



DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE

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PUBLIC HEALTH SERVICE
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UGF GIVING REACHES 71% BY FOURTH WEEK

Employees at NIH reached 71 percent of their United Givers Fund quota and 78 percent participation at the three-quarters mark in the 1958 campaign. As of October 27, the total received was \$48,856. Two divisions had topped 100 percent.

Campaign Chairman Ernest M. Allen said of this achievement, "NIH is ahead of the percentage attained by the city of Washington. This is a very encouraging indication of our continuing efforts to support the 142 agencies that are doing such a superb job in our community."

Surgeon General Burney presented certificates for outstanding community service to representatives of DGMS, which reached 146 percent of its quota, and DRG, which followed at 104 percent.

(See UGF Drive, Page 3)

NIH Employees To Report Time Lost From Injuries For One-Year PHS Study

Employees at NIH have been asked to cooperate in a year-long PHS study to determine the extent and cause of accidental injuries among PHS employees. A program for reporting injuries that occur at work or off the job, and require more than an hour of leave, was initiated at NIH last month.

All PHS employees in the Washington area are participating in the survey, which is being conducted by the Accident Prevention Program of the Bureau of State Services. The project is designed to provide a basis for establishing preventive measures to reduce accidental injuries and the resulting time lost from work.

Time and attendance clerks at NIH have been instructed to ask employees whether their sick leave is the

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R. L. SEGHEL JOINS OFFICE OF DIRECTOR



Richard L. Seggel

Richard L. Seggel, who succeeds Albert F. Siepert as NIH Executive Officer, assumed his new duties in the Office of the NIH Director on October 27. He was formerly Director of the Office of Management Policy in the Office of the Secretary, DHEW.

Mr. Seggel's career with the Federal Government covers more than 18 years. For seven years he served with the Bureau of the Budget, first as an administrative analyst, then as budget examiner. In the latter position he reviewed and made recommendations on the budget estimates for NIH, where programs were rapidly expanding. Later he spent two years as Chief of the Program Planning Branch, Health and Special Weapons Defense Division, FCDA.

Mr. Seggel joined PHS in 1953 as Assistant Executive Officer, Bureau of State Services, where he was one of a three-man team that developed a broad reorganization plan. He became the Assistant Executive Officer of PHS a year later. In this position he helped to direct administrative and management staff activities of the Office of the Surgeon

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BAKER, SESSOMS, NADEL APPOINTED TO NEW POSTS

Dr. Carl G. Baker assumed his new duties as Assistant Director of NCI on November 1, replacing Dr. Stuart M. Sessoms, who is now acting chief of the Cancer Chemotherapy National Service Center.

For the past two and one-half years, Dr. Baker served as Assistant to the Associate Director for intramural research in the Office of the Director, NIH. Prior to this he was associated with NCI in the Grants and Fellowships Branch and in the Laboratory of Biochemistry.

For three years before his assignment to NCI, Dr. Sessoms was Assistant Director of the CC. He came to that post from the NCI General Medicine Branch, where he was acting chief.

Dr. Eli M. Nadel, formerly Executive Secretary of the Pathology Study Section, DRG, has been named to the post held by Dr. Baker. A PHS Commissioned Officer, Dr. Nadel has held executive positions on DRG study sections for the past two years. For 10 years prior to that he was in the Laboratory of Pathology, NCI.

NEW LEAVE POLICY SET FOR VOTERS

The Federal Government has established a new leave policy to enable employees to vote on November 4.

Employees should vote before or after working hours, if possible. If not, they will be excused for enough time to permit them to report for work three hours after the polls open or leave work three hours before the polls close, whichever requires less time off. Supervisors should be consulted for deviations from this policy.

Studies Probe Tooth Structure And Development

No. 217 in a Series



Drs. Marie Nylen and David Scott examine tissues with the electron microscope.

From two directions, studies in the Laboratory of Histology and Pathology, NIDR, are converging on the essential details of tooth structure and development. Dr. David B. Scott and his coworkers, Dr. Marie Nylen and Dr. Shosaburo Takuma, are examining the submicroscopic structure of mature dental tissues, and at the same time are conducting research on the embryological development of teeth. The tool that enables them to penetrate so far into the elements of the tooth is the electron microscope.

In the first, or "head on" approach, Dr. Scott studies tooth structure by breaking it down into organic elements, or fibrous materials, and inorganic elements, or minerals. With the use of replicas, or very thin casts, of fully calcified tooth sections, electron micrographs have revealed differences in the form of enamel prisms and the presence of a submicroscopic network or organic fibrils in the enamel. Dentinal tubules and intertubular matrix are revealing their complexities under the electron microscope.

