ANNUAL RESEARCH EQUIPMENT EXHIBIT WILL OPEN MAY 2

All NIH employees are invited to attend the Fifth Annual Research Equipment Exhibit to be held May 2-5 in Building 22. Eighty-six leading manufacturers will display and demonstrate their newest research instruments and equipment to NIH staff members and other interested visitors during the four-day period.

Hours of the exhibit will be from 11:00 a.m. to 5:00 p.m. on May 2, and from 11:00 a.m. to 9:00 p.m. on May 3, 4, and 5.

Running concurrently with the Exhibit will be a symposium on recent developments in research methods and instrumentation, sponsored by the Washington Sections of the American Chemical Society, the Instrument Society of America, the Society of American Bacteriologists, and the American Association of Clinical Chemists. A total of 16 papers, seven by NIH scientists, will be presented at the sessions.

After a welcome by Dr. Sebrell, the opening session on May 2, from 8:00 to 10:00 p.m., will cover "Electrophoresis and Chromatography." On the afternoon of May 3, from 2:00 to 3:30 p.m., the topic will be "Fluorescence Determination." That evening from 8:00 to 9:30 p.m., the subject will be "Optical Methods in Biochemistry." The discussion for the May 4 meeting (2:00 to 3:30 p.m.) will be "The Selection of Electronic Components for Medical Research." The final session on May 4, from 8:00 to 10:00 p.m., will deal with "Instrumentation for Cytochemical and Microbiological Research." All meetings of the symposium will be held in the Clinical Center Auditorium.

POLIO VACCINE LICENSED BY SECRETARY HOBBY

Final approval for use of the poliomyelitis vaccine by physicians and public health agencies the country over came April 12 when HEW Secretary signed licenses authorizing six U. S. biological manufacturers to distribute the new product.

For more than a year, the NMI Laboratory of Biologies Control, headed by Dr. William G. Workman, has worked closely with Dr. Jonas Salk, the National Foundation for Infantile Paralysis, and the manufacturing firms to establish standards for the production and testing of the vaccine. Under provisions of the National Biologies Control Act, no license for the manufacture and interstate distribution or exportation of a new biological product can be issued until the manufacturer demonstrates that his product meets

(See Polio, Page 4)
Experimental Obesity Studies
No. 139 in a Series

Herman Harris compares two rats of the same age. The obese one at the left weighs 1445 grams, and the normal adult rat weighs 550 grams.

Obesity, or excessive overweight, has become one of the major health problems today—one that affects approximately a quarter of the American adult population. In order to gain a better understanding of this disorder, a group of investigators in the NlAMD Laboratory of Biochemistry and Nutrition has been studying changes that occur in animals during the development of obesity and after the loss of excess weight.

Several laboratories have produced obesity in animals by a variety of means. Hypothalamic lesions, thyroidectomies, semi-liquid and force-fed diets have produced obese rats with weights reaching 1090 grams. These methods, however, may involve physiological changes other than those associated with obesity itself.

The NlAMD group, which includes Dr. Olaf Mickelsen, Samuel Takashashi, and Herman Harris, has developed a high-fat diet which produces significant weight increases and also permits study of the obesity uncomplicated by other physiological changes. The diet contains 60 percent fat and adequate amounts of vitamins, minerals, and proteins. Normal rats receiving this diet on an ad libitum basis weigh well over a kilogram—approximately twice the weight of stock controls. About 40 such "giants" have been produced during the study, and the maximum weight attained thus far has been 1445 grams. At the end of the experiment, the animals are sacrificed and their organs weighed and examined for gross pathology. The carcasses are analyzed for protein, fat, moisture, and ash.

In the course of the study, the investigators have found that the percentage of fat in the bodies of these rats rises with the total weight. For example, the fat content increases from approximately 12 percent in 300-gram rats to 60 percent in 1200-gram rats. The group has also found that rats placed on the high-fat diet at weaning age grow faster and larger than those placed on it in early adulthood. Since approximately half the rats attaining weights over a kilogram were randomly selected from the NIH animal colony, there seems no indication that the obesity results from a genetic or hormonal disturbance.

