

# NIH



# record

DEPARTMENT OF  
HEALTH, EDUCATION, AND WELFARE

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PUBLIC HEALTH SERVICE  
NATIONAL INSTITUTES OF HEALTH

## AWARDS PROGRAM SET FOR MAY 26

Twenty-two NIH employees will receive cash awards at the Annual Awards Ceremony on Monday, May 26, at 3 p.m. in the CC Auditorium. Length-of-service awards will also be presented to 64 employees who have served 20 and 30 years in Government.

The 2d Army Pipe and Drum Corps, better known as the "Kilties," have accepted the NIH invitation to furnish music for the ceremony. All employees, their families, and friends are invited to attend.

## New Appointments Made In DRS, NIDR

New staff members at NIH are William B. Page, recently appointed Assistant Chief of DRS, and Robert R. Hurt, Information Officer, NIDR.

Mr. Page came to NIH from the PHS Arctic Health Research Center in Anchorage, Alaska. There, he was responsible for the organization and conduct of a number of research projects in the Environmental Sanitation Branch.

Before joining PHS in 1949, Mr. Page taught in the Civil Engineering Department of Norwich University, in Vermont. He has also worked with the U. S. Coast and Geodetic Survey.

Mr. Hurt, NIDR Information Officer, was formerly assistant chief of the Technical Information Division of the Biological Warfare Laboratory at Fort Detrick, Md. While in the Chemical Corps, he served as executive officer of the technical research and development activity at Plum Island, N. Y.

A native of Charlottesville, Va., Mr. Hurt replaces G. Byron MacCandless, who left NIH recently to return to private business.

## DR. FLEMMING NAMED HEW SECRETARY



Dr. Arthur S. Flemming

## Genetics Study Section Is Established In DRG

A new study section has been established in DRG to handle the increasing number of research grant applications in the field of genetics.

The new group is an offshoot of the Morphology and Genetics Study Section, now renamed the Cell Biology Study Section.

Grant applications covering all areas of genetics that relate to the health sciences will be considered by the new study section at its first meeting next September.

Dr. Katherine S. Wilson, Executive Secretary for Research Fellowships in the Research Fellowships Section, DRG, has been appointed Executive Secretary of the Genetics Study Section.

Before coming to NIH in 1956, Dr. Wilson was an instructor in Botany at Yale University where she was the first woman appointed to faculty rank in the undergraduate college. At Yale, she engaged in teaching and research in the areas of morphogenesis, plant physiology, and medical mycology.

## Secy. Folsom Resigns After 3 Years Service

President Eisenhower has named Dr. Arthur S. Flemming, president of Ohio Wesleyan University, to succeed Marion B. Folsom as Secretary of the Department of Health, Education, and Welfare. The appointment will be effective in late July.

Dr. Flemming is a skilled administrator with wide experience in Government. He was appointed to the Civil Service Commission by President Roosevelt in 1939 and served for nine years in this post.

In 1951 he returned to the Office of Defense Mobilization from the presidency of Ohio Wesleyan University, his alma mater. From 1953 until last March, he was Director of the Office of Defense Mobilization.

Dr. Flemming was born in Kingston, N. Y., in 1905. He was graduated from Ohio Wesleyan University in 1927, received an M.A. degree from American University, and an LL.B. from George Washington University. He is married and the father of five children.

Mr. Folsom, whose resignation will be effective in July, succeeded Mrs. Oveta Culp Hobby as HEW Secretary in 1955.

A pioneer in the drafting of the Social Security Act, he has been an advisor on the law since that time. In the mid-40's, he was staff director on a special congressional committee on postwar economic policy and planning. He returned to Washington in 1953 as Under Secretary of the Treasury.

While in office, Secretary Folsom worked on programs to improve the medical care, schooling, and economic stability of American families.

# Light Aversion Test

No. 206 in a Series



A blind usually conceals the rat's exits and entrances through doors in the light aversion cage designed by Dr. Edward A. Jerome (right), and mechanical pens record failures and successes.

