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PUBLIC HEALTH SERVICE
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1961 Officers Elected At Annual Meeting Of R&W Association

Members of the NIH Recreation and Welfare Association elected a new slate of officers for 1961 at the R&W annual meeting held December 7 in Wilson Hall.

Dr. Harold P. Morris, NCI, was elected president; Julia A. Rowady, NIMH, first vice president; James G. Hawkes, OD, second vice president; Jean T. Torgerson, DRS, secretary; and Carol E. Miller, NIMH, treasurer.

The outgoing president, Helen M. Anderson, NIDR, submitted her annual report, and called for a vote on three amendments to the Association's by-laws relating to the functions of the treasurer and general manager. All amendments were passed.

Hope for Building

Miss Anderson's report concluded with the hope that eventually the R&W would be able to obtain a building of its own.

The treasurer reported receipts of \$104,533 for the first 11 months of the year, and disbursements of \$101,754. A total of \$8,159 was transferred to patient welfare use.

Camera sets were given as door prizes to Mary R. Cahill, OD, and Margaret C. Parsons, NIMH. Others won candy, cartons of cigarettes, and stationery.

Many Join in Bringing Here The Spirit of Christmastide

Christmas came to NIH this week with gaiety, greenery, and caroling. Serving as Santa Claus, the NIH Recreation & Welfare Association provided Christmas trees for the CC lobby and solarium, and greens for the front of the building. All the nursing units looked festive, and wreaths were hanging on the directors' doors.



Gold and white musical notes, clefs, and bells ornament the "Peace on Earth" Christmas tree in the 14th floor CC auditorium. The 8-foot spruce is a gift to patients of the Clinical Center.

Carol singing, led by members of the NIH Chorus, was a feature of today's annual Christmas party for all NIH employees, scheduled for 11:30 a.m. in the CC auditorium, with greetings from Dr. Shannon, invocation by the Rev. William R. Andrew, Protestant chaplain, and benediction by Father Francis Veith, Catholic chaplain.

Patients Entertained

Festivities started early for the CC patients. On December 12, Santa Claus, an Air Force dance band, and the Walter Johnson High School choral group entertained. During that week the Washington Y-teens and the Westmoreland Congregational Church choir came caroling, and a play was presented by the Catholic University players.

During this pre-Christmas week, carols will be sung by the 9th grade chorus of the North Bethesda Junior High School and by local church groups. The Bethesda-Chevy Chase High School and the American Guild of Variety Artists are each

(See CHRISTMAS, Page 8)

Lealon E. Martin Named Assistant To NHI Director

Dr. James Watt, Director of the National Heart Institute, yesterday announced the appointment of Lealon E. Martin, Assistant Chief of the Office of Research Information for the past four years, as his Staff Assistant for Scientific and Public Information.



Mr. Martin

"Mr. Martin's duties," Dr. Watt said, "will include the development of plans and programs for new and strengthened activities, and he will assist in our work with the National Advisory Heart Council and will direct our Heart Information Center."

Mr. Martin was previously with the Heart Institute, having served as its Information Chief for the eight years following its establishment in 1948.

Has Wide Experience

He has been in the Public Health Service for 17 years, principally in its venereal disease program and on field assignments before joining the Heart Institute.

Previously he was a reporter and photo editor for the Associated Press and a trade magazine editor. He was also engaged in daily and weekly newspaper work and in public relations, and taught and coached in high schools and in the Civilian Conservation Corps.

In announcing Mr. Martin's appointment, Dr. Watt called atten-

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Yule and New Year Issues Are Combined in This One

This 8-page pre-Christmas issue of the *Record* combines the customary 4-page year-end and early New Year issues. Publication date of the next issue, therefore, is January 17. So, Merry Christmas and Happy New Year!

1948 Pre-Xmas Memo Asks: 'Was It Goat or Reindeer?'

One of the essentials of Dan Clink's job is a lively interest in the three A's—Animals, Administration, and Archives.

Animals and Administration are Dan's business 24 hours a day throughout the year, for he is the Administrative Officer of the Laboratory Aids Branch, DRS, and all experimental animals issued to research investigators come from the Animal Hospital and Animal Production Sections of that Branch.

Archives is another of Dan's responsibilities. Careful records kept around the clock on animal husbandry practices are vital to the branch he serves, and he is keeper of the records.

Dan's archival responsibility broadened considerably last February following the death of

Jimmy Phillips, his predecessor in LAB. From Jimmy, Dan inherited an accumulation of papers and thereby acquired a rich collection of NIH lore plus eligibility for the unofficial rank of historian.

To those who never knew Jimmy Phillips, his career spanned the growth of NIH from a small research laboratory to the world's largest research center.

He was toastmaster, organizer, and booster of the NIH Old-Timers Club and a frequent source of information for anyone wanting to verify the past.

The clues to the accuracy of

Jimmy Phillips' uncanny memory may lie in the records he bequeathed to Dan. Much of the collection is a rare miscellany of letters, photographs, ledgers, portfolios, and old keys.

As Chief Archivist of this collection, Dan Clink has in his custody a folder marked "Animals," and in it he's discovered an item that is particularly appropriate to the Christmas season.

Dan's find is a copy of a memorandum dated December 6, 1948, which reads:

TO: Mr. Siepert
FROM: Dr. Dyer

One sees some of the strangest things on Sunday. Had a nice lunch

(See REINDEER, Page 2)

the Record

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PERSONNEL TO PERSON

SUMMER RECRUITMENT

Many students will visit NIH during their Christmas and Easter vacations seeking summertime Civil Service employment, and the Recruitment and Placement Section is now accepting applications.

As in previous years, the student who is most advanced in his academic training will receive first consideration. Generally, those students majoring in the physical and biological sciences are in demand for laboratory type assignments; however, applications will be accepted from all college science students who have completed or will complete their freshman year by June.

Employs 150 Students

NIH employs approximately 150 college students each summer to assist in its laboratories. In this way NIH hopes to interest exceptionally well qualified students to return for permanent employment following graduation.

Applications should be forwarded to the Recruitment and Placement Section, Bldg. 1, Rm. 21, for review and rating. These applications will be available for review at a later date.

Operating officials who intend to employ students during the summer months are encouraged to contact their Administrative Officers early.

* * * * *

UNIVERSITY VISITS

The Civil Service Commission, with the cooperation of Duke University, the University of North Carolina and North Carolina State University, recently sponsored a "Career Day" program at Duke, in which approximately 25 Government Agencies participated.

The National Institutes of Health was represented by C. M.

REINDEER

(Continued from Page 1)

on Sunday—corn hot cakes—rather a late lunch, but very enjoyable. Took a nap after lunch and the rest of it is so strange I'm not sure I ever awakened.

