

N.I.H.



record

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PUBLIC HEALTH SERVICE NATIONAL INSTITUTES OF HEALTH

SIXTH ANNUAL RESEARCH EQUIPMENT EXHIBIT HELD



NIH was host to the manufacturers of scientific instruments at the Sixth Annual Research Equipment Exhibit and Instrument Symposium on May 14 through May 17. Pictured above are two of the many exhibits.

TWO NEW LABORATORIES ESTABLISHED IN NIAMD

The NIAMD Laboratory of Biochemistry and Nutrition has been divided into two laboratories, and three new sections have been added to the Institute laboratory structure, according to a recent announcement by Dr. Floyd S. Daft, NIAMD Director. Replacing the Laboratory of Biochemistry and Nutrition are the Laboratory of Biochemistry and Metabolism and the Laboratory of Nutrition and Endocrinology.

In connection with these changes, four new staff appointments were made and announced by Dr. Daft: Dr. Bernard L. Horecker was named Chief, Laboratory of Biochemistry and Metabolism; Dr. Herman M. Kalckar, Chief, Section on Metabolic Enzymes in that Laboratory; Dr. Klaus Schwarz, Chief, Section on Experimental Liver Diseases,

(See NIAMD, Page 2)

HAMSTERS APPEAR IN AWARD-WINNING TELEVISION SERIES

A series of public-service TV programs presented on WRC-TV recently won for the station Variety's top Showmanagement Award for the year, along with the Inter-NBC Award.

The show, which was entitled YOU--Years of Usefulness, dealt with problems of the aged and was produced by the D. C. Department of Health with the aid of amateur theatrical groups including the Hamsters.

Those from the Hamster group who participated were Caro Miller, Sue Oliver, Dorothy Root, Ervin Liljegren, Phil Joram, Eleanor Landreau, George Ann Johnston, Dr. Agamemnon Despopoulos, Marjorie Lamb, Miriam Frank, Hazel Gump, Hazel Rea and Dr. Robert W. Berliner.

STUDENTS, PROFESSORS HIRED FOR SUMMER JOBS

As a part of the nationwide effort to interest more young people in scientific research careers, NIH is again sponsoring a summer employment program for students. In addition, a limited number of college physiology professors will spend the summer months at NIH, through arrangement with the Committee on Education of the American Physiological Society.

Seventy-five medical and dental students who have completed their second or third year have received the Junior Assistant grade in the PHS Commissioned Corps and will be called to active duty at NIH during the summer months.

Another 120 students will be employed in the Regular Summer Program under Civil Service Schedule A appointments. Almost all of these

(See Employment, Page 3)

New Investigative Tool in Adrenal Physiology

No. 163 in a Series

Until recently it has been virtually impossible for scientists to measure the bodily absorption of hydrocortisone when applied to local inflammations (as in ointments or suppositories). The difficulty lay in finding a method to separate the amount of absorbed steroid from that manufactured by the subject's own adrenal glands. The answer to this problem was recently supplied by Dr. Grant W. Liddle and Miss June Richard of the NHI Section on Clinical Endocrinology.

They found that a new drug will allow measurement of the topically administered hydrocortisone by temporarily suppressing the body's secretion of ACTH, the pituitary hormone that triggers the release of hydrocortisone into the blood.

The new ACTH-inhibiting drug is known as Delta FF (delta, 9 alpha-fluorohydrocortisone). It is a synthetic relative of the natural "glucocorticoid" hormones from the adrenal gland, which have proved valuable in treating inflammatory diseases. In recent years the drug was developed from these natural hormones in progressive steps at several research laboratories.

The investigators have found that Delta FF is so effective in suppressing ACTH secretion that 0.5-mg.

doses of the steroid administered orally every six hours will bring the body's hydrocortisone values to nearly zero in less than two days. Thereafter, for as long as this suppressive dose is maintained, any appreciable rise in hydrocortisone levels may be traced to the absorption of administered steroids or ACTH.

The usefulness of the new drug was demonstrated in a pilot study on absorption of hydrocortisone from the skin and mucous surfaces in a series of normal volunteers. The findings from this group showed that very little (two percent) of the hormone was absorbed through the intact skin, but a considerable amount (26-29 percent) was absorbed from the mucous surfaces studied (vaginal and rectal). The chemical method of determining hydrocortisone concentrations was adapted from that of Dr. Ralph E. Peterson, NIAMD.

