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SCIENCE SEARCH FINALISTS VISIT LABORATORIES HERE

Ten high school seniors who were finalists in the 17th Annual Science Talent Search discussed their winning projects and future plans with leading NIH scientists recently.

The visit to NIH was part of a five-day program planned for the 40 student winners, selected on the basis of their unusual potential scientific ability.

A Washington area winner, Jerry Rice, discussed his plans for a career in cancer research with Dr. Katherine K. Sanford of NCI. For his scientific project, Jerry studied the effects of a carcinogen on malignant tumor cells grown in tissue culture. Dr. Lucia Dunham of NCI, he said, was instrumental in starting him on his tumor research work.

The winners attended a luncheon with NIH scientists and two former Talent Search winners now at NIH, Drs. Donald Tschudy and Gary Felsenfeld.

The Annual Science Talent Search is supported by the Westinghouse Educational Foundation and administered through the Science Clubs of America.

Community Project Aids NIH Patients

Prizes and games for Clinical Center patients are being donated to NIH by the "Pool of Bethesda," a new project of Montgomery County civic groups. The "Pool," composed of representatives from numerous area civic organizations, was initiated by the Woman's Club of Bethesda.

Jigsaw puzzles, bingo prizes, and used musical instruments are being furnished to patients by the group. The Patient Activities Section, CC, will distribute the gifts through the Gray Lady Section.

NIH AIDS IN RESCUE OF STORM VICTIMS



An NIH parking lot doubled as an emergency landing strip for a Fort Meade helicopter on rescue missions during the recent blizzard. An NIH ambulance (above) met the helicopter to rush expectant mothers to nearby hospitals. Arrangements for the landings were made by Nathan Coffey, NCI, who heard of the emergency on his Civil Defense radio. A helicopter landing port at NIH is in the planning stages.

TWO MORE EMPLOYEES RECEIVE CASH AWARDS

Elizabeth Koepenick, secretary in the Employee Health Service, CC, and Ortis G. Stultz, pharmacy helper, CC, received cash awards recently.

Mrs. Koepenick's dependability and devotion to duty were recognized at a ceremony March 3. Dr. Jack Masur, CC Director, presented her with a \$225 award. "Mrs. K" is well known to NIH employees for her sympathy and courtesy. Her judgment and efficiency have helped to maintain the Employee Health Service's high standards in spite of a greatly increased workload.

Mrs. Stultz was cited for suggesting a safer, more efficient

(See Awards, Page 3)

Ten Volunteer Agencies Launch Govt. Campaign

Ten independent charitable agencies will launch the second Federal Service fund-raising campaign on March 15. Two concurrent drives will be conducted on a nationwide basis by the Federal Service Joint Crusade and the Federal Service Health Campaign.

The six-week campaign offers individuals an opportunity to donate to agencies they wish to support. To emphasize voluntary giving, there will be no agency quotas, and solicitation will be on a cash basis, without the use of pledge cards.

National agencies participating in the drive are the American Cancer Society, American Heart

(See Drive, Page 4)

Battery-Powered Device Monitors Heart Action

No. 201 in a Series



Dr. Severinghaus demonstrates a commercial adaptation of the telecor. The leads are connected to the patient's shoulders with hypodermic needles.

A two-pound, battery-powered instrument not much larger than the hand conveys vital information from the heart during anesthesia. Developed and used with great success at NIH, it has recently been made commercially available.

The instrument, called a telecor, was developed by Dr. John W. Severinghaus, Chief, Anesthesia Research Section of the Anesthesiology Department, CC, and provides three kinds of information: electrocardiogram, body temperature, and stethoscopic sounds of heart and respiratory activity.

The need for a cardiac monitor arose from the problems encountered in hypothermia, the controlled lowering of body temperature for heart and brain surgery. It was needed particularly in heart surgery because of the frequency of heart irregularities.

To pick up the heart's electrical activity, the telecor contains a transistor amplifier that is powered by flashlight batteries. An oscillator and three-inch loudspeaker convert each heartbeat into a squeak whose variations serve as a warning of changes in heart rhythm.

In association with the telecor, an esophageal probe may be used.

It also picks up the heart's electrical activity and carries the heart and breath sounds to a stethoscope.

Another problem faced during hypothermia is body temperature measurement. Rectal temperature is less dependable as an index of heart and brain temperature than deep esophageal temperature. To measure this, the esophageal probe contains a temperature-sensitive thermistor bead similar to the one used in America's satellite, the Explorer.

The value of the telecor goes far beyond its use in hypothermia. Its success in general surgery was apparent from the very beginning. Its full implications, however, have yet to be realized.

The telecor is smaller, handier, cheaper, and--since it works off batteries--safer than conventional equipment that imparts the same kind of information.