I think I came over to the Institute at 3:30 p.m., parked by car in back of the Administration Building and walked around to see the status of the monkey house. Now I believe I saw the following:

In back of Building 5 a car was parked and the trunk was open. A man dressed in a cap, coat and white apron (dirty white) was apparently loading a goat into the trunk. When he saw me (the man, not the goat) he, with the assistance of a boy, took the goat out of the trunk and put it in the front seat. I didn't get the tag number of the car as the trunk lid was up. The car was driven away by the boy, and the man went back into Building 5. The goat had two horns, was dark tan and white and was alive.

Oh Hell! Maybe it was a reindeer. P. S. 1. How many goats did we have on Friday at 5:00 p. m.?

2. How many goats do we have now?

Dr. Rolla Eugene Dyer, who was

Hull, PMB, and Hugh Jackson, ORI, who participated in the program and were responsible for a display consisting of a three-panel NIH exhibit, a collection of NIH information material, and a Reyniers germfree tank.

Several hundred students and faculty members visited the NIH display during the two-day program.

This offered a good opportunity to acquaint students and faculty members of all three universities with the functions and missions of the NIH and to describe the career opportunities available to students upon completion of their graduate and undergraduate work.

Mr. Hull recently paid a similar

Men and Plows Battle Two-Day Storm From Sunday Noon to Monday Midnight

The cleared roadways and parking lots encountered by NIH employees returning to work on Tuesday, December 14, following the weekend's 14-inch double snowstorm, were the result of continuing round-the-clock labor—from noon Sunday until midnight Monday—by two Grounds Maintenance crews totaling 20 men.

With the Weather Bureau forecasting a heavy snowfall, Milford D. Myers, Chief of the Grounds Maintenance and Landscaping Section, PEB, began calling his men Sunday morning. By noon he had a 12-man crew in action.

By midnight this crew had all roads, sidewalks, and parking lots cleared of the 6-inch snow deposited by the first storm. Then,

shortly after midnight, the second storm struck, bringing an additional eight inches of snow. And the weary crew went back to work.

At 4:30 Monday morning these men were joined by a second 8-man crew. At 8:30 a.m. the first crew left, returning at 5 p.m. to relieve the second crew, and continued working until midnight.

In all, 400 overtime man-hours (exclusive of Monday), three tons of rock salt and snow-thaw, and 75 tons of sand were required to clear the roads and parking lots. Also in use were six Jeeps, four trucks, and two tractors, all plow-equipped.

Mr. Myers said he regretted that cars parked along Center Drive were plowed in, but he had no choice since they were left there during the storm.



Cartoon by George Marsden

the NIH Director at the time, has acknowledged authorship. The addressee was Albert H. Siefert, now Director of Administration, National Aeronautics and Space Administration, but then NIH Executive Officer.

Dr. Dyer is now living in retirement in Atlanta, at 2150 East Lake

visit to the University of Arkansas to participate in its Career Day activities. Many more such visits are planned in the next few months, and NIH officials interested in college recruiting should contact Mr. Hull concerning their specific needs.

Staff members of NIH who will be visiting universities on other business and also have recruiting in mind are urged to coordinate such visits with the Employment Office by calling Ext. 2404.

By coordinating such contacts, PMB can present a unified approach to NIH recruiting and at the same time reach the largest possible audience at colleges and universities.

Road, N.E. When asked to comment on the memorandum, he was genuinely sorry that he had no followup information to supply.

"I don't know whether Al counted the goats or not," he said. (Ed. Note: He did—one less, Why? Voluntary removal of surplus property!)

Goats are still housed by the Laboratory Aids Branch, according to Mr. Clink, and although an accurate count is reported each month, he guesses that there are about 15 goats on the old animal farm. Eventually, they will be moved, along with other animals, to the new farm near Poolesville.

As to reindeer, at last count LAB had none, but here again Dan has to hedge. Part of his uncertainty is due to a well developed sense of caution.

"Believe it or not, we had a large flock of seagulls earlier this year," he said, when pressed for explanation.—J. T. T.

Inauguration Day Is Holiday

The approaching Inauguration Day—Friday, January 20, 1961—"and succeeding Inauguration Days are statutory holidays in the Metropolitan Area of the District of Columbia," according to word received here by Personnel Management Branch from DHEW.

Correction

The story on changes in the administration of NIH grants in the December 8 issue of the *Record* stated incorrectly that Dr. Ernest M. Allen is a Commissioned Officer in the Public Health Service. Dr. Allen holds a commission in the PHS Inactive Reserve Corps but has been a Civil Service appointee since 1943.

Science Section

This four-page section, devoted chiefly to summaries of research findings that have been reported by scientists of the National Institutes of Health, is prepared with the cooperation of the Information Offices of the Institutes and Divisions of the National Institutes of Health.

DBS Method for Assay Of Vaccine Presented At Cholera Conference

A mouse protection test for the assay of cholera vaccine, developed by Dr. John C. Feeley and Dr. Margaret Pittman, Laboratory of Bacterial Products, DBS, was presented this week at the first of the conferences on cholera, sponsored by the South East Asia Treaty Organization. The 4-day conference is being held in Dacca at the recently established laboratory for cholera research in East Pakistan, where the disease is endemic.

Reference Established

International reference cholera vaccines of the Inaba and Ogawa types of *Cholera comma* were established in 1948 by the World Health Organization but without a unit of potency, because of failure of collaborative assays. Two years ago, WHO's interest was renewed and a Study Group in which Dr. Pittman participated formulated recommended requirements for cholera vaccine.

The need for comparing laboratory potency values with prophylactic efficacy in man was emphasized and the development of a mouse protective test to evaluate the potency of cholera vaccine quantitatively was initiated by DBS in anticipation of clinical trials to be carried out by WHO.

The major emphasis in Dr. Feeley's work has been the standardization of the variables which influence the test, as well as the selection and preservation of a U. S. reference vaccine to determine its relative potency. Difficulty has been encountered in preserving the potency of the reference vaccine during freeze-drying, and various methods are now under investigation.

Potencies Determined

Using the mouse protection test, reproducible relative potencies of vaccines prepared in other countries, as well as the WHO reference preparations, have been determined. It has also been possible to determine the mouse cross-protection of the two *C. comma* types, Ogawa and Inaba—a problem which has received much attention in the past.

Although the DBS test can be used for the evaluation of the mouse protective potency of cholera vaccine, clinical trials of vaccine of known laboratory potency must be carried out before its relation to epidemiologic effectiveness can be evaluated.

Measles Vaccine Research Assessed at DBS Meeting

Results of clinical and laboratory research during the past 19 months, presented by independent investigators of university and pharmaceutical laboratories at a day-long conference at the Division of Biologics Standards on November 18, indicate progress in the development of a satisfactory immunizing agent against measles.

