

NIH



record

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PUBLIC HEALTH SERVICE NATIONAL INSTITUTES OF HEALTH

NEW FELLOWSHIP PROGRAM BEGINS

The NIH fellowships and training program has been expanded to include a program of Senior Research Fellowships.

As an effort designed to increase United States manpower in the basic medical sciences, PHS will award between 40 and 50 new fellowships annually for five years until approximately 250 have been given.

The first such awards were made recently to 44 scientists in schools of medicine, dentistry, and public health. From 29 institutions in 20 States, the recipients have completed their doctoral degrees in such fields as biochemistry, pharmacology, physiology, microbiology, pathology, and the behavioral sciences.

Each fellowship is for a period of five years, and consists of salary not to exceed \$10,000 annually, plus a sum not to exceed \$2,000 annually to defray part of the expenses of the recipient's research.

The fellowships will permit recipients to continue their research activities, while the sponsoring institutions will assign appropriate teaching responsibilities. Under this program, the fellows will achieve well-rounded preparation qualifying them for full-time academic positions at the higher level.

The new program results from more than two years of study by NIH. Assistance was given by a panel of non-Federal experts and by deans of medical schools and heads of university departments concerned with research and teaching in the basic medical sciences. The total cost of the first year of the program will be approximately \$500,000.

These awards are the result of recommendation by the Senior Research Fellowships Selection Committee and by the National Advisory Health Council, with the approval of the Surgeon General.

DBS PREPARES TO TEST APC VACCINE



Adenoviruses, believed to be responsible for a substantial amount of respiratory illness, are under intensive study at NIH. In DES's Laboratory of Viral Products, technician Buford L. Burks prepares cell cultures for adenovirus work. NIAID scientists, discoverers of these viruses (the APC group), have been testing an experimental vaccine since January.

FOREIGN DELEGATES VISIT NIH

A group of foreign delegates to the Association of Military Surgeons visited NIH November 16. Dr. Joseph E. Smadel, NIH Associate Director, greeted them and spoke on the research program of the Institutes. The delegates attended a demonstration of studies in total energy expenditure by Dr. G. Donald Whedon, NIAMD. Dr. Sanford M. Rosenthal, NIAMD, discussed salt-soda treatment for burn shock. The visit included a tour of the Radiation Branch of NCI, conducted by Dr. J. Robert Andrews. The Association of Military Surgeons held its annual convention at the Statler Hotel.

NINDB LAUNCHES LONG-TERM PROGRAM

Awards of more than \$700,000 have been made to Yale University School of Medicine and Brown University to open a long-term study on the causes of cerebral palsy and mental retardation.

It is contemplated that more than \$1 million will be awarded annually to medical institutions under the NINDB program. The Institute will analyze all data obtained by cooperating medical centers, and will submit the findings to each participant.

These awards mark the beginning of a large, long-term collaborative program. Studies will also seek to identify factors responsible for blindness and deafness.

Scanner For Locating Brain Tumors

No. 174 in a Series



Instrumentation used to scan, locate, and record radioactivity in the brain.

In an effort to improve techniques for locating brain tumors, NINDB has erected a radioisotope scanner.

The use of the scanner for locating some types of tumors, principally thyroid tumors, is not new. Now, however, its use for locating other kinds of tumors is promising.

NINDB has been operating its radioisotope scanner for about four months. Although all types of brain tumors cannot yet be located, steady progress is being made and improvements are constantly being incorporated. Better tumor localization may be accomplished through these improvements and the surveying of other isotopes that may be taken up by tumor tissues.

Of all methods used to detect brain tumors, this is the most comfortable and least traumatic. The patient is prepared with radioactive iodine or zinc the day before examination. Under sedation, he is placed in position and a lead shield is clamped comfortably around his neck to shield the scanner from body radioactivity.

The scanning device moves automatically or manually over the patient's head and detects gamma radioactivity that has collected in the brain tumor. Radioactivity is pinpointed by a collimeter, which moves directly over the head and excludes radiation from outside the region being scanned.