The mineral element of enamel and dentin, which is composed of crystals too small to be seen by an optical microscope, is also being detected. The organic matrix of a thin section of tooth is removed by solvents, leaving a single layer of crystals. These may be preserved intact by means of a two-stage replica technique, and photographed for study. The chemical structures of the crystals revealed by electron

diffraction, added to other studies using electron microscopy and X-ray microradiography, combine to bring about an understanding of crystal size and distribution and the relation between organic matter and crystals.

Approaching the study of tooth structure from the developmental standpoint, Dr. Nylen is investigating the embryology of dental tissues, from the point at which cells assume definite characteristics to the build-up of mature tissue, in order to determine the relationship of the materials.

Rodents are admirably suited to this type of study, being provided with incisor teeth that continue to grow through the animal's life. Therefore, within these teeth, there is a constant record of cell activity and mineralization marking each stage of development. Since only small specimens can be used in electron microscopy, both because of technical problems and the great magnification, mice are preferred.

Recent micrographs trace the changes in tooth-forming cells during differentiation and growth, and reveal previously unknown findings on the formation of collagen at an early stage of matrix formation. Parallel studies on bone formation are being conducted by Dr. Takuma.

In addition to broadening basic knowledge in the fields of histology and embryology, these studies will be applied to more specific problems concerning dental tissue. Dr. Scott plans research into the abnormalities of growth and development of enamel and dentin, pathological changes occurring after maturation, and the effects of therapeutic agents, such as fluoride, on tooth structure and composition.

Dog Training Classes To Begin November 17

The next series of classes in obedience training for dogs is scheduled to begin November 17. The course is priced at \$10 to NIH employees, \$15 to others. Those interested call Wendy Ness, ext. 744.

Publication Preview

The following manuscripts were received by the SRB Editorial Section between July 25 and August 6.

DRS
Eyestone, W. H. Cancer research in domestic animals.

CC
Basomani, B. W.; and Fugitt, M. A. Modifications of social work thinking required by research.

NCI
Boggs, D. R.; Frei, E. H.; and Thomas, L. B. Clostridial gas gangrene and septicemia in four patients with leukemia.

Crounse, R. G., and Stengle, J. M. Influence of the thermal papilla on survival of isolated human scalp hair roots in an heterologous host.

Cutler, S. J., and Ederer, F. Maximum utilization of the life table method in analyzing survival.

Lipsett, M. B., and Bergenstal, D. M. Metabolic effects of A-methopterin in man.

Lundin, F. E., and Ross, H. Liver dysfunction in leprosy.

Mantel, N. Preclinical cancer chemotherapy. Olch, P. D.; Eck, R. V.; and Smith, R. R. An experimental study of the effect of irradiation on the dissemination of cancer.

Peterson, R. Overview of rehabilitation nursing: Is it new or is it old?

Reinertson, R. P., and Wheatley, V. R. Studies on the chemical composition of human epidermal lipids.

Rice, M. E., and Shelton, E. The measurement of average and total cell volume during the growth of ascites tumors.

Smith, W. W.; Marston, R. Q.; and Cornfield, J. Patterns of hemopoietic recovery in irradiated mice.

Stabenau, J. R.; Warren, K. S.; and Roll, D. P. The role of pH gradient in the distribution of ammonia between blood and cerebrospinal fluid, brain and muscle.

Stewart, S. E.; Eddy, B. E.; and Stanton, M. F. Induction of neoplasms in mice and other mammals by a tumor agent carried in tissue culture.

Weisburger, J. H.; Weisburger, E. K.; and Morris, H. P. The biosynthesis of N-(7-hydroxy-2-fluoro-9-C¹⁴-yl) acetamide, from N-2-fluoro-9-C¹⁴-yiacetamide, and its metabolism in the rat and in the guinea pig.

NHI
Davis, J. O.; Ball, W. C., Jr.; Bahn, R. C.; and Goodkind, M. J. Relationship of adrenocortical and anterior pituitary function to the fecal excretion of sodium and potassium.

Hunt, G. H.; Akers, R. P.; and Mohler, S. R. Research Grant Program of the National Institutes of Health.

Hyatt, R. E.; Schilder, D. P.; and Fry, D. L. The relationship between maximum expiratory flow and degree of lung inflation.

Levinsky, N. G.; Davidson, D. G.; and Berliner, R. W. Changes in urine concentration during prolonged administration of vasopressin and water.

Mitoma, C.; Smith, T. E.; DaCosta, F. M.; Udenfriend, S.; Patchett, A. A.; and Witkop, B. Studies on 4-keto-L-proline.

Quinn, G. P.; Axelrod, J.; and Brodie, B. B. Species, strain and sex differences in metabolism of hexobarbitone, amidopyrine, antipyrine and ondine.