The meeting, chaired by Dr. Roderick Murray, Director of DBS, was attended by more than 50 virologists.

Dr. John Enders, whose work with measles virus established the principles for an attenuated measles vaccine, summarized his recent experience with the Edmonston strain of virus grown in chick embryo cells. Clinical data presented by other groups using live vaccine made from this strain gave evidence of its capacity to elicit satisfactory protection against natural measles as well as specific antibodies among the vaccines.

The Enders vaccine was shown by three groups of investigators to give 100% protection in children exposed to natural virulent measles virus, while the unvaccinated controls showed the expected high incidence of the disease. Evidence of satisfactory antibody titer at the end of 18 months was also presented. To date, close to 1,000 children have been given this vaccine.

Additional Studies Needed

In most cases, the Enders vaccine caused some clinical reaction—principally fever. However, when administered concurrently with gamma globulin, such reaction was virtually nonexistent. This so-called active-passive immunization was favored by two groups of investigators but additional studies are necessary.

Although various methods of preparing the vaccine have been used, propagation in chick embryo tissue culture is preferred, since adventitious agents which might be pathogenic for man are less likely to be encountered.

There has been some question in the past whether a live vaccine of sufficiently high titer could be produced which would maintain its potency during storage. It is now generally agreed that it is possible to stabilize the vaccine in the dry state.

Studies with both experimental animals and human subjects have given assurance that the Enders strain is devoid of deleterious neurotropic effect.

Dr. Frederic A. Gibbs, University of Illinois School of Medicine, and his colleagues, using electroencephalography to determine neurologic reaction, showed that ap-

proximately 50% of children develop significant abnormalities in their EEG patterns during the course of natural measles. In contrast, no such changes were evident in children inoculated with the Enders attenuated vaccine. This would indicate that central nervous system involvement, which does occur in natural measles, rarely if ever occurs with attenuated vaccine.

Dr. Harry Meyer, Laboratory of Virology and Rickettsiology, DBS, outlined work being done in DBS laboratories in developing serologic tests for detection of measles antibodies. Methods for preparation of a dried reference serum are being investigated for use in both the complement fixation and neutralization tests. The standardization of gamma globulin preparations for measles antibody content is also planned.

Work will be continued by the various investigative groups in acquiring a larger clinical experience. DBS will continue to coordinate these studies and to encourage the acquisition of new data.

Human Bone Studied For Fluoride Effects

In an effort to identify more clearly the role of fluorides in preventing dental decay, National Institute of Dental Research investigators are studying the metabolic changes that occur in calcified tissues of the body.

Studies of the composition of human bone over a wide range of skeletal fluoride concentration were carried out by Dr. I. Zipkin, Dr. F. J. McClure and Mr. W. A. Lee, Laboratory of Biochemistry, NIDR. Analyses were made of 69 bone specimens from 23 individuals ranging from 26 to 90 years of age who consumed drinking water containing up to 4.0 ppm fluoride for 10-87 years prior to death.

The levels of ash, calcium, phosphorus, sodium, potassium, magnesium, carbon dioxide, and citrate of the skeletal tissue were studied in relation to its fluoride content.

Results showed that a ten-fold range in concentration of bone fluoride was associated with a slight increase in magnesium, a decrease in carbon dioxide and a

Variability Is Found in Excretion of Labeled And Unlabeled Calcium

During the course of studying the excretion of certain minerals in rats, National Institute of Dental Research investigators found evidence of unexpected variability in the renal clearance of labeled and unlabeled calcium. These findings of possible significance to metabolic studies employing radio-calcium as a tracer have now been reported in *Nature*.

In experiments by Dr. Robert Likins and Miss Doris Craven, Laboratory of Biochemistry, weanling rats (Group I) were injected intraperitoneally with a solution containing Ca^{45} and a trace amount of unlabeled calcium. Urine was collected at the end of 30 minutes and 60 minutes, and analyzed for radiocalcium and total calcium.

Blood Analyzed

One hour after injection, blood from each animal was also analyzed for Ca^{45} and Ca^{40} . A comparable group of rats (Group II) were denied food for 12 hours and the experiment repeated.

Results showed that in the two groups of animals the percent of the injected dose of labeled calcium excreted in the urine was significantly less in the case of the starved rats. On the other hand, the total amount of calcium excreted remained the same in starved and unstarved animals.

While a slower absorption of the injected Ca^{45} might logically account for this diminished excretion by Group II rats, additional experiments showed that plasma of similarly starved rats contained as much radiocalcium 30 minutes after injection as did non-starved controls.

Although the explanation for this discrimination against radiocalcium is not readily apparent, there is no reason to believe that the renal clearance rates of Ca^{45} and Ca^{40} differ intrinsically.

consistent decrease in citrate content, but no change in calcium and phosphorus. These observations parallel similar *in vitro* findings. A slight decrease in sodium and little or no change in potassium was also observed.

It appears that the ions showing change, presumably oriented on the bone crystal surface, may be replaced by surface deposited fluoride. Such chemical changes, attributed to fluoride, were not associated with any change in the normal histological pattern.

New Analytic Technique Helps Solve Problems Of Protein Structure

Progress in solving an important problem in protein chemistry research, the rapid and sensitive analysis of proteins for their amino acid content, has been made by Dr. H. A. Saroff, a physical biochemist at the National Institute of Arthritis and Metabolic Diseases.

Working with the relatively new analytic technique known as gas chromatography, Dr. Saroff has been able to expand the application of this technique so that 75 percent of the amino acids can be rapidly identified and measured in minute test samples.

Speeds Process

Gas chromatography is similar to the older methods of column and paper chromatography used to separate mixtures of different compounds. In gas chromatography, however, the substances to be tested are first vaporized and mixed with an inert "carrier" gas before fractionation. This innovation greatly increases the speed with which the separation can be done and makes it possible to use extremely small samples.

The gas chromatographic technique has great potential for rapid amino acid analysis, but for various reasons it is not yet fully applicable. One of the problems has been the proper preparation of the test substances before they are vaporized.

To overcome this problem, the NIAMD scientist has improved upon a technique developed by other investigators for preparing volatile substances from the amino acids. Essentially, it involves a means of preparing N-trifluoroacetyl-methyl esters of the amino acids for vaporization.

Report to Be Published

Dr. Saroff's particular way of preparing these esters enables him to analyze for 14 of the more common amino acids, and his report on the new method will appear in the journal *Analytical Biochemistry*. Further work is being done to find other derivatives and techniques which may allow analysis for even more of the amino acids since Dr. Saroff believes that no single derivative will be useful for all of them.

The importance of the NIAMD research lies in the fact that amino acid analyses which now require from one to six days can be carried out in three to four hours, and the new method is so sensitive that it can detect as little as 1/25th of a milligram. It will make possible a more rapid and comprehensive attack on the basic problems of protein structure.

