

NIH



record

DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE

May 5, 1958, Vol. X, No. 9

PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTH

EQUIPMENT EXHIBIT SET FOR RECORD CROWD

More than 5,000 persons are expected to attend the Eighth Annual Instrument Symposium and Research Equipment Exhibit at NIH Monday through Thursday of next week. All NIH staff members and scientists in the Washington area are invited to attend both the exhibit and symposium.

The newest types of research equipment will be displayed by more than 100 manufacturers in Bldg. 22 from 11:30 a.m. to 6 p.m., Monday, Wednesday, and Thursday, and from 11:30 a.m. to 9 p.m. on Tuesday. Instrumentation clinics to demonstrate new equipment will be held daily throughout the exhibit.

Each of the six sessions of the symposium, to be held in the CC Auditorium, will deal with recent developments in research methods and instrumentation. Dr. James A. Shannon, NIH Director, will address the opening session on Tuesday, May 13, at 2:30 p.m.

13 Fellowships Awarded To European Scientists

Postdoctoral research fellowships have been awarded to 13 European scientists under a new PHS research fellowship program administered by NIH.

An extension of PHS's postdoctoral fellowship program, the awards will enable the scientists to receive a year of intensive training at the U. S. research institution of their choice.

Professional qualifications of the European scientists were endorsed by national research organizations in 10 Western European countries. Each recipient has a workable knowledge of the English language and a doctorate in medical or related science.

Symposium sessions are scheduled as follows: gas chromatography, May 13 (2:30-4:30 p.m.); macromolecules, May 13 (8-10 p.m.); microrespirometry, May 14 (10

(See Exhibit, Page 3)

NOBEL PRIZE WINNER SPEAKS HERE MAY 14



Dr. Albert Szent-Gyorgyi

Dr. Albert Szent-Gyorgyi, Nobel Prize winner and former Fellow at NIH, will return here May 14 to present the 6th Annual NIH Lecture.

Entitled "Bioenergetics," the lecture will review Dr. Szent-Gyorgyi's intensive research on energy transfer in muscle cells. He will discuss biological factors in living cells that may lead to progress in many areas of medicine and biology.

All NIH employees and guests are invited to attend the lecture, to be presented at 8:15 p.m. in the Clinical Center Auditorium.

Dr. Szent-Gyorgyi was awarded the 1937 Nobel Prize in Medicine and Physiology for his studies on biological oxidation and the chemical isolation of vitamin C.

At present, Dr. Szent-Gyorgyi is director of the Institute for Muscle Research at the Marine Biological Laboratory in Woods Hole, Mass. He held a special research fellowship in NIAMD from 1948 to 1950, and investigated the molecular structure of contractile proteins in muscle.

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Making plans for next week's equipment exhibit are James B. Davis, DBO (left), who is in charge of arrangements, and Dr. Robert Bowman, NIH, chairman of the instrument symposium.

A Search For Ancient Cancer Remedies

No. 205 in a Series

The ancient Greeks and Romans treated cancer with a preparation made from the juniper tree. Centuries later, the North American Indians were using a cancer remedy made from the mandrake root.

These widely separated people were making use of an active anti-cancer agent derived from common plants. Within the past decade the National Cancer Institute found that the savin juniper contains the same active agent as the American mandrake, namely podophyllotoxin, a substance that destroys a high proportion of cancer cells in laboratory animals.



Egyptians squeezed herbs in animal skins to get plant extracts.

Finding plant extracts that will destroy malignant cells is a large task. Some of the preliminary, but fascinating, work has already been done in NCI's Laboratory of Chemical Pharmacology by Dr. Jonathan Hartwell and associates.

Dr. Hartwell, a gardener as well as a chemist, is conducting his own "great books" course. Four years ago he began an extensive survey of the world's medical and pharmaceutical literature, searching for ancient as well as modern references to plant remedies for cancer. Chronologically, the study covers nearly 3,500 years, from the writings of the Egyptians down to the present.

