DR. KENNETH CHAPMAN JOINS NIMH STAFF

Dr. Kenneth W. Chapman, a psychiatrist and PHS specialist in narcotic addiction programs, has joined the staff of the Community Services Branch, NIMH, where he will assist States and communities in developing programs of prevention, control, and treatment of drug addiction.

Since 1946, Dr. Chapman has been closely identified with narcotic study and treatment programs, principally at the PHS hospital in Lexington, Ky., where he has been Clinical Director and later Medical Officer in Charge. He is Executive Secretary of the PHS Committee on Drug Addiction.

Dr. Chapman was born in Springfield, Mass., and graduated from Yale Medical School. He joined PHS in 1939.

NIH PAPERS SENT TO GENEVA ATOMS FOR PEACE MEETING

Two papers by NIH scientists were accepted for presentation at the International Conference on Peaceful Uses of Atomic Energy held in Geneva, Switzerland, August 8-20.

An abstract by Dr. DeWitt Stetten, Jr., on "The Use of Isotopes in Analysis of Metabolic Disorders" was presented orally on August 12. Dr. Stetten, who is Associate Director in Charge of Research, NIAMD, was unable to attend the conference due to a previous commitment.

A paper entitled "Early Radiation Death" by Dr. Kirkland C. Brace and Dr. Howard L. Andrews, of NCI's Laboratory of Radiation Biology, was printed in the press digests.

Over 175 oral and 400 written presentations by United States scientists were given at this "Atoms-for-Peace" conference attended by representatives of more than 70 nations.

ANIMAL BUILDING ADDITION PLANNED

Contract negotiations for the construction of an animal building to house monkeys for poliomyelitis vaccine testing are expected to be completed in time for construction to start by mid-September. It is estimated that the new quarters, which will provide quarantine facilities for 800 monkeys, will be completed by January 15, 1956.

The addition, to be known as Wing E of Bldg. 14, will be a one-story concrete and brick structure, and will be attached to the south end of Building 14-A. Construction of the new building was authorized by Congress with the passage of a supplemental appropriation bill providing $600,000.

Rhesus Monkey Need Forms Available Here

As a result of discussions between the Government of India and the United States Mission to India and the United States Embassy in
Aging of the Nervous System

No. 146 in a Series

By directing the skills of five different scientific fields to the problem of aging of the nervous system, NIMH scientists are pioneering a type of working team in trying to understand the primary processes of aging.

This unique "multi-scientific" attack originated in NIMH's Laboratory of Psychology, Section on Aging, with the organization of a research section consisting of a psychologist, a physiologist, a biochemist, an anatomist, and a mathematical biologist to be added soon. The Section is headed by Dr. James E. Birren. Other members of the team are Drs. Eugene Streicher, Jack Botwinick, William Bondareff, and Mr. Joel Garbus.

It has been clearly demonstrated in studies of aging that simple responses and perception become increasingly slow in later life. The average speed of the elderly in moving a finger in response to a sound signal is .232 sec. Young adults have an average reaction time of .182 sec. The investigators are trying to find out why the slowing occurs. These studies have been carried out with extensive use of reaction time and other apparatus, using modern electronic equipment to insure precise measurements.

One of the studies indicates that the increase in time required for simple responses is associated with a delay in the central nervous system. This is based upon results which show that speed of response using the foot (a long nerve path) was not proportionately longer for the elderly than for the young in comparison with a jaw or finger reaction (short nerve path).

The results showing reduced speed of response and perception have significance for the physiological and anatomical changes of aging on one hand, and to social adjustment on the other. Fears of falling and of traffic very likely have their basis in the fact that older persons require more time to perceive information from their environment, to organize or prepare their responses, and to respond overtly.

Tests on rats of different ages showed a marked slowing of reaction time in later life. Rats of different ages were placed in a special recording cage and measurements were made of their speed of reaction to small electric shocks applied to their feet. In comparing other data, it was found that male rats were less active than female rats.

Understanding of aging of the nervous system requires information about biological, psychological, and social processes. The brain is an organ which changes with use; it learns. This feature, plus the fact that the cells of the nervous system are as old as the individual, since they do not multiply, makes the problems of aging of the nervous system different from other organs of the body. It is also a fertile and challenging field for scientific exploration which will not remain for long unexplored and little understood.