Old rats can learn new tricks, according to Dr. Edward A. Jerome, an NIH psychologist.

Dr. Jerome's problem-solving experiments with light aversion have shown that old rats not only learn how to escape some of life's less pleasant situations, but also how to adapt readily to changing environmental conditions that require them to discard old modes of behavior in favor of new ones.

Rats, being nocturnal animals, prefer relative darkness, and in these tests, the old as well as the young have learned in a succession of problems eight different ways of escaping light. The apparatus used is pictured above.

Under investigation are two possible explanations for the decrease in learning ability that is assumed to be characteristic of aging.

According to one theory, it is the inevitable degeneration of the central nervous system which impairs the aging organism's ability to learn. The other hypothesis attributes the deficit in learning to an ever-increasing accumulation of experience, or of over-practiced habits of responding. The result is interference with the acquisition of new modes of behavior.

Unlike animal aging studies that depend on the hunger drive or on other strong internal disturbances that may be affected by age, the light aversion technique employs a controllable external means of generating the motivation to learn—illumination.

This arrangement eliminates the need for complicated deprivation schedules and permits the animal to learn in a state free of metabolic or emotional stress.

The test apparatus has two identical compartments separated by a partition of five swinging doors. The compartments are illuminated alternately by fluorescent lights. An automatic timing mechanism outside the cage controls the operation of the lights and of the doors. The doors can be locked or unlocked in any desired sequence. Mechanical pens trace the animal's movements and record the time spent in faulty and successful attempts at escape.

All tests are variations of the basic problem in which the rat must find his way through the one unlocked door that will lead him to the darkened side of the cage. After a little training, most rats find the right door in about 4 seconds. The problem is, however, to learn to find it without trying any of the other doors.

Half of the 40 rats tested were old (24 months), and half were young adults (8 months). The number of males and females was equal.

Dr. Jerome's work with light aversion began when he was associated with the Naval Medical Research Institute and is continuing as part of the animal aging series conducted by the Section on Aging of the NIMH Laboratory of Psychology. Except for the final analysis of data, the light aversion studies of aging are complete.

## Publication Preview

The following manuscripts were received by the SRB Editorial Section between March 7 and March 14.

CC

Hilbish, T. F., and Morrow, A. G. Why selective angiography? Techniques and applications in the preoperative evaluation of patients with congenital and acquired heart disease.

NCI

Frei, E., III; Holland, J. F.; Schneiderman, M. A.; Pinkel, D.; Selkirk, G.; Freireich, E. J.; Silver, R. T.; Gold, G. L.; and Regelson, W. A comparative study of two regimens of combination chemotherapy in acute leukemia.

Grogan, C. H. Experimental studies in metal carcinogenesis. XI. The penetration of chromium into the cell nucleus.

Hollcroft, J., and Congdon, C. C. Carcinogenesis of chronic  $\gamma$  irradiation.

Mantel, N. An experimental design in combination chemotherapy.

Moore, T. B., and Baker, C. G. Observed and calculated  $R_i$  values of several synthetic peptides in paper chromatography.

Mustacchi, P., and Cutler, S. J. Survival in cancer of the thyroid.

Olech, P. D.; Eck, R. V.; and Smith, R. R. An experimental study of the effect of external irradiation of a "primary" tumor and its distant metastases.

Shelton, E., and Rice, M. E. Studies on mouse lymphomas. II. Behavior of three lymphomas in diffusion chambers in relation to their invasive capacity in the host.

Williams, R. B., Jr.; Toal, J. N.; White, J.; and Carpenter, H. M. Effect of total body X radiation from near threshold to tissue lethal doses on the small bowel epithelium of the rat. I. Changes in morphology and rate of cell division in relation to time and dose.

NHI

Bodenstein, D. The role of hormones in the regeneration of insect organs.

Brodie, B. B.; Spector, S.; Kuntzman, R. G.; and Shore, P. A. Rapid biosynthesis of brain serotonin before and after reserpine administration.