The study does not stop with the texts of Hippocrates, Galen, and Dioscorides, or the works of other great founders of scientific medi-

cine. It also includes "herbals," both old and new. The heyday of the herbals was in the 15th and 16th centuries. From the wealth of botanical lore in the herbals have come the "old wives' tales" that still persist and that may lead to future chemical investigation.

Dr. Hartwell's systematic search is nearing its end. Among the nearly 3,000 books he has read are translations of medical papyri and volumes treasured by bibliophiles the world over. He is one of the best customers for library loans from all corners of the United States.

The value of the information he reads lies in its extractability. A primary file of almost 700 titles contains a systematic record of plant remedies and their applications. The records do not neglect mention of the part of the plant involved--whether root, stalk, flower, or seed. Secondary files cross-index the abstracts under botanical family and again under common name. A punched card file codes plants according to family, genus, species, time (century), geographic location, and by type of cancerous affliction.

Name a familiar garden vegetable, and probably you will find in the files a long and often honorable history of its medicinal use. Cato the Elder (B.C. 234-149) makes the earliest reference to cabbage as a cancer cure. His prescription was to bruise the leaves for use as a poultice.

Carrots (*Daucus carota*) were also used in poultice form to mitigate the pain of cancer. The leaves applied with honey were believed to cleanse cancerous ulcers.

Ever since the American Cancer Society offered a \$100,000 prize in 1926 for a cancer cure, it has been flooded with attic remedies. Dr. Hartwell, on examining a sample of 650 letters, found many that repeated some of the same classical "cures" he has uncovered.

The long-term phase of Dr. Hartwell's survey begins when plants are selected for laboratory investigation. A chemist may have to spend years in an effort to identify and isolate an effective cancer agent in a single plant. Certainly, the literature survey should aid in, and perhaps shorten, this process.

Publication Preview

The following manuscripts were received by the SRB Editorial Section between February 28 and March 5.

NCI

- Barrett, M. K. A critical analysis of "tumor immunity."
- Carroll, B. E. Statistical considerations in cytology surveys.
- Grogan, C. H. Binding of chromate to human plasma protein.
- Jude, J. R., and Smith, R. R. The use of the ileal bladder in genitourinary and gynecological surgery.
- Montagna, W., and Van Scott, E. J. The anatomy of the hair follicle.
- Mora, P. T., and Young, B. G. Interaction between synthetic polyglucose sulfate and biologically active basic polypeptides and proteins.
- Schneider, W. C. Cell fractionation techniques.
- Shimkin, M. B. On the etiology of cancer.
- Tullner, W. W. Mediation of the progestational action of amphenone by the rabbit adrenal.
- Wheatley, V. R., and Reinertson, R. P. The presence of vitamin D precursors in human epidermis.

NHI

- Burns, J. J., and Ashwell, G. L-ascorbic acid.
- Duggan, D. E. The spectrofluorometric determination of tocopherol and tocopherol esters.
- Fales, H. M., and Wildman, W. C. The structure of haemanthamine.
- Hendler, R. W. On the possible involvement of lipids in protein synthesis.
- Leeper, L. C.; Weissbach, H.; and Udenfriend, S. Studies on the metabolism of norepinephrine, epinephrine and their α -methyl analogues by partially purified enzyme preparations.
- Shack, N. W. The role of the kidney in electrolyte and water regulation in the aged.
- Waalkes, T. P.; Sjoerdsma, A.; Creveling, C. R.; Weissbach, H.; and Udenfriend, S. Serotonin, norepinephrine and related compounds in bananas.

NIAID

- Bauer, J. A., Jr. Histocompatibility in inbred strains of guinea pigs.
- Eagle, H. Nutritional requirements for cell growth and poliovirus propagation.
- Emmons, C. W. Association of bats and histoplasma.
- Emmons, C. W. Medical mycology.
- Salvin, S. B. Resistance of animals and man to histoplasmosis.
- Weinbach, E. C., and Bowen, W. J. The effect of pentachlorophenol on the adenosinetriphosphatase and contractile properties of psoas muscle preparations.
- Young, M. D., and Burgess, R. W. Pyrimethamine resistance in *Plasmodium vivax* malaria.