Certain Essential Body Tissue Fats Found to Be Stabilized by Vitamin E

Research conducted by Dr. John G. Bieri, National Institute of Arthritis and Metabolic Diseases and by Dr. Max K. Horwitz, an NIAMD-grantee at the Elgin State Hospital, Elgin, Illinois, has shown that vitamin E stabilizes certain essential fats in body tissues.

The functions of almost all B vitamins have been determined by nutritionists and biochemists, but information regarding the functions of the fat-soluble vitamins, which include vitamin E, has been lacking.

Dr. Bieri's work, using the chick as the experimental animal, established that vitamin E acts to prevent oxidation of unsaturated fatty acids in body tissue. If this occurs, the oxidized product may produce a loss of vital cell structures or inhibit important cell chemistry.

He also provided evidence that two other substances which can replace part of the requirement for vitamin E in animals, namely, selenium and the amino acid L-cystine, probably do so by their antioxidant action in the tissues.

Dr. Bieri has been able to show that if the unsaturated fatty acid content of the diet is kept very low, these substances do not accumulate in the tissues and no significant oxidation of the fatty acids occurs. Under such conditions, chicks have been raised and maintained symptom-free for over a year without any dietary vitamin E. Chemical analyses showed that the chicks were devoid of the vitamin.

If, however, the unsaturated fat

content of the diet was increased, the chicks promptly developed "deficiency" symptoms. These symptoms could be prevented by feeding either vitamin E or other non-vitamin antioxidant compounds.

"It is apparent that there is a dietary requirement for an antioxidant, which is normally furnished as vitamin E. This requirement, however, can vary widely depending on the unsaturated fatty acid content of the diet. In contrast to the high degree of specificity shown in the requirement for the various B vitamins, the requirement for vitamin E can be fulfilled by other compounds (antioxidants)," Dr. Bieri said.

Although deficiency of vitamin E in man is almost unknown due to the widespread occurrence of the vitamin throughout the plant kingdom, Dr. Horwitz, working at the Elgin State Hospital, has experimentally produced such a deficiency state in man for several years. No striking symptoms were obtained in the human studies and results indicated that vitamin E was functioning primarily as an antioxidant, agreeing with the work of Dr. Bieri.

Although there are still unanswered questions in this area, the results of Dr. Bieri's studies, together with those of other American investigators, indicate that vitamin E has a unique function when compared with the function of other vitamins. One of Dr. Bieri's more recent publications on the subject, with Dr. A. A. Anderson, appeared in the *Archives of Biochemistry and Biophysics*.

Responses Differentiate Four Human Cell Lines

Established lines of human cells are widely used in cancer research, and their utilization is increasing. Because of their morphologic similarity, methods of differentiating such cell lines are required. They are now commonly characterized by nutritional requirements, chromosome counts and anomalies, sex-chromosome markers, morphologic variations, immunologic response, and virus susceptibility.

A report by scientists of the National Cancer Institute's Laboratory of Chemical Pharmacology suggests the possibility of characterizing four morphologically indistinguishable cell lines by their response to certain chemicals. The strains are: HeLa, a line of malignant cells derived from a patient with uterine cancer, and three cell lines, designated as D227, D189, and D164, which resulted from spontaneous *in vitro* transformations of normal human fibroblasts

into cells histologically similar to malignant cells.

Strain D227 was the only line to respond to Suramin sodium. After one to two days' exposure to this compound, D227 exhibited a number of changes, including ghostlike cells with missing nuclei and moth-eaten cytoplasm, fragmentation and beading of the cell membrane.

Pronounced vacuoles appeared in the cytoplasm of cells of strain D189 after three days' exposure to .01 mg. hydrocortisone per ml. of nutrient medium. Exposure to .1 mg. per ml. of hydrocortisone for ten days produced sporadic vacuolization in D164 cells and cellular enlargement and nuclear aberration in HeLa cells.

These findings demonstrate that the strains are free from cross-contamination and suggest that the D derivatives represent completely different biological variants.

Henry C. Orr and Dr. Morris Belkin are coauthors of the report, which appears in a recent issue of *The Journal of the National Cancer Institute*.

Dr. Bunim Cites Impressive Gains Over Arthritis

"The tremendous growth of research on arthritis and the other rheumatic diseases during the past ten years has yielded impressive dividends," NIAMD's Dr. Joseph J. Bunim told a recent conference sponsored by the Canadian Arthritis and Rheumatism Society in Toronto, Canada.

"Two serious and crippling diseases have now become preventable," he said, "and the development of newer and more powerful cortisone-like drugs has brought relief from pain to thousands of arthritics."

Research Grant Supported

Dr. Bunim, a former president of the American Rheumatism Association, is the Clinical Director of NIAMD. This Institute, through research grants, supports a major portion of the arthritis research done in the U. S. and conducts clinical and laboratory research in its own facilities at Bethesda, Md.

In describing the U. S. attack on the rheumatic diseases Dr. Bunim said that during the past decade the amount of money spent on research and training had increased from \$300,000, from both government and private sources, to over \$600,000 from NIAMD alone. In 1950 there were only eight institutions providing professional training in this field, whereas today there are over 40 such institutions. The results of this increased activity have been both practical and conceptual, he reported.

Penicillin Prophylaxis Used

It has now become possible to prevent rheumatic heart disease and recurrences of rheumatic fever by the prophylactic use of penicillin. In gout, another rheumatic disease, the recurrent acute attacks of gouty arthritis can be prevented, as can the "gouty tophi" or nodules which form in joints and other parts of the body.

Within the past ten years four effective anti-gout drugs have been developed; only one, colchicine, had been available previously. For rheumatoid arthritis patients, a whole spectrum of new anti-inflammatory corticosteroid drugs, all more powerful than cortisone, have been developed to reduce pain and swelling.

Speaking about medical research in general, Dr. Bunim said that an inherent principle is that research goals should not and cannot be too narrowly defined. Many times, discoveries of interest in one disease field turn out to have their great

Latent Diabetes Seen Social Debit in Survey Conducted in England

Detection of latent diabetes and the epidemiology of diabetes in general were discussed by Joan B. Walker, M.D., Head of the Diabetic Department, Leicester Royal Infirmary, Leicestershire, England, at a recent NIAMD-sponsored seminar.

"The magnitude of the public health problem in dealing with latent diabetes has yet to be appreciated fully," stated Dr. Walker. "We do not know how far the latent condition gives rise to the loss of energy in earlier years. Fatigue or lassitude is the most constant feature of poorly controlled diabetes, which, in itself, is a factor no society can afford to ignore."