Chen, P. S., Jr. Spectrophotometric determination of  $\Delta^4$ -3 ketosteroids with salicyloyl hydrazide. Application to urinary aldosterone.

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

Fish, M. S.; Johnson, N. M.; Lawrence, E. P.; and Horning, E. C. *tert*-Amine oxides. Chemical and enzymatic rearrangements of *N,N*-dimethyltryptophan oxide.

Goodman, D. S., and Gordon, R. S., Jr. The metabolism of plasma unesterified fatty acid.

Grant, R. P.; Tomlinson, F. B.; and Van Buren, J. K. Ventricular activation in the pre-excitation syndrome (Wolff-Parkinson-White).

Norris, A. H., and Shock, N. W. Exercise in the advanced years.

Shore, P. A. Possible mechanism of antidepressant action of Morsilid.

NIAMD

Brennan, J. M. *Beamerella* and *Kaaga*, two new genera of chiggers from South America (Acarina: Trombiculidae).

Dalmat, H. T. Arthropod transmission of rabbit fibromatosis (Shope).

Dray, S., and Young, G. O. Differences in the antigenic components of individual rabbits as shown by induced isoprecipitins.

Eklund, C. M.; Kohls, G. M.; and Jellison, W. L. Isolation of Colorado tick fever virus from rodents in Colorado.

Emmons, C. W. The organism, *Histoplasma capsulatum*.

Freund, J.; Miles, A. A.; Mill, P. J.; and Wilhelm, D. L. Vascular permeability factors in the secretion of the guinea pig coagulating gland.

Greenberg, J., and Kendrick, L. P. Parasitemia and survival in mice infected with *Plasmodium berghei*. Hybrids between Swiss (high parasitemia) and STR (low parasitemia) mice.

Huebner, R. J.; Rowe, W. P.; and Chanock, R. M. Newly recognized respiratory tract viruses.

Jellison, W. L.; Bell, J. F.; Verrees, J. D.; Holmes, M. A.; Larson, C. L.; and Owen, C. R. Preliminary observations on diseases in the 1957-58 outbreak of *Microtus* in Western United States.

Lunde, M. N., and Jacobs, L. A comparison of results of hemagglutination and dye tests for toxoplasmosis in a survey of Trinidad natives.

Prescott, B.; Kauffmann, G.; James, W. D.; and Stone, H. J. Increase of the tolerated dose of isoniazid in mice by the use of certain organic solvents.

Rosen, L. Hemagglutination by adenoviruses.

#### NIAMD

Allison, A. C., and Blumberg, B. S. Dominance and recessivity in medical genetics.

Scow, R. O.; Chernick, S. S.; and Smith, B. B. Elevation of fetal blood ketone bodies in fasting rats.

Mosley, V. M., and Wyckoff, R. W. G. Micro-radiography for absorption analysis.

Fletcher, N. G., Jr. Some aspects of the chemistry of ribose.

Shanes, A. M. Electrochemical aspects of physiological and pharmacological action. II. The action potential and excitation.

Hawell, A., Jr., and Rogosa, M. The isolation of *Leptotrichia buccalis*.

#### NIDR

McClure, F. J. Wheat cereal diets, rat caries, lysine and minerals.

#### NIMH

Axelrod, J., and Tomchick, R. Enzymatic O-methylation of epinephrine and other catechols.

Bandareff, W. Changes in the brain with age. Dittmann, A. T. Preference for delayed reinforcement: A further analysis.

Gillette, T. L. Toward a student-centered marriage course: A progress report.

Redl, F. The concept of a "therapeutic milieu."

#### NINDE

Hagiwara, S., and Tasaki, I. A study of the mechanism of impulse transmission across the giant synapse of the squid.

Hall, K., and Norris, F. Fluothane sensitization of dog heart to action of epinephrine.

Hoore, J. W. Potential control of the squid axon membrane.

Sidman, R. L. Histochemical studies on photoreceptor cells.

Tasaki, I., and Spyropoulos, C. S. Stria vascularis as source of endocochlear potential.

von Sallmann, L. The role of the central nervous system in the regulation of the intraocular pressure.