Hydrocortisone represents a powerful natural hormone which not only suppresses inflammation but also plays a part in regulating the body's use of carbohydrates and its responses to stress. It is important to know whether local applications of hydrocortisone get into the general circulation, because its side effects can be dangerous when its use is not controlled.

CDC LAB TRAINING SCHEDULE AVAILABLE

The Laboratory Refresher Training Courses schedule is now available, according to an announcement by the Laboratory Branch of CDC. The schedule covers the period from July 1956 to June 1957. Information and application forms should be requested from Laboratory Training Services, Communicable Disease Center, U. S. Public Health Service, P. O. Box 185, Chamblee, Georgia.

Holiday

NIH will be closed for business on Wednesday, May 30, in observance of Memorial Day.

NIAMD Cont'd.

Laboratory of Nutrition and Endocrinology; and Dr. Bernard Witkop, Chief, Section on Metabolites, Laboratory of Chemistry.

Dr. James M. Hundley, the Institute's Chief of Laboratory Research, also heads the new Laboratory of Nutrition and Endocrinology with Dr. Olaf Mickelsen as Assistant Chief.

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Publication Preview

The following manuscripts were received by the SRE Editorial Section between May 1 and May 13.

Allam, M. W., et al. Transplantability of a canine thyroid carcinoma through thirty generations in mixed breed puppies.

Andrews, J. R. The curability of carcinoma of the uterine cervix and the Mayo Clinic report.

Axelrod, J., et al. The distribution and metabolism of lysergic acid diethylamide.

Bailey, C. J., et al. Possible interrelationship of neonatal asphyxia, cerebral palsy and mental retardation.

Banfield, W. G. Age changes in the swelling capacity of human achilles tendon.

Blaugh, D. S. Technique for studying effects of drugs on discrimination in the pigeon.

Bornschein, H., et al. Temporal aspects of the human electroretinogram.

Ernann, J. M. *Neoschongastia moucheti*, n. sp. and *N. brennani* Crossley and Loomis from Africa (Arcaei: Tronbiculidae).

Cramblett, H. G. Juvenile rheumatoid arthritis - a review of the literature.

Duggan, D. E., et al. The spectrophotofluorimetric determination of tryptophan plasma and of tryptophan and tyrosine in protein hydrolysates.

du Ruisseau, J. P., et al. Studies on the metabolism of amino acids and related compounds in vivo. IV. Blood ammonia and urea levels following intraperitoneal administration of amino acids and ammonium acetate, and the effect of arginine thereon.

Fklund, C. M., et al. The use of monkeys in detecting live virus in certain poliomyelitis vaccines.

Endicott, K. M. Organization of cancer chemotherapy in the United States of America.

Felix, R. H. Evolution of community mental health concepts.

Folk, J. E. A new pancreatic carboxypeptidase.

Fry, D. L., et al. A catheter tip method for measurement of the instantaneous aortic blood velocity.

Gould, R. F. Methods and recent research in psychiatric clinic treatment for children.

Gran, R. P. Left axis deviation, an electrocardiographic pathologic correlation study.

Greenstein, J. P., et al. Studies on the metabolism of amino acids and related compounds in vivo. III. Prevention of ammonia toxicity by arginine and related compounds.

Gullino, P., et al. Studies on the metabolism of amino acids and related compounds in vivo. I. Toxicity of essential amino acids, individually and in mixtures, and the protective effect of L-arginine.

Haenszel, W., et al. Tobacco smoking patterns in the United States.

Hendler, R. W. Fixation of carbon dioxide into the carboxyl carbon of glycine.

Heuper, W. C. The potential role of non-nutritive food additives and contaminants as environmental carcinogens.

Jacobs, L., et al. A comparison of the toxoplasmin skin test, the dye test and the complement fixation reaction for toxoplasmosis in the diagnosis of various forms of uveitis.

Jellison, W. L., et al. Epidemiologic aspects of coccidiosis in southern Utah. Part III. Laboratory studies.

Kahler, H., et al. The sedimentation of deoxyribonucleate in $MgCl_2$ solutions.

Kendig, I. V. The problem of irregular discharge.

Kennedy, T. J. Adrenals.

Kielley, R. K. Inhibition of glutamate oxidation and coupled phosphorylation by fluorene carcinogens.

Korn, E. D. The partial inactivation of lipoprotein lipase by bacterial "Heparinase."

Kurland, L. T., et al. The geographic distribution of multiple sclerosis and amyotrophic lateral sclerosis, with particular reference to the partly Spanish Chamorro population in the Mariana Islands.