NIAMD

- Laki, K.; Horvath, B.; and Klatzo, I. On the relationship between myosin and tropomyosin A.
- Yamada, E., and Jakoby, W. B. Enzymatic utilization of an acetylenic compound.
- Sokoloff, L. Joint diseases of laboratory animals.
- Saroff, H. A., and Simpson, R. B. Anion effects on the binding of zinc to serum albumin.

NIDR

- Burstone, M. S. Histochemical demonstration of acid phosphatase activity in osteoclasts.
- McClure, F. J., and McCann, H. G. The chemistry of human bones following the prolonged use of an excessive fluoride vs. a non-fluoride drinking water.

NIH Exhibit Wins Art Show Award

An NHI exhibit, "William Harvey and the Circulation of the Blood," was awarded the top prize in the exhibit category at the Ninth Annual Art Directors Show recently. The show is sponsored by the Art Directors Club of Metropolitan Washington.

The 20-unit exhibit contains rare memorabilia of William Harvey and historical material concerning circulation. It was displayed for the first time in the CC Lobby last September as part of the William Harvey Tercentenary Commemoration.

The Harvey exhibit was a joint project of NHI and the National Library of Medicine. The award received was one of 25 in the 1958 exhibition. Members of the NHI exhibit committee, which helped plan the exhibit, were Dr. Bert R. Boone, Dr. Robert Ingram, and Art Cosing.

The Art Directors Show is now on display weekdays until April 30 in the Perpetual Building and Loan Auditorium, 1111 E Street NW.

NIMH

Evarts, E. V.; Gillespie, L., Jr.; Fleming, T. C.; and Sjoerdsma, A. Relative lack of pharmacologic action of the 3-methoxy analogue of norepinephrine.

Gladwin, T. Current cultural and psychological research in mental retardation.

Locke, B. Z.; Kramer, M.; Timberlake, C. E.; Pasamanick, B.; and Smeltzer, D. Problems in interpretation of patterns of first admissions to Ohio State public mental hospitals for patients with schizophrenic reactions.

Tarjan, G.; Wright, S. W.; Kramer, M.; Person, P. H., Jr.; and Morgan, R. The natural history of mental deficiency in a state hospital. I. Probabilities of release and death by age, intelligence quotient and diagnosis.

NINDB

Goodman, G., and Gunkel, R. D. Familial electroretinographic and adaptometric studies in retinitis pigmentosa.

Gouras, P. Spreading depression of activity in amphibian retina.

Hild, W.; Chong, J. J.; and Tasaki, I. Electrical responses of astrocytic glia from the mammalian central nervous system cultivated *in vitro*.

Imus, H. A. Research in sensory disorders. Macri, F. J.; Wanko, T.; and Grimes, P. A. The elastic properties of the human eye.

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

PHS SOCIETY, TB GROUP HOLD MEETINGS AT NIH

Three hundred members of the PHS Clinical Society held their 12th Annual Meeting at NIH, April 24-26. Papers on a variety of clinical studies were presented at the meeting by PHS physicians and dentists from all parts of the country.

The sessions were opened by Dr. Stuart M. Sessoms, NCI Assistant Director and Secretary-Treasurer of the Society. Dr. James A. Shannon, NIH Director, and Dr. Jack Masur, CC Director, welcomed the group.

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A meeting on tuberculosis research, sponsored by NIAID, was held at NIH on April 21. Twenty-six scientists, specialists on tuberculosis, discussed the possibility of immunization by means of extracts of tubercle bacilli. Dr. Carl L. Larson, Director of the Rocky Mountain Laboratory, served as chairman.

Doctors' Orchestra Invites Employees At NIH To Join

The Doctors' Symphony Orchestra extends an invitation to all persons connected with the medical profession and members of their families to join the amateur music group.

The orchestra meets each Thursday at 8 p.m. at the Perpetual Building in Bethesda. Players in all sections will be welcome. Those interested may contact Mrs. Robert Havell, EMerson 2-7652.