The pulse of voltage that is formed by crystal, photomultiplier, and pre-amplifier is carried to a gamma spectrometer. The pulse is then sent to an external scaler and to a rate meter circuit in the spectrometer. The scaler output is used to activate a solenoid, which makes a dot pattern of the tumor. At the same time, the output from the rate meter is fed to a recorder which in turn operates a photoscan mechanism. Thus three recordings are made simultaneously: the recorder chart, the dot pattern of graph paper, and the photoscan on film.

After these recordings are made, the patient's head is X-rayed over the photoscan picture. The relative position of the tumor can then be determined with reference to the bony landmarks.

With assistance from Oak Ridge, the radioisotope scanner was assembled at NIH in the Biophysical Application Section of NINDB.

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Publication Preview

The following manuscripts were received by SRB Editorial Section between October 16 and November 10.

- Adams, S. The First National Library.
Algire, G. H. In vivo cell culture.
Arnold, F. A. The Grand Rapids Fluoridation Study - Results pertaining to the 11th year of fluoridation.
Bates, R. W., et al. Prolactin and thyrotrophin content of functional transplantable pituitary tumors.
Bayley, N. A new look at the curve of intelligence.
Bieri, J. G., et al. Utilization of vitamin A and carotene by selenium poisoned rats.
Birren, J. E. Mechanism and explanation in Gerontological Society.
Blough, D. S. Spectral sensitivity in the pigeon.
Brodie, B. B. Remarks at Josiah Macy, Jr., Foundation. Third Conference on Neuropharmacology.
Bunim, J. J. Clinical uses and hazards of adrenal steroids and their analogues in the management of rheumatic diseases.
Burstone, M. S. Application of histochemistry to oral pathology.
Burstone, M. S. The cytochemical localization of esterase.
Burton, R. M., et al. Some effects of lysergic acid diethylamide on barbiturate anesthesia.
Chang, Y. T. Chemotherapy of murine leprosy. VI. The effects of isonicotinylhydrazide of 2-carboxymethoxy-3-methoxybenzaldehyde (compound 373) and isonicotinylhydrazide of 2-carboxymethoxybenzaldehyde (compound 377) on mouse leprosy.
Chang, Y. T. Chemotherapy of murine leprosy. VII. The effect of cycloserine (Seromycin) on mouse leprosy.
Clausen, J. A. Social and psychological factors in narcotics addiction.
Coleman, R. M., et al. Blood pyruvate levels of rats during hemoprotozoan infections.
Dawber, T. R., et al. Coronary heart disease in the Framingham study.
du Ruisseau, J. P., et al. Studies on the metabolism of amino acids and related compounds in vivo. VI. Free amino acid levels in the tissues of rats protected against ammonia-toxicity.
Eisenberg, F., et al. Studies on the metabolism of labelled galactose in a galactosemic individual.
Evans, V. J., et al. Studies of nutrient media for tissue cells in vitro. III. The use of whole egg extract ultrafiltrate as a substitute for chick embryo extract for long-term cultivation of strain L cells.
Everts, E. V. Some comments on the tranquilizing drugs.
Field, J. B., et al. Effect of carbutamide in the diabetes associated with acromegaly.
Fraser, H. F. Human pharmacology of nalorphine (n-allylnormorphine).
Freter, K., et al. Studies on the chemical and enzymatic oxidation of lysergic acid diethylamide.
Fuortes, M. G. F. Motoneurone excitability during rhythmic reflex firing.
Gutter, F. J., et al. Sedimentation behavior of bovine plasma albumin in 4 Molar urea.
Heller, J. R. Organization and research in the National Cancer Institute.
Heller, J. R. Recent advances in cancer research.
Heller, J. R. The national program of voluntary cooperative research in cancer chemotherapy in the United States.
Hill, J. H., et al. Fractionation of plasma proteins by turbidimetry: An unsuccessful aid in cancer diagnosis.
Hueper, W. C. Environmental cancer hazards, a problem of community health.
Hueper, W. C. Dietary factors in carcinogenesis.
Kalckar, H. M. Biological problems posed by studies on mutants of galactose metabolism in man and microorganism.