Levy, H. B., et al. The effect of animal viruses on host cell metabolism. II. Effect of poliomyelitis virus on glycolysis and uptake of glycine by monkey kidney tissue cultures.

Li, C. Inhibition of activity of cortical neurones.

Lillie, R. D. Lecturas en Histoquímica.

Lillie, R. D. Reversal of cyanide blockade of aldehyde reactions by reoxidation with periodic acid.

Loomis, L. N., et al. The histogenesis of Rous sarcoma I induced by purified virus.

Mustacchi, P., et al. Occurrence of cancer in acromegaly and in hypopituitarism.

Mustacchi, P., et al. Radiation cancer and Jean Clunet (1878-1917).

Popvici, A., et al. Reduction of 9-(2-*trans*-decahydroquinolino-1-oxoethyl)-1,2,3,4-tetrahydrophenanthrene and its optical forms to alcohols with pronounced gonadal effects.

Rowe, W. P. A study of the role of adenoidal-pharyngeal conjunctival (APC) viruses in acute respiratory infections in a Navy recruit population.

Salzman, N. F., et al. Physiological disposition and fate of chlorpromazine and a method for its estimation in biological material.

Shore, P. A., et al. Mediation of drug action through liberation of biologically active substances.

Sjoersdsma, A., et al. The cardiovascular manifestations of functioning carcinoid tumors.

Stadman, E. R. Preparation and assay of acyl coenzyme A and other thioesters; use of hydroxylamine.

Steinberg, D., et al. Serum glutamic-oxalacetic transaminase in coronary artery disease: a review of 201 cases.

Stephan, R. M. The role of microbic dental plaques in the etiology of caries.

Stewart, S. E., et al. Lymphocytic choriomeningitis virus in mouse neoplasms.

Stupfel, M., et al. Internal body temperature gradients during anesthesia and hypothermia and the effect of vagotomy.

Waravdekar, V. S., et al. Enzyme changes induced in normal and malignant tissues with chemical agents. VII. Effects on hydrolytic and synthetic enzymes of diphosphopyridine nucleotide in sarcoma 37.

Weisburger, J. H. The reduction of fluorenone by hydrazine - some observations on the mechanism of the Wolff-Kishner reaction.

Winitz, M., et al. Studies on the metabolism of amino acids and related compounds in vivo. II. Effect of toxic doses of essential amino acids on blood sugar, liver glycogen and muscle glycogen levels.

Winitz, M., et al. Studies on the metabolism of amino acids and related compounds in vivo. V. Effects of combined administration of nonprotective compounds and subprotective levels of L-arginine HCl of ammonia toxicity in rats.

Wolcott, G. B. Chromosome studies in the genus *Plasmodium*.

First Blood Panel Donor Has Rare Rh Type



THREE EMPLOYEES TO RETIRE

H. J. MacGahren, BMB, head of the Grounds Maintenance and Landscaping Section, who came to NIH almost as soon as the ground was broken for the Administration Building, retired from active service last month.

"Mac," as he was best known, was born and raised in Wilkes-Barre, Pennsylvania. He later attended Fordham University, Pennsylvania State College, and during World War I served with a Naval Marine Bombing Squadron.

Frank O'Donnell, who has been associated with the Rocky Mountain Laboratory since 1932, will retire on June 1. He has played an important role in the administrative activities of the laboratory and its development and expansion. His earlier service was with the Montana State Board of Health, and during the period prior to World War I, was directly associated with spotted fever control work.

Another Rocky Mountain Laboratory employee, Ray E. Willey, supervisor in the animal unit, will retire on June 1. He has worked at the Laboratory for the past 12 years and has been of great assistance to the scientists through his work in the animal colony.

Mrs. Norma Spencer, DBS, first volunteer to participate in the NIH Blood Donor Panel Program, was found to have a blood type that occurs in approximately one out of every 130 people. In the event of an emergency, this information could be vital for her, and in addition, it will provide a valuable reference in the testing of blood serum samples submitted to the Division by the manufacturers.

All employees are eligible to participate in this program by donating a small sample of blood in the Employee Health Service. Those whose types are needed for testing purposes will be asked to donate to the Blood Panel at specified intervals, and will receive \$2 for each 20-cc. donation. Following the initial sample test, each employee will receive a pocket card giving comprehensive information on his blood type, including ABO group, Rh type, MN, Kell, and Duffy factors.

Application forms may be obtained by calling ext. 2597.

EMPLOYMENT Cont'd.

employees will be college science students. Several hundred applications for these positions have been received and reviewed. Application deadline dates for both summer programs have passed.