Redding, C. M.; Bragdon, J. S.; and Steinberg, D. The synthesis of low and high density lipoproteins by rat liver *in vitro*.

Shafir, E. Partition of unesterified fatty acids in normal and nephrotic syndrome serum and its effect on serum electrophoretic pattern.

Udenfriend, S.; Witkop, B.; Redfield, B. G.; and Weissbach, H. Studies with reversible inhibitors of monoamine oxidase. Harmaline and related compounds.

NIAMD

Bartlett, R. G., Jr., and Young, M. W. Free roaming in the Albino rat and its effect on restraint hypothermia.

Bartlett, R. G., Jr., and Altland, P. D. Effect of restraint on altitude tolerance in the rat.

Black, R. L., and Bunim, J. J. Progressive systemic sclerosis (scleroderma) and dermatomyositis.

Corwin, L. M., and Schwarz, K. An effect of vitamin E on the regulation of succinate oxidation.

Olson, R. A., and Engel, E. K. Visible absorption microscopy of pigment systems in living cells using interference filters: *Chlorella chloroplast*.

Pollard, C. J., and Bieri, J. G. On the occurrence of vitamin A aldehydes in fish and frog ova.

Shuster, L.; Khorana, H. G.; and Heppel, L. A. The mode of action of ryegrass ribonuclease.

Silverman, M., and Pitney, A. J. Dietary methionine and the excretion of formiminoglutamic acid by the rat.

NIMH

Bell, R. Q. Clustering without computation of the complete matrix.

Birren, J. E., and Kay, H. Swimming speed of the albino rat: I. Age and sex differences.

Brown, D. D., and Kies, M. W. Hydantoin-5-propionic acid: A new urinary metabolite of urocanic acid.

Campbell, J. D.; Yarrow, M. R.; and Yarrow, L. J. A study of adaptation to a new social situation.

Campbell, J. D., and Yarrow, M. R. Personal and situational variables in adaptation to change.

Kies, M. W., and Alvord, E. C., Jr. Prevention of allergic encephalomyelitis by prior injection of adjuvants.

Mudd, S. H. Enzymatic cleavage of S-adenosyl-methionine.

Rheingold, H. L., and Bayley, N. The later effects of an experimental modification of mothering.

Rosenthal, D., and Frank, J. D. Outpatient therapy.

Shakow, D. Research in child development: A case illustration of the psychologist's dilemma.

Williams, R. H., and Fox, J. H. Changing roles and relationships.

Yarrow, M. R., and Campbell, J. D. Interpersonal change: Process and theory.

Yarrow, M. R.; Campbell, J. D.; and Yarrow, L. J. Acquisition of new norms: A study of racial desegregation.

Yarrow, L. J., and Yarrow, M. R. Leadership and interpersonal change.

Yarrow, M. R., and Gillette, T. L. Working mothers.

NINDB

Gajdusek, D. C. Kuru - An acute degenerative neurological disorder in Melanesian natives.

Kuhlman, R. E. Species variation in the enzyme content of the corneal epithelium.

von Sallmann, L. Early lenticular lesions resulting from ionizing radiation.

NIH Spotlight



David S. Smith

UGF DRIVE Contd.

The breakdown on contributions from other areas of NIH is as follows:

	% of quota	% of participation
OD	96	103
NIMH	90	90
NIAMD	88	90
NIDR	85	92
NIAID	80	84
NINDB	78	86
NHI	76	94
DBS	71	82
DBO	65	83
CC	62	81
NCI	60	65
DRS	36	49
Total	71	78

INJURY STUDY Contd.

result of an injury. If so, the employee will be contacted by the Employee Health Service and asked to furnish certain pertinent details. The Health Service will also obtain information about employees who seek care for injuries.

Commissioned Officers are requested to report accidental injuries that result in absenteeism directly to the Employee Health Service, ext. 553.

Completed reports will be sent to the Accident Prevention Program for analysis.

The success of the accident study hinges on employee cooperation and completeness of reporting. If successful, the study will be used as a model for similar programs in other Federal agencies and in private industry.

try at Syracuse University, where she topped over 2,000 classmates in taking valedictory honors.

An important part of the Property and Supply Section of Supply Management Branch, DBO, Dave's unit receives an average of 14,000 packages a month during most of the year, and as many as 25,000 during the spring rush months. In addition to providing many "unseen" services such as sending books to the bindery and keeping outside suppliers on their toes, Dave checks in all of the food and medical supplies that keep NIH operating.

Dave enjoys the variety that is involved in his job. His problems range from sending biologicals to such places as the Canal Zone, Ethiopia, and Pakistan, to transporting complex and delicate devices like the IBM computers and the recently ordered \$20,000 radiation analyzer.