First British Survey

Dr. Walker's survey, sponsored by the British Diabetic Association, was the first of its kind to be conducted in England. After careful deliberation as to which detection method would disclose the most precise picture of England's overall diabetes problem, Dr. Walker decided to study a complete natural population group, patterned along the lines of the Wilkerson-Krall survey of Oxford, Massachusetts, in 1947.

Dr. Walker and her team of three field workers—a biochemist, a technician, and a photographer—concentrated on the village of Ibstock, in the midlands of England. In Ibstock, the population of 5,405 (1951 census) is nearly static—fewer than 50 persons come into or leave the village annually. The general practitioners in the area and the staff at the diabetic clinic located 15 miles from town cooperated in the study.

Tested Enzymatically

Ibstock was surveyed in 20 manpower months during the period from May 1, 1957, to July 1958. Urine samples from 81 percent of the town's population, or 4,501 people (2,071 males and 2,034 females) over five years of age, were tested by an enzymatic method (Clinistix) for detecting the presence of sugar. In addition to the 33 known diabetics in Ibstock, the tests disclosed an additional 167 unsuspected glycosurics, whose physicians placed them immediately on an appropriate dietetic regimen.

Dr. Walker's comparison of certain factors in the affected and in the unaffected population shows that a gradual rise of the glucose-tolerance curve appears to follow the rise in age of the suspected glycosuric. The sex distribution ratio also changed. In the newly-formed glycosurics among the

(See DIABETES, Page 6)

Two Tick-Borne Diseases Identified By Fluorescent Antibody Technic

In two separate studies at the Rocky Mountain Laboratory of the National Institute of Allergy and Infectious Diseases, in Hamilton, Montana, Drs. Willy Burgdorfer and David Lackman have used the fluorescent antibody technic to identify Colorado tick fever virus, and Rocky Mountain spotted fever. Their report of the identification of the virus of Colorado tick fever appears in the *Journal of Bacteriology*.

The study concerned with visualization of *R. rickettsii* by fluorescence is reported in the *Journal of Infectious Diseases*.

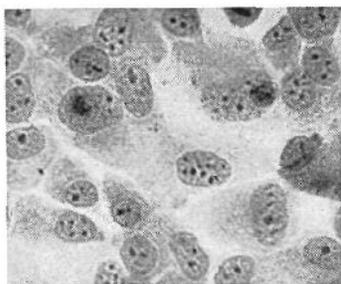
Using homologous antibody labeled with fluorescein isothiocyanate, the investigators identified 34 CTF virus isolates in suckling mice with suspensions of *Dermacentor andersoni*, the northwestern species of wood tick which transmits CTF. They also used blood samples of three species of rodents collected in nature. Control tests performed simultaneously indicate that the reactions which occurred were specific.

Technic Is Practical

The fluorescent antibody technic as a means of identifying isolates of CTF virus in suckling mice is of practical value in studies on the ecology of this virus. Using this method, it is now possible to make frequent isolations of the virus either from the tick vector or from the blood of rodents that serve as hosts for the immature stage of ticks. In the past each isolate had to be identified by time-consuming neutralization tests in suckling mice.

Using the same technic in another investigation, Drs. Burgdorfer and Lackman have succeeded in identifying *R. rickettsii*, the etiological agent of Rocky Mountain spotted fever, in smears of gut tissues from experimentally infected *D. andersoni*.

In smears of infected nymphal ticks the organisms stained consistently with a very bright fluorescence. In those prepared from



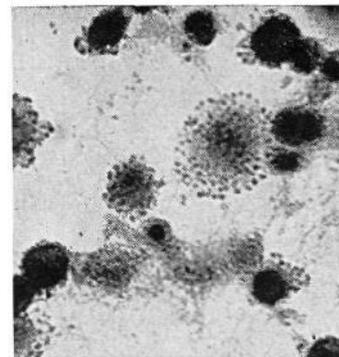
Untreated control cells (strain D227) show epithelium-like sheet of cells and well-defined cell outlines.

adult ticks several weeks after molting, the rickettsiae fluoresced less strongly, although they were still detectable.

The fluorescent antibody technic has been used at the PHS Communicable Disease Center, on rickettsiae of Rocky Mountain spotted fever, using individual ticks.



Strain D227 cells 48 hours after exposure to 1 mg. per ml. Suramin sodium. Note ghostlike cells with missing nuclei, and moth-eaten appearance of cytoplasm.



Characteristic beading and disruption of cell membrane, fragmentation of cytoplasm, and cytoplasmic granularity found in strain D227 cells 48 hours after exposure to 1 mg. per ml. Suramin sodium. Cells are few in number, epithelial-type growth absent.

In this study, all of the staining reactions, from strong fluorescence to a notably decreased amount, were specific as shown by the results of control experiments. Inhibition could be observed regularly with unlabeled immune serum, and staining was not detected when heterologous conjugate was applied or when smears of normal ticks were treated with specific conjugate.

Triturates of ticks found positive by the technic always produced clinical or serological evidence of Rocky Mountain spotted fever infection in guinea pigs. Triturates free of rickettsiae did not cause the disease when injected into guinea pigs.

Studies Describe Ion Flow Through Nerve Membrane

Biophysical studies of electrical currents across the squid axon membrane confirm and extend the validity of nerve impulse transmission theories which have been expressed mathematically by Hodgkin and Huxley.

New data have resulted in the development of an equation which more accurately describes the characteristics of potassium ion flow through a membrane after it has been highly polarized, as well as under other electrical and environmental conditions.

Equations Evaluated

A critical survey and evaluation of the Hodgkin-Huxley equations is being conducted by Drs. Kenneth S. Cole and John W. Moore, Laboratory of Biophysics, National Institute of Neurological Diseases and Blindness, who have reported the present study in the first issue of the *Biophysical Journal*.

The investigators found that the original equations were valid when the membrane's electrical potential was initially at or below the resting level. When the membrane had been kept at an abnormally high potential, however, the flow of potassium ions was delayed and these equations were not applicable.

Therefore, a new formula was developed to express accurately the delayed rise of the potassium current. Although more complex, it was found to apply under a variety of experimental conditions. Both formulae were in close agreement in situations where the original work was applicable, indicating that the underlying assumptions are probably valid.

Theories Supported

Experiments also supported the original theories that sodium and potassium ion currents across the squid axon membrane are independent of each other. In addition, they confirmed that the potassium current pattern is dependent on a single variable, defined by a first order differential equation.

The use of mathematical expressions greatly simplifies the interpretation of highly complex direct studies of ionic membrane currents. Although these processes cannot be investigated in higher animals or man, information obtained from the large axons of squid and several other invertebrates has been found applicable to vertebrates.

The nurse-population ratio has increased almost fivefold in the U. S. since 1910, according to PHS.