LECTURE Contd.

A continuous flow attachment developed by Dr. Szent-Gyorgyi and Josef Blum for the Servall super-speed centrifuge will be demonstrated at the Research Equipment Exhibit at NIH May 12 through 15.

A native of Hungary, Dr. Szent-Gyorgyi was formerly president of the Hungarian Academy of Sciences and vice president of the National Academy of Hungary.

He was professor of Medical Chemistry at the University of Szeged, Hungary, from 1931-1942, and at Budapest University from 1944-1947.

EXHIBITS Contd.

a.m.-12 noon); aerosols, May 14 (2:30-4:30 p.m.); automatic processing of experimental data, May 15, (2:30-4:30 p.m.); and protein monolayers, May 15 (8-10 p.m.).

NEWS BRIEFS

A new Division of Radiological Health will be set up in PHS to provide technical assistance to State agencies on public exposure to radiation. The Division will also conduct research and training programs. Dr. Francis J. Weber, medical director of the Department's regional office in Denver, will be chief of the new Division.

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Dr. Oliver J. Caldwell of the Office of Education, DHEW, recently returned from a month-long tour of educational institutions in the Soviet Union. While in Russia, he arranged for exchange visits between American and Russian educators, and planned an exchange of educational materials. Dr. Caldwell is Assistant Commissioner for International Education.

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Gladys Harrison, head of the PHS Division in the Office of General Counsel, DHEW, retired April 18. Of her 25 years in Government, she has devoted 16 to legal services for PHS.

NIH SCIENTISTS ATTEND FEDERATION MEETINGS

A total of 144 NIH staff members presented scientific papers at the annual meeting of the Federation of American Societies for Experimental Biology, held April 14 through 18 in Philadelphia.

Many others of the NIH staff attended the meeting. A record number of 2,196 papers were presented.

The Federation meeting is one of the largest scientific gatherings in the country. More than 8,000 scientists attended the meeting this year.

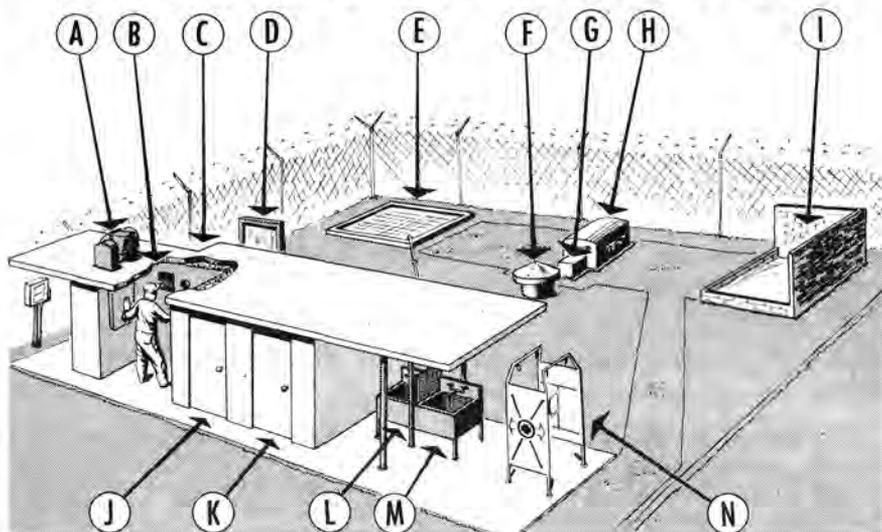
Barbershop Harmonizers Sing Here May 11

The Singing Capitol Chorus, an internationally known barbershop harmony group, will present its annual concert in the CC Assembly Hall, 14th floor, on Sunday, May 11, at 2:30 p.m.

The program will include selections by four area barbershop quartets and by the "Precisionists," a 25-voice rhythm chorus. These singers have toured Europe and will depart soon on a Pacific tour.

Patients, NIH employees, and their families and friends are invited to attend the concert free of charge.