Currently the obese rats are being put on a variety of reducing regimens. Some are being fed unlimited amounts of stock diet, while others receive restricted amounts of the high-fat diet. When they attain the weight of normal adults, they will be studied to see how the physiological and metabolic functions differ from those in animals that were never obese. These studies will include blood pressure measurements, body composition, incidence of disease, longevity, and reproductive capacity.

Publication Preview

The following manuscripts were received by the SRB Editorial Section between March 30 and April 5.

Axelrod, Julius. The enzymatic demethylation of epinephrine.

Blum, Harold F. Sunlight as an environmental factor in cancer of the skin.

Eagle, Harry. The minimum vitamin requirements of mouse fibroblast in tissue culture, the production of specific vitamin deficiencies, and their cure.

Gilman, A. G. Some epidemiological considerations of cancer of the lung.

Greer, Monte A. Evidence of a primary "drinking center" in the hypothalamus of the rat.

Hadlow, W. J. Degenerative myopathy in a white-tailed deer, Odocoileus virginianus.


Hunter, Jehu C. Differential effects of temperature on the growth of certain transplanted tumors in strain DBA mice.


Mulay, A. S., et al. Lesions induced in C57BL mice with gallium citrate and methylcholangthrene.

Newton, Walter L. The establishment of a strain of Australia albigenus which combines albinoism and high susceptibility to infection with Schistosoma mansoni.

Rabinowitz, J. C. Purine fermentation by Clostridium cylindrosporum.

Schade, Arthur L. Plasma iron—its transport and significance.

Schneider, Walter C. Structural factors in metabolic regulations.

Severyghius, F. J., et al. The respiratory dead space increase following atropine in man, and atropine, vagal or ganglionic blockade and hypothermia.

Showe, Jane J., et al. On the enzymic nature of mitochondrial characterization by Janus green B and the detection of Krebs cycle dehydrogenases with Janus green B.


Takasugi, J., et al. The parallelism between the action potential, action current and membrane resistance at a node of Ranvier.


Wiikler, A., et al. Methodology of research in psychological pharmacodynamics.

Wilson, Alene. Laboratory aid in the diagnosis of malaria.

STUDY SECTION MEETINGS


BARBERSHOP CONCERT

The "Singing Capitol Chorus," international barbershop singing chorus champions, will present a concert in the barbershop harmony style for patients in the 14th floor auditorium of the Clinical Center, Wednesday, April 27, at 8:00 p.m. NIH employees and their families are cordially invited to attend.

THANK YOU

Response to the questionnaire sent out in the last issue of the NIH Record has been most gratifying. We wish to thank all of you who took time to give us your opinions. We want to hear from everyone--so if you missed the questionnaire, you may obtain one by calling ext. 2125.

NIH Spotlight

April 29 is the date set for the Spring Dance to be held in Wilson Hall from 9 p.m. to 1 a.m. The Committee promises good dance music and an entertaining floor show. Dress will be informal. Come stag or come drag--but be sure to come! Tickets are now being sold by your Division Representative at $1.10 per person. As a special inducement, parties of four will be admitted for the price of three.

There's still time to join the intramural softball league, which is scheduled to start play early next month. Games will be held twice weekly at 6 p.m. on the diamond behind Building 5. Softball manager Brit Smith announces that the first practice session will be held on Wednesday, May 4, at 6 p.m. He can be contacted on ext. 2460 for more details.

The first program in the new NIH Film Society series will be the "Lavender Hill Mob," starring Alec Guinness, which is scheduled for the CC Auditorium at 8:15 p.m. on April 27 and 28. Subscription tickets for this first series of six outstanding British and American films are priced at $2.00 per person, or $3.00 for a family ticket admitting two adults. For further information, contact Bill Gray on ext. 2877.

The Hamsters report that rehearsals for the 1955 edition of "Life at NIH" promise the best production yet. No employee will want to miss this. Keep the dates in mind--May 19, 20, and 21.

Kay enters an average of two tournaments a month. The high-pressure games and no-cash-prize rule fail to deter the thousands of ardent players who "count master points more than money." The grueling competition requires "steady nerves and lots of stamina," but Kay insists it's a challenge. Winners receive permanent prizes, and a "travelling" trophy which is kept for one year, then goes back into competition.