Rheumatic Fever Response to Steroid Is Found No Better Than to Aspirin

Clinical studies conducted in four states by the Combined Rheumatic Fever Study Group indicate that prednisone is no more effective than aspirin in preventing residual heart disease following rheumatic fever attacks.

The National Heart Institute grant-aided studies were conducted by 12 investigators in children's cardiac services in eight hospitals: four in New York City, two in Baltimore, and one each in Boston and Cleveland. Coordinated by Dr. A. G. Kuttner of New York University-Bellevue Medical Center, the investigators reported their combined findings in the *New England Journal of Medicine*.

Their findings are similar to those of an earlier cooperative study of aspirin vs. steroid therapy, sponsored jointly by the Research Council of Great Britain and the American Heart Association. In the present study, however, steroids were given in larger doses and over a longer period of time.

57 Patients Studied

Admitted to the study were 57 patients who met the following criteria: 1) they were 12 years of age or younger, 2) had suffered their first attack of rheumatic fever not more than 28 days previously, and 3) had moderate to severe carditis as evidenced by pericardial rub or effusion, cardiac enlargement, congestive heart failure, and/or significant heart murmurs.

About half of these patients received large daily doses of prednisone which totaled 3 grams over a 12-week treatment period; the remaining patients were given doses of acetylsalicylic acid (aspirin) sufficient to maintain blood levels at 25 to 35 mg./100 cc., also for a 12-week period. Three weeks after termination of therapy and again

one year later all patients were reexamined and the incidence of residual heart disease in each group compared.

The study group found that both prednisone and aspirin controlled acute rheumatic symptoms in most patients and, during the ensuing year, all patients remained free of rheumatic recurrences.

Recovery Complete

Of those patients available for study at the end of the year, 12 in prednisone group and 16 in the aspirin group recovered completely with no signs of residual rheumatic heart disease, whereas 16 prednisone and 7 aspirin-treated patients had residual heart disease at this time. Of three patients originally allocated to the aspirin group but later switched to prednisone, one recovered completely and two were left with residual heart disease.

Thus, "large doses of prednisone given for 12 weeks were not found to be superior to acetylsalicylic acid in preventing residual rheumatic heart disease," conclude the investigators.

"The chief action of both prednisone and salicylates appears to be to suppress the inflammatory reaction caused by this disease. In many patients, however, even if the acute symptoms are promptly and well controlled, cardiac damage is not prevented," they state.

In view of these findings, all but one of the investigators felt the risk of prolonged steroid therapy was unwarranted, although no serious side effects of prednisone were noted in this study.

and to observe whether time alone turns latent diabetes into the irreversible condition. It is necessary to know more about the actual health of the latent diabetic, whether or not there is a significant loss of efficiency at the time he or she is latent and whether it is proper to continue to ignore this phase until symptoms become prominent. It will be valuable to ascertain whether dietetic control of obesity during this phase would alter absolutely or delay the onset of symptomatic diabetes. There appears to be a need to observe the parous woman, her own weight, and the size of her infant."

Dr. Walker echoed the opinion of other investigators to the effect that "until we have more evidence such as might be obtainable over a period of 10, 20, or 30 years by continuous observation of two or three static natural communities, the answers will possibly evade us."

ARTHRITIS

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est value in a totally different one. Cortisone is a good example of this since it has proven to be much more valuable in certain blood diseases than in arthritis. Originally introduced for use in three rheumatic diseases, rheumatoid arthritis, rheumatic fever, and systemic lupus erythematosus, cortisone has now been found valuable—even lifesaving—in many other disorders, including those of the eye, skin, kidneys, lungs, heart, blood and digestive system.

In addition to the practical discoveries that may originate in other disease fields, concepts about disease developed in one field may also have an important bearing on those in another. Some of the most intriguing work now being done on the rheumatic diseases involves the concept of autoimmunity as a possible cause of these disorders. This concept evolved from studies of two non-rheumatic diseases, hemolytic anemia and a thyroid disorder known as Hashimoto's thyroiditis, and appears to have important implications in arthritis.

May Be Autosensitive

Recent research has indicated that rheumatoid arthritis and some of the other rheumatic diseases may be the result of autosensitivity, occurring when a person becomes overly sensitive to substances that are present within his own body. Especially interesting in this connection is the so-called rheumatoid factor, a substance found in patients with rheumatoid arthritis and one that is diagnostic of the disease. It is now known that this factor, or more correctly these factors, are gamma globulins and have many of the characteristics of an antibody. This raises the interesting possibility that there is some antigen present, some deleterious substance to which the body is sensitive and responds by producing antibody.

Theory Substantiated

The theory has been further substantiated by the discovery of rheumatoid factor in two kinds of cells; the plasma cells, present in the lining of human joints, and "large pale cells" in the body's lymph nodes. This marks the first time that the cellular source of rheumatoid factor has been identified and it is significant that both these cell types specialize in antibody production.

Many aspects of the problem remain to be studied, however. It is still uncertain that the rheumatoid factor is a true antibody, and even if it is, the specific antigen that causes its production must be identified. Furthermore it must be determined whether or not the factor is the actual cause of the disease

Large Population Group Reports Incidence of Oral Ulcerated Lesions

Herpes labialis (fever blisters) and aphthous stomatitis (canker sores) are both recurrent painful ulcerations of the mucous tissues of the mouth. A study of these disorders as they occur in a large population group has now been reported by National Institute of Dental Research scientists.

The purpose of the investigation, involving some 1,800 persons, was to determine the prevalence of and patient experience with aphthous and herpetic lesions. Participants in the study included the student bodies of the Schools of Medicine, Dentistry, Dental Hygiene, Veterinary Medicine, Graduate Nursing, and Hospital Nursing of the University of Pennsylvania. Also participating were nursing students at the Philadelphia General Hospital and the Presbyterian Hospital.

Checked for Accuracy

A specially designed questionnaire was employed and all responses were checked for accuracy by comparison with answers to similar questions on completed medical history forms.

Analysis showed that thirty-eight percent of the students had a history of recurrent herpes labialis with no sex differences noted. On the other hand a significant sex difference was seen in the 57% of females and 52% of males that had aphthous ulcerations. In addition these prevalence levels were considerably above those previously reported in population studies by other investigators.

Age, racial background, marital status, school, and class differences were not seen in either disease, and students susceptible to episodes of aphthous stomatitis experience more frequent recurrences than those susceptible to herpes labialis. Although both conditions may be triggered by metabolic or environmental changes, laboratory and clinical data now available point to an etiological difference between the two diseases.

These studies, reported in the *Journal of Oral Surgery, Oral Medicine, and Oral Pathology*, were under the direction of Dr. I. I. Ship, formerly of the NIDR Clinical Investigations Branch. Dr. Ship is now with the Dental Research Laboratory, Philadelphia General Hospital.

or merely a by-product. In any event, immunologic mechanisms seem to be importantly involved, Dr. Bunim said, not only in rheumatoid arthritis but in two other rheumatic diseases, systemic lupus erythematosus and Sjogren's syndrome.