In addition to its use in the operating room, the telecor can be used to monitor heart action in seriously ill patients. The leads from the instrument may be conveniently attached to the patient either with small needles at the shoulders or

(See Telecor, Page 3)

Publication Preview

The following manuscripts were received by the SRB Editorial Section between December 24 and January 13.

CC

Lusted, L. B. The intravenous urogram in acute leukemia.

Peden, J. C., Jr., and Peacock, A. C. The coagulation of blood by Russell's viper venom: A reaction between Russell's viper venom and beef serum factors.

NCI

Armitage, P. Host variability in dilution experiments.

Breslow, A.; Emmart, E. W.; and Altman, H. Site of localization of chorionic gonadotropin in the rat ovary.

Burstone, M. S. Histochemical comparison of naphthol AS-phosphates for the demonstration of phosphatases.

Calabresi, P., and Meyer, O. O. Polycythemia vera: I. Clinical and laboratory manifestations.

Calabresi, P., and Meyer, O. O. Polycythemia vera: II. Course and therapy.

Law, L. W. Some aspects of drug resistance in neoplasms.

Li, M. C.; Hertz, R.; and Bergenstal, D. M. Therapy of choriocarcinoma and related trophoblastic tumors with folic and purine antagonists.

Mider, G. B. The histophysiology of cancer. Moriyama, I. M.; Baum, W. S.; and Haenszel, W. M. Inquiry into diagnostic evidence supporting medical certifications of death.

Schatten, W. E.; Ship, A. G.; Pieper, W. J.; and Barter, F. G. Syndrome resembling hyperparathyroidism associated with squamous cell carcinoma.

Schneiderman, M. A. Epidemiology of carcinoma of the breast.

Shimkin, M. B. Jacob Wolff, historian and biographer of cancer.

Shuster, L.; Langan, T. A., Jr.; Kaplan, N. O.; and Goldin, A. The significance of the induced *in vivo* synthesis of diphosphopyridine nucleotide.

Woods, M. W., and Hunter, J. C. Metabolic and growth responses of mouse melanomas, Krebs-2 carcinoma and brain relative to stress and insulin: anti-insulin hormones.

NHI

Bronk, J. R. Some effects of thyroxin on oxidative phosphorylation in mitochondrial particles and intact mitochondria.

Steinberg, D., and Fredrickson, D. S. Studies on the effects of Δ^4 -cholestenone in animals and in man.

Watt, J.; Wegman, M. E.; Brown, O. W.; Schliessman, D. J.; Maupin, E.; and Hemphill, E. C. Salmonellosis in a premature nursery unaccompanied by diarrheal disease.

Yu, T. F.; Burns, J. J.; Paton, B. C.; Gutman, A. B.; and Brodie, B. B. Phenylbutazone metabolites: antirheumatic, sodium retaining and uricosuric effects in man.

NIAID

Andrews, J. M. National Institutes of Health research on Asian influenza.

Chanock, R. M.; Parrott, R. H.; Cook, K.; Andrews, B. E.; Bell, J. A.; Reichelderfer, T.; Kapikian, A. Z.; and Huebner, R. J. Newly recognized myxoviruses from children with respiratory disease.

Darnell, J. E. Adsorption and maturation of poliovirus in singly and multiply infected HeLa cells.

Gibson, C. L., and Jumper, J. R. Prevalence of canine toxoplasmosis in Memphis, Tennessee.

Gibson, C. L., and Coleman, N. The prevalence of toxoplasma antibodies in Guatemala and Costa Rica.

Hoyer, B. H.; Bolton, E. T.; Ormsbee, R. A.; LeBouvier, G.; Ritter, D. B.; and Larson, C. L. The behavior of mammalian viruses and rickettsiae in anionic cellulose ion-exchange columns.

McCullough, N. B., and Beal, G. A. The biological stability of the genus *Brucella*.

Philip, C. B. New records of Tabanidae in the Antilles supplemental report.

NIAMD

Briggs, G. M. The outlook for nutrition research.

Buck, J. Cyclic CO₂ release in insects. IV. A theory of mechanism.

Heppel, L. A., and Rabinowitz, J. C. Enzymology of nucleic acids, purines and pyrimidines.

Scott, E. M., and Griffith, I. V. Interactions of B vitamins on growth of rats.

Seven, M. J., and Peterson, R. E. The spectrophotometric determination of iron in urine using 4, 7-diphenyl-1, 10-phenanthroline.

NIDR

Kennedy, J. J. Comparison of the gross biological effects of rotary and ultrasonic instruments on guinea pig incisors.

Kennedy, J. J.; Buckman, N.; and Proffit, W. R. Biological responses to high speed instruments.

McClure, F. J. Dietary protein and dental caries.