The Smiths are practically an NIH family now that Mrs. Smith has come to work to help further the education of their two daughters, Betty Ann and Nancy. Nancy has just finished her studies in mathematics and chemis-

An ardent sports enthusiast, Dave enjoys playing golf as often as he can, but not as often as he would like because of the time needed for the many responsibilities and chores that come with raising a family. He scores in the eighties -- not bad for a left-hander who only gets out to play once in a while. His NIH record is fine, too. Cash awards have been coming his way regularly, in his previous jobs at other agencies as well as at NIH. The most recent one rewarded him for effecting savings by means of improved shipping methods.

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NIH FIELD EMPLOYEES RECEIVE AWARDS

Cash awards were presented recently to three employees at NIAID's Rocky Mountain Laboratory in Hamilton, Mont., and to one person in the NCI Louisville Cancer Survey at the University of Louisville Medical Center.

At the RML, Hilda J. Holley and Susan P. Smaus received \$50 each for suggesting an improved method of distributing reprints of scientific papers, which effected savings in money, time, and energy. A check for \$175 was presented to Lyndahl E. Hughes for his superior performance and devotion to his work as a medical biology technician.

Barbara L. Ernst received \$100 for her special service in suggesting and planning an exhibit demonstrating the work and achievements of the Louisville Cancer Survey Project.

SYLVESTER LEWIS DIES

Sylvester W. Lewis, a laborer in the Housekeeping Section, Office Services Branch, DBO, died suddenly in the Georgetown University Hospital on October 2. He had worked for NIH a total of 16 years.

Mr. Lewis is survived by his wife, Pansy, and daughter, Mable Juanita. He was a native of Washington, D. C.

DR. MOSETTIG SERVES AS SYMPOSIUM CHAIRMAN

Dr. Erich Mosettig, Chief of the NIAMD Section on Steroids, served recently as Chairman of the Symposium on the Biochemistry of Steroids at the Fourth International Congress of Biochemistry in Vienna, Austria. Approximately 400 scientists from all over the world attended the symposium, which was one of 12 presented at the week-long Congress.

After the Congress, Dr. Mosettig visited research laboratories in Germany and the Netherlands. A native of Vienna, he is consultant in steroids for the Cancer Chemotherapy National Service Center.

NFFE Group To Hold Membership Meeting

A meeting of NIH employees interested in forming a local of the National Federation of Federal Employees (NFFE) will be held Thursday, November 13, at 12 noon in Wilson Hall.

The group plans to elect officers and draw up a local constitution. Applications for charter membership may be obtained or submitted at that time. All Federal civil service employees are eligible for membership.

NIH WARDENS LEARN FIRST AID TECHNIQUES



First aid instructor Fred D. Reynolds (center) of the NIH Guard Force explains the advantages of a new resuscitation method to two NIH Civil Defense wardens who recently completed a series of first aid classes. Estella Engel (left) uses a life-size doll to demonstrate the mouth-to-mouth resuscitation technique as it should be used with children. Looking on is Civil Defense warden John D. Estes.

NIH SCIENTISTS WILL LECTURE IN COURSE AT CHILDREN'S HOSPITAL

Six NIH scientists will present lectures during a five-week course in immunology and hypersensitivity to begin at Children's Hospital on November 11. The class is sponsored by the Allergy Section of the hospital's Research Foundation.

Lecturers from NIH include Drs. Joseph H. Bauer, Sheldon Dray, Phillip R. B. McMaster, and Sanford H. Stone of the Laboratory of Immunology, NIAID; Dr. Robert M. Chanock, Laboratory of Infectious Diseases, NIAID; and Dr. Howard C. Goodman, Laboratory of Cellular Physiology and Metabolism, NHI. Other lecturers are Drs. Elmer L. Becker and Geoffrey Edsall of the Walter Reed Army Institute of Research.

A class on clinical hypersensitivity will follow, starting January 6. Both courses are of special interest to pediatricians, internists, and general practitioners, and carry credits with the American Board of Pediatrics and the Academy of General Practitioners.

EXECUTIVE OFFICER Contd.

General, and advised the Surgeon General on management policies.

In his most recent position, Mr. Seggel was responsible for promoting improved management policies and practices throughout the Department, conducting surveys, and making recommendations to the Secretary on management developments and policy problems.

Mr. Seggel received A.B. and M.A. degrees from Princeton University, where his primary field was public administration. He is a member of the American Society for Public Administration.

"Guys And Dolls" Tickets On Sale

The Hamsters, now in rehearsal for "Guys and Dolls," have set the production dates for the nights of November 20, 21, and 22. Tickets are on sale at the R&W desk in the CC lobby, and through local R&W representatives. The price of \$1.50 includes all taxes.

Anyone interested in helping with costumes, lighting, stage sets, or properties, call Ruth Stevenson, ext. 501.