DIABETES

(Continued from Page 5)

younger age group there were twice as many males as females; in the newly diagnosed diabetics, about equal (11 males-14 females), but the known diabetics were in the proportion of three females to one male.

The incidence of obesity was found to be higher in the group with latent diabetes. Too, the history of stress, such as personal or family illness, domestic or financial anxiety or employment difficulties, was predominant in 50 percent of the males and in 73 percent of the female group in the newly diagnosed diabetics.

"Not unlike previous surveys," stated Dr. Walker, "our findings are far from conclusive. It appears important to find out more about the genetic pattern of inheritance,

Recently Released Film Depicts Normal Control Role in NIH Research

"Serving by the 'Pool of Bethesda'" is the title of a new motion picture, the first to be released by the Clinical Center.

Produced by the Communicable Disease Center in cooperation with the CC Information Office, the film describes the contributions volunteer normal control patients are making to the medical research program at NIH.

Portrays Experiences

The 17-minute sound-color film explains the goals and functions of NIH and vividly portrays actual experiences of volunteers in the CC who have come from all parts of the country to participate in numerous research projects for varying periods of time.

Although the film was prepared especially for presentation to Brethren and Mennonite Church groups, where most of the volunteers are recruited, it had its initial showing at Bennington College in Vermont recently and was well received by the students and staff.

Participation in the NIH volunteer program has steadily expanded from one volunteer in 1953 to 68 this year.

Visit to NIH Scheduled For Mobile X-Ray Unit

Cards were being distributed this week to NIH employees to prepare for the scheduling of chest X-ray examinations here in March by the Mobile Unit of the Montgomery County Tuberculosis and Heart Association.

Employees wishing to have chest X-ray examinations are asked to return the card to the NIH Employee Health Service, Bldg. 10, Rm. B2-A-06. Each employee will then be notified of the day and hour of his scheduled examination.

Employee Health Service points out that the chest X-ray, technically called a photofluorogram, makes it possible to detect not only tuberculosis but certain heart and other conditions.

The Service urges all employees who are not already scheduled for annual chest X-ray examinations to take advantage of this opportunity.

The Mobile Unit will be centrally parked near the loading platform at the rear of Building 1. The dates and hours of its scheduled appearance here are: March 2, 8 a.m. to 4 p.m.; March 3, 9 a.m. to 5 p.m.; March 30, 9 a.m. to 5 p.m.; and March 31, 8 a.m. to 4 p.m.

SPSE MEMBERS TOUR PHOTO SERVICES



Dr. George Z. Williams, Chief, Clinical Pathology Department, CC (right), explains the use of image-intensification equipment in the Clinical Center to Washington members of the Society of Photographic Scientists and Engineers. The SPSE members were here November 14 for a tour of NIH photographic services arranged by Roy Perry, Chief, Photographic Section, DRS (center). Dr. Williams adapted the image-conversion technique to ultraviolet microscopy, which he now employs in hematology studies. The converter is used to view and photograph living cells without staining. Another technique demonstrated by Dr. Williams was the ultraviolet television microscope, which combines a motion picture camera and UV microscope with closed-circuit TV for time-lapse cinematography of chemical changes in living unstained cells.

DRG Scientist Receives Honorary D.Sc. Degree From Michigan Univ.

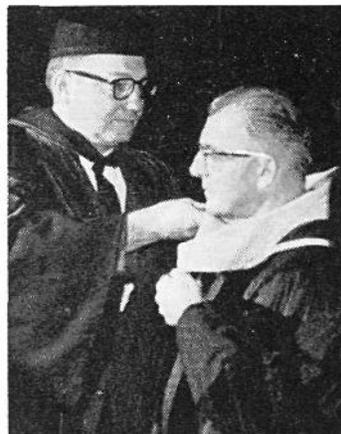
Francis L. Schmehl, Chief of the Health Research Facilities Branch, DRG, was awarded an honorary degree of Doctor of Science by the University of Michigan at Ann Arbor on December 1.

The degree was presented at a ceremony dedicating the nation's largest college building for pharmaceutical research, recently constructed with the aid of an NIH grant.

Dr. Schmehl was cited for his "sound professional judgment, exceptional executive gifts and unflinching tact" in carrying out the Health Research Facilities Program.

His honorary diploma states: "Health scientists throughout the nation are deeply in his debt. The University of Michigan expresses a widely shared sense of gratitude and esteem in conferring upon him the degree of Doctor of Science."

Dr. Schmehl has headed the HRF program since its inception in 1956.



Francis L. Schmehl, DRG, receives the honorary degree of Doctor of Science at the University of Michigan on December 1. At left, Prof. Richard C. Boys of the Michigan faculty.

He also served in DRG as a Biological Chemist from 1947 to 1953. In the interim he held posts as Executive Officer of the Children's Cancer Research Foundation and Assistant Chief of the Cancer Chemotherapy National Service Center of NCI.

"Annie" Dates Are Set for Middle of January

The nights of January 18, 19, 20, and 21 have been set by the R&W Hamsters for their production of "Annie Get Your Gun."

The musical comedy, with a cast of 35, will be presented in the Clinical Center auditorium. Curtain time is 8:30 p.m.

Tickets, at \$1.50 each, go on sale December 27 through R&W representatives, ticket sellers in each building, the CC post office, and the R&W film desk.

Preceding the public performances, "Annie" will be presented for CC patients and their friends and relatives on January 17.

NIH Visit December 29 Scheduled for Members Of Dental Fraternity

Approximately 400 dentists from all parts of the U.S., Canada, and Mexico are scheduled to visit NIH December 29 as a feature of the Fifty-Third Annual Convention of the Alpha Omega Dental Fraternity, to be held in Washington December 26-31.

Following breakfast in the CC cafeteria, the group will meet in the CC auditorium for welcoming remarks by Dr. Jack Masur, CC Director, and Dr. Francis A. Arnold, Jr., Director of NIDR.

Rep. Fogarty Honored

The program will include discussions by several NIDR scientists on the work of the Institute, and a showing of the NIH orientation film.

At its convention the fraternity will present the Alpha Omega Achievement Award to Rep. John E. Fogarty of Rhode Island. The award is given annually to some person outstanding in dentistry and its allied sciences in recognition of his professional contributions.

The Alpha Omega Dental Fraternity was founded in 1907 at the Pennsylvania College of Dentistry. Today it is an organization with more than 8,000 members in 47 alumni and 35 undergraduate chapters.