Zipkin, I.; Lee, W. A.; and Leone, N. C. Fluoride content of urinary and biliary tract calculi.

NIMH

Butler, R. N., and Perlin, S. Psychiatric consultation in a research setting.

Felsenfeld, G. Theoretical studies on the interaction of synthetic polyribonucleotides.

Felsenfeld, G., and Orgel, L. E. Jahn-Teller distortions of tetrahedral transition-metal complexes.

Freygang, W. H., Jr.; Frank, K.; Rall, W.; and McAlister, A. Evidence for electrical inexcitability of soma-dendritic membrane in motoneurons.

Streicher, E. Bilateral asymmetry of rat brain calcium.

NINDB

Albers, R. W., and Salvador, R. An ultramicro method for the determination of succinic semialdehyde: The properties and distribution of the α -amino-butyl- α -ketoglutaric transaminase in nervous tissue.

Baldwin, M., and Dekaban, A. Siamese twins conjoined by their heads (cephalopagus frontalis). Surgical separation followed by normal development.

Dekaban, A. S. Noli me tangere.

Guth, L. Functional recovery of the rat hemidiaphragm after reinnervation by the vagus nerve.

Hall, K. Modification of tracheostomy tube.

Kuhlman, R. E., and Resnik, R. A. Quantitative histochemical changes in the development of the rat lens and cornea.

Macri, F. J.; Wanko, T.; and Grimes, P. A. Study of the distensibility of the human eye.

von Sallman, L.; Macri, F. J.; Guortes, M. G. F.; and Grimes, P. Study of afferent electric impulses induced by intraocular pressure changes.

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NEW PHS GUIDE GIVES RULES ON OUTSIDE WORK

A guide recently issued by PHS outlines Federal law and Departmental policy on work or services performed by Civil Service employees beyond the scope of their official duties.

Known as Chapter C2 of PHS Personnel Guide 1, the guide also lists certain activities prohibited to DHEW employees. All NIH employees should become familiar with these provisions.

Discussed in the guide are regulations governing outside work such as private medical or dental practice, consultation, teaching and lecturing, and writing. In some cases, administrative approval authorizing such activities is required.

The guide will be posted on all bulletin boards at NIH, and is available in Institute and Division Administrative Offices and in the Personnel Management Branch, Bldg. 1, Rm. 21A.

Dr. Burney Urges Polio Vaccination Of Children

A stepped-up campaign to have children under five vaccinated against polio has been initiated by Surgeon General Burney. The nationwide effort results from new evidence indicating that the highest incidence of paralytic polio occurs in this age group.

Figures compiled by the PHS Communicable Disease Center show that the paralytic polio attack rate in 1957 was higher for children under five than for the total of all other age groups.

These findings have been sent by Dr. Burney to professional societies throughout the country. The Children's Bureau, DHEW, will cooperate by bringing these facts to the attention of parents.

The PHS, with the American Medical Association and the National Foundation for Infantile Paralysis, will continue to urge vaccination of all persons through the age of 40.

AWARDS Contd.

method of relabeling bottles in the Pharmacy Department. An accident caused by removing labels with a sharp instrument led her to suggest the use of self-adhering labels. She received \$10.

NEWS BRIEFS

A newly appointed National Advisory Committee on Radiation will meet for the first time this month to advise the Surgeon General on PHS programs dealing with the public health aspects of radiation. Dr. Russell H. Morgan, Professor of Radiology, Johns Hopkins University Medical School, will serve as chairman.

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Dr. Simon Black has been appointed Chief of the Section on Biochemistry and Toxicology in the Laboratory of Pharmacology and Toxicology, NIAMD. Dr. Black, a chemist with NIAMD since 1954, replaces Dr. O. Hayaishi, now a member of the Kyoto University Faculty of Medicine, Kyoto, Japan.

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Recently elected Chairman of the Board of Regents of the PHS National Library of Medicine is Dr. I. S. Ravdin, Professor of Surgery, University of Pennsylvania. Dr. Ravdin succeeds Dr. Worth B. Daniels, Clinical Professor of Medicine at Georgetown University.

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A supplement to "Survey of Compounds Which Have Been Tested for Carcinogenic Activity" is now available. The publication, which lists 779 newly tested compounds, was compiled by Professor Philippe Shubik of the Chicago Medical School, and Dr. Jonathan Hartwell of NCI. Copies are available from the Government Printing Office at \$3.50 each.

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A four-year emergency education program was recently presented to the President by DHEW Secretary Folsom. Designed to stimulate State, local, and private action to meet critical security needs, the program includes provisions for scholarships, grants, and language training centers.

TELECOR Contd.

with an esophageal probe. It can be easily transported with the patient while attached.

The telecor can also be used on animals during research, on sluggish newborn infants, on patients in the post-anesthesia recovery room, and on patients who have had a heart attack.