Publication Preview

The following manuscripts were received by the SRB Editorial Section between July 18 and 28:

- Calhoun, John B. Behavior of house mice with reference to fixed points of orientation.
- Calhoun, John B. A comparative study of the social behavior of two inbred strains of house mice.
- Calhoun, John B. The use of animals in research on aging.
- Cutler, Sidney J. Improvements in cancer survival rates.
- Ebou, Franklin G., Jr. The future uses of radioisotopes as tracer agents.
- Evarts, Edward V., et al. The effects of physiological subnormality and LSD on posttetanic potentiation of lateral geniculate potentials.
- Frank, K., et al. Pre-spine potentials in elements of the spinal cord.
- Greenstein, Jest, et al. Studies on carcinogenic amides L. and D-amino acid derivatives of 2-aminofluorene, 4-aminodiphenyl, and 3,3'-diaminodiphenyl, and their susceptibility to hydrolysis by tissue homogenates.
- Guilino, Piero, et al. The toxicity of individual essential amino acids and their diastereomers in rats and the effect on blood sugar levels.
- Hueper, W. C. Silicosis, asbestosis, and cancer of the lung.
- Kielley, Ruth K. Reduction of 2,4-dinitrophenol and other nitrogen compounds by liver xanthine oxidase.
- Laki, K. A proposed structure for myosin.
- Olivier, Louis, et al. Seasonal studies on Trypanosoma centromale in northeastern Brazil.
- Perrine, Theodore D. Needle valve stopcock.
- Pittman, Margaret, et al. Influenza bacilli infections.
- Smith, Falconer, et al. Hemolysin production in irradiated mice given spleen or bone-marrow homogenate.
- Wright, Barbara E., et al. The role of polyglutamyl pteridine coenzymes in serine metabolism. I. Cofactor requirements in the conversion of serine to glycine.
Alerted by the serious consequences of rheumatic fever -- heart disease and kidney trouble -- the Employee Health Service is conducting an extensive campaign of preventive medicine to control this crippling disease. Eliminating "strep" throats would mean the virtual elimination of rheumatic heart disease and nephritis, since these conditions invariably follow beta-hemolytic streptococcus infections in a certain percentage of cases.

All employees with sore throats of any severity are urged to come to the Health Unit, Bldg. 10, so that cultures may be taken to rule out streptococcus infection. Culture reports will be available in 18 to 24 hours -- in sufficient time to have one's personal physician begin antibiotic treatment if the culture is positive.

By treating and curing "strep" infections in adults, protection will also be given to youngsters with whom they come in contact. More insidious but not as dramatic as polio, rheumatic fever accounts for more deaths in childhood than does polio, and the crippling effects are much more serious, since they damage the heart.

DAVID BURGOON NAMED TO ADMISSIONS STAFF
The appointment of David F. Burgoon as Assistant to the Chief, Admissions and Follow-Up Department, CC, was made effective August 1. He was formerly assigned to the Business Operations Branch.

Mr. Burgoon joined the Public Health Service in 1946, and came to NIH in July 1953 from the Bureau of Medical Services, Washington. He is a graduate of the University of Pennsylvania, Philadelphia.

Radioactivity -- a word that spells "danger" to the atomic age citizen -- holds no fear for NIAMD's Walter S. Cool.

His job as Biologist in the Laboratory of Physical Biology, with headquarters in the Isotope Lab, concerns radiation safety. He is one of a staff of four who see that all radioisotopes and X-ray machines are used safely. He advises investigators on the best way to use isotopes for maximum benefits to their research projects. Walter also processes dosimeter films for NIH, the Baltimore PHS Hospital, and the Carnegie Institution. These films, which record the radiation to which the worker is exposed, are encased in the dosimeter, a badge-like meter worn by individuals working with radiation.

Another phase of Walter's job is traveling "out to sea" to dispose of radioactive wastes collected here. This semiannual job requires someone to accompany cement-sealed vaults of radioactive waste to Norfolk, where they are placed on board a Coast Guard cutter, carried 150 miles out to sea, and dumped overboard at a minimum depth of 1,000 fathoms. Walter usually makes one of these trips a year.

Walter began his career in radiation in 1948, when he accepted an Atomic Energy Commission fellowship to study radiation biology at the University of Rochester. He was one of eight students selected for the first such class sponsored by AEC. The opportunity to get in "on the ground floor" prompted him to abandon plans of becoming an M.D. after graduating from Houghton College, Houghton, N. Y. Following completion of course requirements in 1949, he came to NIH, worked on his thesis in his spare time, and two years later received his M.S.

Last spring Walter accepted a challenging assignment on radioactivity analysis at the Nevada atom bomb test site. He spent almost three months there studying ecological factors for a UCLA project supported by the AEC. Walter was one of a crew that went into the field following an atomic explosion to collect plant and soil samples and to trap or shoot wild animals such as rabbits, foxes, bobcats, and rats. The animals were frozen and shipped to UCLA for further radiation study.

Varying wind patterns led the group to adjoining states to carry on their experiments. Much of the time they bedded down in sleeping bags set under the stars.

The youngest of five children, Walter was born in Evans Mills, a small town near Watertown, N. Y. He lives in Rockville with his wife, Harriett, a biologist in NCI. Both are active in church work. Walter is vice president, and Harriett secretary, of the Maryland and Virginia Conference of Young People of the Free Methodist Church. He also sings first tenor in the church quartet.

Walter enjoys hunting and amateur photography. The garden is another hobby, although he admits to leaving most of this work to Harriett.