As in past summers, a number of Civil Service competitive appointments will be made at NIH to fill stenographic and typing jobs.



EMPLOYEE HEALTH NOTES

An allergic person is one who reacts unfavorably to certain agents which are harmless to other people. In allergy cases there is often a family history of allergic diseases, which include asthma, hay fever, hives, serum sickness, eczema, and gastrointestinal disturbances.

The allergens, or sensitizing agents, stimulate production of other substances known as antibodies. It is the interaction of these allergens and antibodies which releases a toxic substance that produces the allergic disease. With expanded research currently under way, it is expected that prevention and control will be placed on a more scientific basis.

Some allergies such as hay fever and asthma are often produced by the inhalation of pollens, dust, or other substances. Eczema is often produced by contact with sensitizing substances such as kerosene, medications, cosmetics, etc. Poison ivy also falls into this category.

The treatment for allergies is antihistamines, desensitization procedures, and hormones. However, when a physician is consulted, he can often determine the source of the allergy and the individual may be able to avoid contact with the offending substance.

MISS EDITH JONES RECEIVES AWARD

Miss Edith A. Jones, Chief of the Nutrition Department, Clinical Center, was honored by her alma mater, the University of Alabama, on May 11, when she received the first Distinguished Service Award offered by the University.

Miss Jones was chosen for this honor by the school's Home Economics Department as one of their former students who had made outstanding contributions in the field of home economics. After graduating from Alabama, she received her Master's Degree in Public Health and Nutrition at the University of Tennessee. She joined the staff of NIH in September 1952.

NIH Spotlight



Jane Joralemon

From the time she was first introduced to science back in her early schooldays, Jane Joralemon has never thought of any other field of study and has directed all her efforts toward biology.

As a physiologist in Dr. William F. Windle's NINDB laboratory in T-6, Jane is working on the effects of reserpine in animals, using cats, monkeys, and chimpanzees. She is also working with a research team which is conducting a study of spinal cord regeneration.

Although interested in science, Jane also likes to travel, sing, and is active in sports.

Immediately upon graduation from Vassar, Jane and some friends made a tour of the West Coast and Canada. Then, in 1951, she felt the urge to see more of the world and embarked on the U.S.S. *Independence* on the ship's first regularly scheduled trip to Europe. Jane and her three girl friends landed in Italy and bought an automobile, and started northward to see France, Germany, Switzerland, Austria, Denmark, Holland, Sweden, and then Spain and the British Isles.

Jane's musical activities include membership in the Washington Cathedral Choral Society and the "Pitch Pipers," an octet composed of girls, who entertain in veterans' hospitals in the Washington area. Jane sings second alto in both groups.

While at Vassar, Jane took part in many sports including basketball, hockey, lacrosse, squash, and badminton. When she graduated and returned to her home in Bryn Mawr, Pennsylvania, she still continued



R & W NOTES

Art instruction is now available at the rate of \$7 for a ten-week series. For further information, contact Elizabeth Guinn, Ext. 2932. Mrs. Marguerite Burgess, who has taught at Phillips and Corcoran Art Galleries, will be the instructor.

The R & W Film Service center in the Cloak Room, Clinical Center, will be open from 10 a.m. until 1:30 p.m. daily, except Saturday and Sunday. All black and white film brought in before 11 a.m. will be returned the following day.

Plans for a golf tournament have been made. The tournament will take place in early fall. All members who have submitted requests for golf lessons will be contacted as soon as the new classes are formed.

playing hockey with a Philadelphia team, which competed in the Middle Atlantic Conference.

Prior to coming to NIH in 1954, Jane has worked as a technician at the Institute for Cancer Research, Fox Chase, Pennsylvania, and then as a research assistant in the anatomy department at the University of Pennsylvania in Philadelphia.

Jane lives in Georgetown in a big, rambling house with three girls who work for Congressmen. They have a cat called "Pigpen" and two little kittens that the girls would like to place in foster homes.

Some of Jane's work includes the handling of two young chimpanzees named Brunhilde and Siegfried. Her favorite animals are dogs, but she also loves her two young charges and says, "They are just like naughty children... throwing tantrums, playing pranks, and just getting into mischief generally."

Another interest of Jane's is sports cars, and she often attends the sports car association "rallies" along with a young man who shares her enthusiasm for that sport and takes part with his Austin-Healy car.

Slender, blonde, and attractive, Jane has a host of friends, but has no definite marriage plans right now.