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## NEWS BRIEFS

A national conference to evaluate the PHS Professional Nurse Traineeship Program will be held in Washington from August 13 through 15. About 80 authorities will meet to determine how the program has helped meet the acute need for trained administrators and nursing teachers.

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Ralph C. M. Flynt, an official in the DHEW Office of Education for 24 years, was recently appointed director of the Laws and Legislation Branch, OE. He was formerly director of the Higher Education Programs Branch.

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A PHS survey is now under way to determine the Nation's supply of medical products that would be essential in the event of a nuclear attack. More than 700 wholesale drug houses, surgical supply firms, and drugstore warehouses are co-operating. The survey is part of a program sponsored by the Office of Defense Mobilization.

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A pioneer study classifying and defining all known types of "strokes" has recently been published by a committee of eight leading physicians, appointed by NINDB. Published in the May issue of *Neurology*, the study will be of value in diagnosing and treating cerebrovascular diseases. Reprints of the paper, entitled "A Classification and Outline of Cerebrovascular Diseases," may be obtained from the NINDB Information Office.

## SOME EDUCATION COSTS ARE TAX DEDUCTIBLE

Certain educational expenses may be deducted from Federal income taxes, according to a new ruling by the Internal Revenue Service.

The cost of education, including some research and training expenses, may be claimed as a deduction if there is a direct relation between the education and the employee's occupational requirements.

To be deductible, education must (1) maintain or improve skills required in employment or trade, and (2) be undertaken to meet requirements imposed by law, regulation, or an employer as a condition to retaining the employee's salary, status, or employment.

The new regulations are retroactively effective if claims are filed within three years of the tax year involved.

Deductions may also be made for transportation, meals, and lodging while away from home, if these expenses are necessitated by the course of study.

For additional information, see Departmental Circular No. 944, U. S. Civil Service Commission. Questions concerning the ruling should be submitted to the District Director's Office of the Internal Revenue Service.

### Holiday

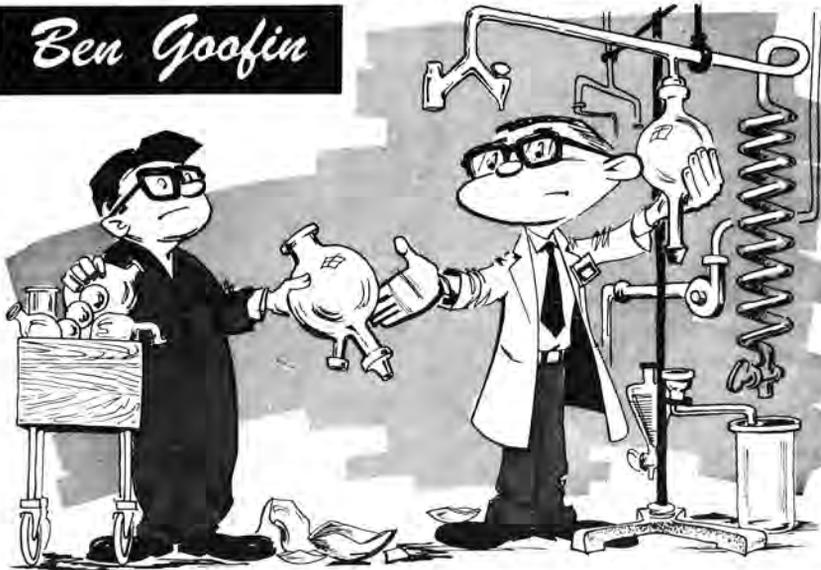
NIH will be closed for business Friday, May 30, in observance of Memorial Day.



On the opening day of the instrumentation exhibit, May 12, Ellen Nielsen, NINDB, and Helen Paravati, SMB, stop to see Cyrus Lindgren, of the Ivan Sorvall Co., explain the operation of the continuous flow system developed by former NIH research fellow Dr. Albert Szent-Gyorgyi and the company's chief designer, Josef Blum.