NIH PIONEERS CHEMICAL DISPOSAL AREA



Included in the new chemical disposal plant are (A), gas cylinder exhaust (B), loading and observation room (C), bottle crusher (D), mirror (E), neutralizing tank (F), solvent storage tank (G), burner (H), combustion chamber (I), burning pit (J), storage room (K), control room (L), acid sink (M), solvent sink, and (N), safety shower.

A model plant for disposing of waste chemicals is now being constructed on the NIH reservation. Planned and designed by the Sanitary Engineering Branch, DRS, and the Plant Safety Branch, DBO, the operation will serve as an example to major laboratories throughout the country.

A unique feature of the new plant is an adjustable bottle crusher and can "guillotine." Chemical containers are fed through a drop slot into this mechanism, and as they are broken, a heavy water spray dilutes the chemical and minimizes fumes.

Known waste acids then drain to a 200-gallon neutralizing tank where they are reacted with appropriate reagents. Flammable liquid solvents and unknown chemicals are directed to a solvent storage tank 15 feet away. There an oil burner destroys the solvent. Flames are discharged into a combustion chamber, designed to reduce smoke and disagreeable odors.

Large quantities of known acids and solvents in returnable containers are emptied into stone sinks that connect with the neutralizing and solvent tanks.

A unit for exhausting leaking compressed gas cylinders is also a part of the new plant. A burning pit will be used to destroy certain hazardous solids.

Every effort has been made to insure the safety of the employee operating the disposal plant. He feeds containers into the bottle

NIH WILL WELCOME--

- May 8 - Post Congress Tour of the Fifth International Congress of Internal Medicine.
- May 8 - Washington Chapter of the Professional Group on Medical Electronics, Institute of Radio Engineers.
- May 13 - Joint Meeting of the Orthopedic Association of English Speaking Nations.
- May 29 - World Congress of Gastroenterology.

For further information about these meetings, contact the Special Events Section, ext. 3475.

Sales Held At NIH Benefit The Blind

The Columbia Lighthouse for the Blind, Inc., a nonprofit organization, is holding exhibits and sales here of products handmade by blind persons.

The exhibit this year features aprons, brooms, dust mops, and handwoven neckties and stoles. Items may be purchased May 8 and 9 outside the Bldg. 1 Cafeteria, and May 12 and 13 on the first floor of Bldg. F-6, outside the Guard Office.

crusher from behind a reinforced concrete wall, and observes the operation in a mirror. A safety shower is near in case of accident.

The fenced waste chemical area occupies 2,500 square feet at Center Drive and Service Road South.

NEW VISITORS PROGRAM HELD HERE TWICE DAILY

Regularly scheduled programs for visitors to NIH are being presented twice daily by the Special Events Section, CC. Held at 10 a.m. and 2 p.m. each working day, the sessions include a showing of the NIH film, a brief talk, question period, and a short tour of the CC.

Programs for professional visitors who have special interests or desire interviews will still be arranged by the Special Events Section. Advance notice is required, however, so arrangements can be made. Employees who sponsor a foreign visitor are also urged to report his name and title to the Special Events Section.

To help cope with the increasing number of visitors, an Advisory Committee on the NIH Visitor Program has recently been appointed. Under the chairmanship of Dr. Heinz Specht of NIAMD, the Committee will submit recommendations to the NIH Director.

Proposals under review by the Committee include special programs for science students and teachers, annual open houses, and bus tours of the reservation for visitors.

Kindly Return Tote Boxes

Tote boxes used for the delivery of stock supplies should be returned to the Central Storeroom immediately after delivery. Tote boxes should not be used as refuse containers since they become dirty or contaminated and must be discarded.

The boxes must be replaced at considerable expense if they are unclean or not returned, and the cost is added to the surcharge that is paid. For pick-up service, call ext. 2211 or 3524.

CD Commends Loan Of NIH Generators

Two portable generators loaned to Montgomery County Civil Defense by NIH serviced more than 60 rural homes during the March blizzard.

A letter of thanks to the NIH Director calls the loan "a splendid act of community cooperation" and expresses appreciation "for fostering a spirit of sharing community responsibility."