CC Cafeteria Reports Slight Food Cost Rise

Due to the new pay raise for Wage Board employees, prices in the cafeteria of Building 10 showed a slight increase this week.

Under Government regulations the cafeteria is a service supplied to the staff of NIH, and its cost must be fully recovered on an annual basis. It is not permitted to show either a profit or a loss.

According to Miss Edith Jones, Chief, Nutrition Department, the cafeteria is open 22 hours per day, Monday through Friday, and 17 hours per day on Saturdays, Sundays and holidays, in order to serve food to the patient care staff day and night.

Most entree items will advance 10 cents while vegetables will cost 5 cents more, as will soups and salads.

"No raise in the cost of coffee is contemplated at this time," Miss Jones said. "We hope the modest increase in cost of the general food items will take care of the additional income from sales we need to meet the new Government pay increase for our Wage Board employees engaged in food preparation and service for the cafeteria."



Sixteen NIH employees received incentive awards November 23, 15 of them at a joint ceremony in Wilson Hall (see the Record of Nov. 22) and one at a separate ceremony in the conference room of the new DBS Building (see story on this page). Pictured here are the 16 recipients and some of those who participated in the presentations. Top row, from left: Observing the Wilson Hall affair in armchair comfort are Dr. Harold P. Morris, NCI, Chairman of the NIH Board of Employee Awards, and Richard L. Seggel, NIH Executive Officer, who acted as master of ceremonies. Esther Kohn, a secretary in the Community Services Branch, NIMH, receives her award from Rod Mercker, Administrative Assistant of that branch; Pauline H. Wall, Information Specialist, NCI, receives hers from Dr. Kenneth M. Endicott, NCI Director; Rose B. Daniele, a secretary, and Christine Andronicus, Film Librarian, both of the Photographic Section, DRS, get their awards from Chris A. Hansen, DRS Chief; and Dorothy P. Horlander, Chief, Special Events Section, CC, receives award

congratulations from Dr. Jack Masur, CC Director. Bottom row, from left: William J. Stalters, Assistant Administrative Officer, DBS, presents award check to Irma E. Strunk, Travel Clerk in the Office of the Director, DBS, at the special DBS ceremony. Recipients of a group award to members of the Arthritis and Metabolic Diseases Nursing Service, CC, are Mary Shea, Head Nurse, Unit 8 West; Marie Altman, Assistant Head Nurse, and Mary Mitchell, Head Nurse, both of Unit 9 East, with Dr. Masur who made the presentation. Following receipt of their group awards from Mr. Hansen (third from right) are members of the Drafting Unit, Medical Arts Section, DRS: Helen N. Smith, Unit Head; Martha B. Smith, Elva R. Sawyer, Kenneth G. Carney, Marion L. Gundy, and Dorothy Potbury. Clifford F. Johnson, Chief of the Public Information Branch, ORI, receives his award from Lealon E. Martin, who at that time was Acting Chief, ORI.—Photos by Bob Pumphrey, except lower left, by Norman MacVicar.

Dr. E. L. May Named NIAMD Section Chief

Dr. Everette L. May has been appointed Chief of the Section on Medicinal Chemistry (formerly the Section on Analgesics) in NIAMD's Laboratory of Chemistry. He succeeds Dr. Nathan B. Eddy who retired in September of this year following a distinguished career with the Public Health Service.

A member of the WHO Expert Advisory Panel on Addiction Producing Drugs, Dr. May is a member of the team which developed a new analgesic, phenazocine, which is many times more powerful than morphine and may be safer for long-term administration.

MARTIN

(Continued from Page 1)

tion to the fact that "The National Heart Act, which established the Institute, charges the Institute and its National Advisory Heart Council with specific responsibilities in communications, information, and education. New and increasing needs," he said, "are posed in these fields by the rapid growth on all fronts of the national and international attack on heart disease."

Mr. Martin is a member of the National Association of Science Writers, the American Heart Association,

To Avoid Xmas Fires Follow These 10 Tips

Within the three days beginning at 6 p.m. Christmas Eve last year, 43 persons lost their lives in fires in this country, according to the National Board of Fire Underwriters.

For a Christmas season free from the tragedy of fires this year, the *Record* offers the following 10 suggestions from NIH Fire Marshal Kenneth W. Gettings.

Choice and Care of Your Tree

- Select a fresh Christmas tree, with needles firmly attached.
- Saw the trunk off at an angle, at least one inch above the original cut.
- Anchor the tree securely in a water container and keep the water level above the cut.
- Place the tree in coolest part of the room, away from radiators, heaters, and fireplace.

and the Medical Affairs Section of the American College Public Relations Association.

He is Chairman of the Committee on General Studies Courses of the U.S. Department of Agriculture's Graduate School at NIH, and is a member of the Board of Directors of the Tuberculosis and Heart Association of Montgomery County and a member of Omicron Delta Kappa, Eta Sigma, and Sigma Upsilon, honorary collegiate fraternities.

Elimination of Hazards

- Check electric lighting sets for frayed insulation, loose connections, and broken sockets. Use only those sets that bear the UL label.
- Use non-combustible or "flameproofed" decorations.
- Don't buy pyroxylin plastic dolls or toys.
- Discard gift wrappings promptly.
- Turn tree lights off at night and before leaving home.
- Discard the tree as soon as it has served its purpose.

CHRISTMAS

(Continued from Page 1)

sending a variety show, and the Scottish Rite Temple is providing an entertainment and dance.

Each Institute is giving parties this week for the patients on its wards, with a Santa Claus for the children.

An 8-foot Christmas tree, trimmed in gold and white, stands in the CC 14th floor auditorium, a gift of the D.C.-Montgomery County Down-to-Earth Garden Club. The tree was previously on display at the Annual Christmas Greens Exhibition sponsored by the National Capital Garden Club League at the Botanic Garden.

Irma E. Strunk Wins Performance Award

At a special award ceremony November 23, Irma E. Strunk, Travel Clerk in the Office of the Director, DBS, was the recipient of a sustained superior performance award and check for \$140 for having "continuously maintained a degree of service which must be defined as far above the normal degree of operations." Dr. Roderick Murray, DBS Director, made the presentation.

Since 1957 Mrs. Strunk has processed all DBS travel requests, both domestic and foreign, including orders and vouchers for meetings, and inspectors' and consultants' travel requests.

DBS travelers have spent a total of 159 days in 15 foreign countries during the past two years, and Mrs. Strunk has taken in stride problems associated with arranging the itineraries of international trips, as well as security clearances, passports, and conversion of foreign currency to dollars.

Protestant religious services will be held in the CC chapel at 6:30 p.m. on the 24th, and at 10 a.m. on the 25th.

Catholic Mass will be celebrated at midnight on the 24th, preceded by 15 minutes of carol singing, and on the 25th at 7:15 and 8:30 a.m.