## PRESCRIPTION SAFETY GLASSES NOW AVAILABLE

*Ben Goofin*



Employees who are exposed to eye hazards in the performance of their jobs may now obtain unbreakable, prescription-ground safety glasses free of charge.

Persons in the following occupations are considered eligible for the prescription glasses: electricians, carpenters, sheet metal workers, and other tradesmen who encounter eye hazards in their work; scientific personnel who are exposed to possible eye hazards; and employees who work with mentally disturbed patients. Any employee who is blind in one eye is also eligible.

Justification forms for prescription safety glasses are available in the Plant Safety Branch. If the request is approved, a prescription form for the glasses must be completed by a qualified ophthalmologist or optometrist.

Employees who do not require prescription-ground glasses may obtain safety spectacles from the NIH Storeroom.

### Mr. Berg Retires

Harry W. Berg, incinerator operator in the Plant Engineering Branch, DRS, retired April 30 after almost 18 years at NIH.

Mr. Berg began his Government career as a laborer in the NIH Building and Grounds Section. He worked as an operating engineer's helper and as an operating engineer in the Buildings Management Branch before transferring to the Plant Engineering Branch in 1956.

Born in Marietta, Ohio, in 1893, Mr. Berg is a resident of Bethesda.

### NIAMD CO-SPONSORS RHEUMATOLOGY SERVICE

A new rheumatology service has been established at the D. C. General Hospital under the joint direction of NIAMD and the Georgetown University Medical School.

The new service is designed to furnish a clinical program in arthritis and to evaluate new anti-inflammatory agents as they become available. These therapeutic trials will complement NIAMD metabolic and physiological studies of compounds that appear promising for use against the rheumatic diseases.

Co-directors of the new unit are Dr. Roger L. Black, NIAMD, and Dr. William Reeve of Georgetown University Medical School.

### NIH Chorus To Present A Musical "World Tour"

"Around the World in Music" will be the theme of a spring concert to be presented by the NIH Chorus on Friday, May 23. All employees, their families, and friends are invited to attend the annual event at 8 p.m. in the CC Auditorium.

Musical selections from many lands and several folk dances make up this year's program. Tickets, priced at \$1 including tax, are on sale at the R & W Film Desk in the CC Lobby and outside the CC Cafeteria.

The concert is being produced by Carol Long, with the assistance of Hazel Rea, Dan Rice, Phil Joram, and Gertrude Quinn. The chorus' professional music director is George Messick.



## EMPLOYEE HEALTH NOTES

Foreign bodies that accidentally lodge in the eye may lead to infection or permanent damage if proper first aid measures are not taken immediately.

There are two important rules to follow when a foreign body gets into the eye. First, don't rub the eye. This will only drive the irritant in farther and may create a site for infection. Second, get the foreign body out immediately. The longer the material remains in the eye, the greater is the chance of permanent damage.

Dust, eyelashes, or other small foreign bodies may come out as the eyes water. If not, opening the eyes under water may dislodge the particle. If the irritation persists or sight is impaired, an ophthalmologist should be consulted at once.

Chemicals or other irritating liquids that splash into the eyes should be flushed for at least 20 minutes by opening the eyes under water or by letting a faucet run over the open eyes. Have another person contact a doctor immediately.

Consult your Employee Health Service for further information about eye care. Your eyes are valuable; take care of them.

### Dr. Algire Dies

Dr. Glenn H. Algire, 50, of the Laboratory of Biology, NCI, died March 24 at Walter Reed Army Hospital after a long illness. A PHS Commissioned Officer, Dr. Algire had been employed here since 1943.

While at NIH, Dr. Algire developed a transparent chamber for studying the growth of tumors in living animals. The device, a plastic "window" inserted into the skin fold of anesthetized mice, makes it possible to observe the tumor's growth and the effect of anti-cancer drugs on it.

A native of Baltimore, Dr. Algire received his B.S. degree from Columbia University Teachers College and his M.D. from the University of Maryland.

He is survived by his wife, Dorothy, and three children, Anne, Thomas, and Stephen.