Kannel, W. B., et al. The electrocardiogram in neurocirculatory asthenia.

Kielley, R. K. On the nature of the inhibition of glutamate oxidation by the carcinogen, N-2 fluorenyldiacetamide.

Kielley, R. F. Inhibition of glutamic dehydrogenase of rat liver mitochondria by the carcinogen, N-2-fluorenyldiacetamide.

Kominz, D. R., et al. Vertebrate and invertebrate tropomyosin.

Korn, E. D. The degradation of heparin by bacterial enzymes. III. A comparison of the degradation of heparin, hyaluronic acid, and chondroitin sulfate.

Korn, E. D. Inactivation of lipoprotein lipase by heparinase.

Korn, E. D., et al. Lipoprotein lipase of chicken adipose tissue.

Kramer, M. A discussion of the concepts of incidence and prevalence as related to epidemiological studies of mental disorders.

Kurahashi, K. Enzyme formation in galactose negative mutants of *E. coli*.

Laki, K. A simple method for the isolation and crystallization of tropomyosin from the muscles of the clam, *Venus mercenaria*.

Likins, R. C., et al. Calcification in lysine deficiency.

Mehler, A. H. Glycolysis.

Mehler, A. H. Some generalizations about enzymes as catalysts.

Morgan, T. M. A psychiatric nursing assignment to Israel.

Peacock, A. C. On the Fuchs cancer test: Species-specific proteolysis of fibrin by serum.

Philip, C. B. A new era in ideas of systematic relationships of world Tabanidae inaugurated by Mackerras, and its impact on nomenclature of horseflies of the Western Hemisphere.

Pradhan, S. N., et al. Effect of some sympathomimetic amines on urethan and barbiturate.

Prescott, B., et al. The effect of glycerine on the toxicity of isoniazid in mice.

Kenkin, E. M. Tabulated data on transcapillary movement of various substances.

Russell, A. L. Fluoride domestic water and periodontal disease.

Shannon, J. A., et al. Poliomyelitis vaccine: Some considerations relating to its safety.

Smadel, J. E. Recent experience and present status of killed virus poliomyelitis vaccine.

Suskind, R. G., et al. Studies of viral agents oncolytic for human tumors in a heterologous host. The oncolytic effect of Coxsackie B viruses.

Tabor, H., et al. Formiminoglycine, formimino-L-aspartic acid, formimino-L-glutamic acid.

Takemoto, K. K., et al. Human amnion cell cultures; susceptibility to viruses and use in primary virus isolations.

Turner, D. M. The National Cancer Institute of the National Institutes of Health.

Waravdekar, V. S., et al. Reduction of synthesis of diphosphopyridine nucleotide in tissues from mice bearing transplantable tumors.

Watt, J. Impressions of Russian medical research in the field of heart disease.

Weinstein, P. P., et al. The development of a study on the axenic growth in vitro of *Nippostrongylus muris* to the adult stage.

Weisburger, J. H., et al. Orientation of biochemical hydroxylation in aromatic compounds.

Wells, C., et al. Progressive familial choreoathetosis with cutaneous telangiectasia.

Williams, G. Z. Direct observation of cellular absorption by ultraviolet television microscopy.

Wood, H. B., et al. 1,2:4,6-Di-O-benzylidene- α -D-glucopyranose and improvements in the preparation of 4,6-O-Benzylidene-D-glucopyranose.

Zipkin, I., et al. The rate of urinary fluoride output in normal adults.

NJH Spotlight



Jean Whitt

Handling large amounts of money holds no terrors for pretty Jean Whitt, agent cashier in the Financial Management Branch. Jean finds her many responsibilities stimulating, and especially enjoys her frequent contacts with patients. One of her duties is taking charge of patients' accounts, and every Monday finds her walking through the Clinical Center to collect phone bills.

Jean came to NIH four years ago and gained valuable experience for her present position by working in the Accounting and Payroll units of FMB. No wonder she is an expert treasurer for R & W, a position she assumed last July.