Born in New York City, Kay moved with her parents to one of the first homes built in Chevy Chase, D. C., where she now lives. The few nonworking hours not spent with her two sons, Jerry 16, and Bob 14, are utilized for gardening, golfing, and dressmaking.
NIH SCIENTISTS ATTEND FEDERATION MEETINGS

Sixty-five NIH scientists attended the Annual Meeting of the Federation of American Societies for Experimental Biology, held in San Francisco during the week of April 11-15. Twenty-seven NIH staff members presented papers during the five-day schedule of scientific sessions and meetings.

The Federation meeting is one of the largest annual scientific gatherings in the country. This year approximately 5000 scientists attended the sessions, where almost 1400 papers were presented.

Leaking Gas Tanks

Parking your car on an incline, with the gasoline tank cap on the low side, may cause the tank to drip gas, particularly in warm weather. A passing smoker could initiate a disastrous fire. Call the Guard Office if you observe such a hazardous condition.

CHEST X-RAY

If you have not yet made an appointment for a chest X-ray, call the Employee Health Service, ext. 553, for the location of the PHS Mobile Unit, which will be stationed on the reservation from April 25 to 29.

AWARDS Cont'd

Dr. von Oettingen, a Medical Officer in the Laboratory of Pharmacology and Toxicology, received the Superior Service award based on "outstanding contributions to the fields of toxicology, industrial hygiene and public health." He has been at NIH for 17 years.

Dr. McClure, Chief of the Laboratory of Oral Biochemistry, was honored for "continued meritorious contributions to the fields of nutrition and public health dentistry." He joined NIDR in 1936 and is recognized for his outstanding work in fluorine metabolism and its role in the prevention of dental caries.

Mr. Phillips, a Biologist in the Laboratory of Tropical Diseases, received his award for "elucidation of the mechanism of disease production in amoebic dysentery by the parasite Endamoeba histolytica, through the use of germ-free animals." He joined NIH in 1941, and since 1952 has been assigned to LOBUND Institute, University of Notre Dame, South Bend, Indiana.

FOLLOW-UP SPEEDS SUPPLIES TO NIH

So accustomed is SMB's Follow-Up Unit to expediting purchase orders for unusual items, that calls regarding black widow spider venom, gila monsters, or chameleons, fail to raise an eyebrow.

Making certain that these and other more conventional supplies are promptly delivered is the responsibility of five employees in the Follow-Up Unit, headed by E. J. Palen. Located in Building 13, the Unit, under the supervision of SMB's Procurement Section, maintains a close check on purchase orders and also hastens delivery on emergency items. About 90 percent of all NIH orders go through this Unit.

Over 60,000 purchase order items have been received here during the first eight months of this fiscal year. An estimated 500 phone calls for expediting and 1300 follow-up actions per month are made on these orders.

Activity is focused on a "Rotor file" containing all unfilled orders. Referred to as the "merry-go-round," it has four revolving tiers and during a peak period may hold 2000 active orders.

Three copies of the purchase order come to Follow-Up, are logged according to vendor, and a discount is noted. The order is a returnable postcard to the vendor requesting shipment information. Should this fail to produce results, a letter is sent, or a phone call made if the supplier is in the vicinity. If the supplier promises a reasonable rescheduled delivery date, the requisitioning office is contacted to learn whether the new date is agreeable. Questions concerning delivery to requisitioning offices should be referred to the Follow-Up Unit.

POLIO Cont'd

Federal standards for safety, purity, and potency.

Final determination of these qualities of the vaccine was made in part from data released April 12 by Dr. Thomas Francis, Jr., of the University of Michigan, head of the vaccine evaluation study. According to Dr. Francis, data gathered from the extensive 1954 field trial revealed the vaccine to be 62 to 72 percent effective in the prevention of all paralytic poliomyelitis. In laboratory confirmed cases in study areas "it may be suggested that vaccination was 80-90 percent effective against paralytic poliomyelitis," Dr. Francis said.