NIH Spotlight

Walter S. Cool

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R & W NOTES

Hamster chairman Hazel Rea announces that the group will present a three-act play Oct. 27 and 28. The script will be selected soon, and auditions will be held within the next few weeks.

Executive Council members have been invited to Brooke Manor Country Club Saturday, Sept. 24, for breakfast and a radio broadcast. They will be interviewed by Brooke Johns on his program beginning at 9:00 a.m., Station WDON.

Several instruction classes will begin the latter part of September, depending upon employee interest. For beginner's, intermediate, and advanced bridge classes, contact Catherine McGhee, ext. 3322. For modern dance classes phone Dottie Quinn, ext. 3461. For art classes call Frances Legallais, ext. 778.
NIH BUDGET FOR 1956
TOTALS $97,823,000

Fiscal year 1956 appropriations for NIH totaling $97,823,000 were passed at the last session of Congress and approved by the President. This total is an increase of $16,555,000 over the amount appropriated for 1955.

Funds have been appropriated as follows:

- NCI  $24,828,000
- NHI  18,778,000
- NIMH 18,001,000
- NIAMD 10,740,000
- NINDB  9,861,000
- NMI   7,580,000
- DRG   5,899,000
- NIDR   2,136,000

MRS. BURICH ACCEPTS MEDICAL RECORDS POST

Mrs. Gloria S. Burich has been appointed Acting Chief of the CC Medical Record Department, effective August 1. She came to NIH from Walter Reed Army Medical Center, where she was Supervisory Medical Record Librarian.

A native of Nashwauk, Minn., Mrs. Burich graduated from the College of St. Scholastica, Duluth, Minn.

McCLAFFERTY RETIRES

Harry J. McClafferty, Supervising Operating Engineer in BMB’s Mechanical Engineering Section, retired from government service on July 31. He had been at NIH since November 1942. Born in Ferris, Pa., he lives in Derwood, Md., with his wife.

FORMS Cont’d

India, the Government of India has agreed to permit the export of adequate numbers of Rhesus monkeys from that country for medical research and poliomyelitis vaccine purposes. The agreement, which will likely be renewed annually, covers the one-year period ending June 30, 1956, and provides that permission to export will be granted only upon certification of the United States Government (through the Public Health Service).

Certificate of Need forms (which are valid only upon approval and signature by the Surgeon General) and further information concerning PHS procedure may be secured by calling Miss Katharine Parent, Executive Secretary of the National Advisory Committee on Rhesus Monkey Requirements, ext. 2748.

GLASSBLOWERS FILL SPECIAL ORDERS

Laboratory glassware vital to the numerous and varied research problems studied at NIH are custom-made in the Glassblowing Group of the Instrument Section.

This service activity of the Laboratory Aids Branch is located in Building 13. The staff, including Glass Technologist Frederick Highhouse and two glassblowers, work in close harmony with scientific investigators. The primary function of the group is the construction of precision glassware, unavailable commercially.

Some of the items developed here have had wide application. One of these, the tissue culture flask, designed and developed by Dr. Wilton R. Earle, NCI, and Mr. Highhouse, is used in many laboratories on the reservation. Others are the all-glass, automatic, water distillation apparatus developed by Mr. Highhouse and Calvin Mencken and John B. Moloney, of NCI, and the centrifugal funnel for rapid extraction, developed by Dr. E. M. Nadel, NCI, and Mr. Highhouse.

Some glass items are ordered regularly. Among these are the counting plate, with special groove, used for radioactive material, and various sizes of measuring burets.

Practically any type of glass item required can be fabricated with the equipment on hand in the unit. The wet cutoff wheel cuts glass objects to various sizes and shapes; the graduating machine is used for precision graduating; the flat grinding wheel is required for specified thickness and finish; and the drill press performs varied glass drilling operations.

For "straight work," or aligning and fusing two pieces of glass, there are four glassblowing lathes. Glass up to 18" in diameter can be mounted on the arbor of this lathe and heated over the multiple gas burners while the glass revolves.

Glassblowers use the hand torch and bench torch when shaping and molding glass into more intricate designs. Constant manipulation of the glass while it is exposed to the direct flame is necessary to prevent disintegration. As the glass becomes hot, it is more pliable, and the glass blower can blow through one end of the tube and cause the glass to expand. He can also fuse several pieces of glass together.

When fusing two pieces of glass a strain is set up immediately behind the point fused, creating weak spots. In order to equalize the strain, all items are placed in the annealing furnace, where they are exposed to high temperatures from six to eight hours.

Glassblowers get their raw material from what they call their "working stock." This consists of a supply of glass tubing 3 mm. to 6" in diameter.

In addition to creating the varied and numerous glass articles requested, the Glassblowing Unit repairs all glass apparatus here.

Frederick Highhouse, left, and Lewis Spessard use the glassblowing lathes to form necks on large pieces of tubing.