an extensive trip in Europe. She visited a number of bacteriological laboratories, including the Lister Laboratory for Preventive Medicine, the Central Public Health Laboratories, and the National Medical Research Council Laboratories, in London; the University of Oslo; the State Serum Institute at Copenhagen; and the State Bacteriological Laboratories in Stockholm. She also attended the 20th International Physiological Congress in Brussels.

Members of the Department pictured above are, left to right, Chief, James R. Welch; Fire Marshal K. Gettings; Captains Samuel Carter and Robert Shibler; Driver, Stuart Northup; Private Charles Keys; Driver Charles Barrett; and Privates Sheldon Jenkins, William Oden, and Thomas J. O'Connor.

BACK FROM EUROPE



Mrs. Helene Schrecker, NIDR, who organized the European tour for R & W last summer, is greeted by the airlines purser upon her return from Europe. More than 70 NIH employees went on the tour.