Dr. Severinghaus is working on an extension of the telecor that will present the electrocardiogram on a miniature oscilloscope that is also powered by batteries.

PROGRAMS PLANNED FOR LIBRARY WEEK

A series of programs in observance of National Library Week will be launched here Monday, March 17, by Maj. Gen. Melvin J. Maas, USMC, ret. Employees, patients, and the public are invited to attend the opening ceremony at 8 p.m. in the 14th Floor Assembly Hall, Bldg. 10.

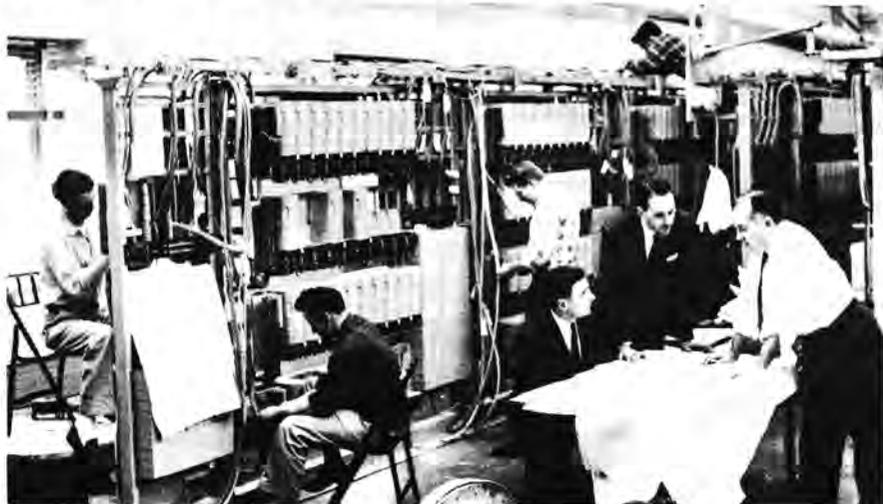
General Maas, chairman of the President's Committee on Employment of the Physically Handicapped and a former CC patient, will speak about the satisfaction to be derived from books. A showing of the film, "Winged Bequest," will follow his talk.

An open house in the patients' library on Friday afternoon, March 21, will be highlighted by demonstrations and displays of reading aids used by CC patients. Exhibits will include specialized equipment, such as talking-book machines, ceiling projectors, prism glasses, and electric page-turners. The patients' library is in Rm. 5N-262, Bg. 10.

Other plans include discussions on library facilities, book collecting, and building home libraries. Patients and interested employees will meet Wednesday evening, March 19, in all CC solariums. A children's hour for younger CC patients will be held on Thursday afternoon.

Margaret C. Hannigan, patients' librarian, has arranged the programs at NIH. National Library Week is sponsored by the National Book Committee, Inc., and the American Library Association.

500 NEW TELEPHONE LINES INSTALLED



The 500 new telephone lines now being installed at NIH will help to service our rapidly expanding staff and facilities. Discussing the new rotary lines are (foreground, l. to r.) George Hoff, DBO Communications Section; Paul Holden, Chesapeake & Potomac Telephone Co.; and Western Electric foreman John J. Degutes.

DRIVE Contd.

Association, Arthritis and Rheumatism Foundation, Muscular Dystrophy Associations of America, National Multiple Sclerosis Society, National Society for Crippled Children and Adults, National Tuberculosis Association, and the United Cerebral Palsy Association. Two international agencies, CARE and Crusade for Freedom, will also participate.

Further information will be circulated by keymen to everyone at NIH.

Russian Translations Available In Library

Translation programs at NIH and elsewhere now make Russian literature in the biological and medical sciences more readily available to American scientists than ever before.

Scott Adams, NIH Librarian, reports that the following Russian publications, translated under NIH grants and contracts, are available in the library:

"Abstracts of Soviet Medicine," "Biochemistry," "Bulletin of Experimental Biology and Medicine," "Biophysics," "Journal of Microbiology, Epidemiology, and Immunology," "Problems of Oncology," "Problems of Virology," "Sechenov Physiological Journal of the USSR," and "Problems of Hematology and Blood Transfusion."

The library also purchases the following translated Russian journals:

"Bulletin of the Academy of Sciences, USSR; Division of Chemical Sciences," "Journal of General Chemistry of the USSR," "Pharmacology and Toxicology," "Proceedings (Doklady) of the Academy of Sciences of the USSR; sections on Chemistry, Physical Chemistry, Biochemistry, and Biological Sciences;" and "Soviet Journal of Atomic Energy."

An outline of the Soviet translation program at NIH may be obtained from the library on request.



When pipetting poisonous or dangerous materials, use devices provided for this purpose.