Travel has always been one of Jean's favorite pastimes. Her family has moved frequently because of her father's naval career. Jean was born in Cambridge, Massachusetts, 23 years ago. She spent a year in Panama, lived in Portsmouth, Virginia, and then moved to the west coast. But the charms of California failed to captivate her.

An easterner at heart, Jean was glad to move to Washington.

She now lives in Kensington with her parents and two younger brothers, and hopes to stay in the Washington area for a long time.

Jean's energy and vivacity have led to many activities after working hours. Since joining her church bowling team a year ago, she has improved, but will not yet divulge her scores. Her teammates, she says, have been most encouraging. Much of her spare time is given to singing in the church choir "just for the love of singing," and she also en-



R & W NOTES

R & W is planning a new billing procedure for continuous membership. Members will be billed in mid-December and can then renew their memberships, receiving cards and discount books by the first of January.

A series of classes in ceramics is planned. Anyone interested in learning the techniques of ceramic making may contact Mary Lou Schafferman, ext. 575.

Christmas is right around the corner, so for cards and gifts be sure to see the display at the Film Service Center. Personalized and photographic greeting cards are featured, as well as many types of cameras, camera equipment, and film. Other gifts may be ordered from the Film Center's catalog, and low-priced shelled pecans are now on sale. The booth is located in the CC checkroom and is open every workday from 10:30 a.m. to 2:00 p.m.

It's still not too late to join the NIH Chorus. This is your chance to get in the Christmas spirit and to participate in the annual Christmas program. Rehearsals are held in the CC Auditorium, Tuesday evenings at 7:30 p.m., and are under the direction of Mr. George Messick, a professional choral director. For more information contact Erv Liljegren, ext. 3225.

WHODUNIT SOLVED

The Hamster's whodunit puzzle was correctly solved by Clydis Jones, Financial Management Branch, DBO, who received two tickets to the performance of "The Mousetrap." On the basis of three weekly clues, Mrs. Jones identified the mystery personality as John Schrank, who attempted to assassinate President Theodore Roosevelt.

joys getting together with her friends to play bridge.

Vacations usually find Jean heading for Florida, where she has gone for the last three summers. She also spends occasional weekends in Ocean City, Maryland, perfecting her tan on the beach.

HAMSTERS CATCH MURDERER AS "MOUSETRAP" CLOSES



Barbara Beard and Erv Liljegren, owners of Monkswell Manor, greet guests (center) George Ann Johnson and Phil Joram, unaware of sinister events to follow...



Out of the snowstorm comes William White (left), the uninvited guest...



Luckily, as the murderer (yes, the detective) reveals himself, a curious turn of events enables Margaret Seeman (left) to prevent another murder.



Detective Ag Despopoulos arrives to warn guests that two of them will be murdered and the vengeful murderer lurks among them...

John M. Hannan Joins NIAID Staff

John M. Hannan has been reassigned as Administrative Officer of NIAID, effective November 13. He was formerly Administrative Officer of NCI, and replaces John B. Beadle, Jr.

Mr. Hannan joined NIH in 1948, after serving two years with VA. He was assigned to NCI, where he remained until this transfer.

Mr. Beadle joined NIH in 1951. He has accepted a position as business manager with the Public Health Research Institute of New York City.

Committee Forms For Aid to Hungary

A committee of NIH staff members has been formed to collect contributions for aid to Hungary. Any financial donations will be appreciated (and are tax deductible). Checks or cash should be sent to Marjorie Harsha, Bg. 10, Rm. 6D-20. This money will be forwarded to the International Rescue Committee in New York for use in Hungary and to aid Hungarian refugees. For more information contact Dr. Stanley Sarnoff, ext. 3119.

DR. OLIVIER RETURNS FROM WHO CONFERENCE

Dr. Louis J. Olivier, Laboratory of Tropical Diseases, NIAID, has returned from a trip to Europe, where he took part in a WHO conference and visited a number of research laboratories.

At the invitation of WHO, he attended a seven-day conference in Paris, which dealt with the habits and control of the snails that transmit schistosomiasis.

Following the conference he visited laboratories and colleagues in Paris, Geneva, London, and Liverpool.