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MONTHLY STATUS AND PROGRESS REPORTS

FEBRUARY 1949

Excerpt

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March 18, 1949

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ORIGINATING & MANAGEMENT

1949-1-11

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Mr. John D. Aker, Jr.

Speeches

Dr. Sheldon Julian addressed a group at the Naval Medical School on February 11 on "The Environmental Biology of Ionizing Radiation".

Dr. John D. Aker attended the National Cancer Conference as sponsored by the American Cancer Society in Memphis, Tennessee on February 11 and contributed a paper on "Cancer Research in the Atomic Energy Era".

GAC Meeting

Mr. John D. Aker, Chairman of the Advisory Committee for Biology and Medicine, appeared before the General Advisory Committee of the Atomic Energy Commission on behalf of the Committee's participation in research and to give assistance to the Division of Biology and Medicine of the Atomic Energy Commission in its work and research program.

Dr. John D. Aker spoke on the subject of radiation hazards in atomic energy and the biology of ionizing radiation and comparative statistics.

Report to Congress

It is planned that the next Semiannual Report to Congress will bring the file up to biology and medicine as used in naval energy. Accordingly, all contract investigators of the Bureau of Medicine and Surgery are being requested through the Office of Naval Research to provide a summary of their accomplishments in this field in such terms for a nucleus for this report.

Advisory Committee for Biology and Medicine

The Advisory Committee for Biology and Medicine met in Washington on February 11 for their bi-monthly deliberations which resulted in recommendations on the ABP project at the University of Rochester.

The committee recommended that it would be desirable to expand the work may be done under cancer research studies on the atomic bombing.

The committee further recommended that a staff member be appointed to collect information and to study the relation to diseases concerning the defense of the civilian population and the training of appropriate personnel to handle patients resulting from an atomic bomb.

Research Projects

The following research projects have been approved by the Division of Biology and Medicine during the month of February:

Medical Branch

University of California, Berkeley, Calif. - Dr. A. L. Arnsperger - "Relationship Between Radiation Dose and the Immunity State" - \$33,000 (Office of Naval Research - Bureau)

University of Pennsylvania - Dr. C. D. Van Allen - "Radioisotope Study of the Distribution and Retention of Americium 241 in the Rat" - \$10,000 (ABP - Bureau)

University of Michigan - Mr. George E. Moore - "Methods and Techniques to Improve Localization of Radioactive Materials in the Body; with Special Reference to the Diagnosis of Brain Tumors" - \$10,000 (ABP - Bureau)

1951 - 1952 FUND

- (4) University of Virginia - Dr. C. L. Gemmill - "Effect of Beta Radiation on the Distribution of Phosphate in Red Blood Cells and Cardiac Muscle" - \$10,500 (AEC - New)
- (5) Meharry Medical College, Nashville, Tenn. - Dr. Paul Hahn - "Treatment of Neoplasms by the Direct Infiltration of Radioactive Iodine". - \$60,000 (Transfer from CNF to AEC)
- (6) University of Michigan - Dr. R. L. Mann and F. J. Hedges - "Universal Serologic Reaction following Irradiation" - \$21,600 - (AEC - New)
- (7) Henry Ford Hospital - Dr. F. W. Hartman - "Preliminary Studies on the Use of Nitrogen Mustard in the Sterilization and Preservation of Blood" - \$11,500 (AE - New)
- (8) Beth Israel Hospital - Dr. R. L. Blumgart - "Studies of Radioactive Iodine Therapy of Graves' Disease and other Related Thyroid Disorders" - \$44,500 (CNF Renewal)
- (9) Memorial Hospital - Dr. C. P. Iselaas - "Investigation involving Use of Isotopes and Radiation in the Study of Special Tumors, Protein Chemistry, Experimental Pathology, Immunochemistry and Immunology" - \$140,000 (CNF Renewal)
- (10) Hooper Foundation, University of California - Dr. H. Becks - "Metabolism of Radioactive Fluorine with Reference to Dental and Skeletal Structures" - \$5,000 - (AE - New)
- (11) University of North Carolina - Dr. Arthur Roe - "Biological Changes Induced by Radiation" - \$2,000 (AEC - New)

Biology Branch

- (1) Sloane Physics Laboratory, Yale University - Dr. E. C. Pollard - 'Irradiation of Viruses and Large Molecules' - \$1,000 for 15 hrs and 15 min.
- (2) Sloane Physics Laboratory, Yale University - Dr. E. C. Pollard - 'Monomolecular Layer of Cetyl Radical Agent' - \$1,000.

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(1) North Carolina State College, Raleigh, N. C. -
Mrs. W. E. Colwell and N. S. Hall - \$20,850 for
1949 and 1950 - "The Movement of Ions through
Living Systems".

(2) North Carolina State College, Raleigh, N. C. -
Dr. W. C. Gregory - "Gamma Seed Irradiation" -
\$10,000.

(3) Long Island Biological Association, Cold Springs
Harbor, L. I., New York - Dr. M. Demerec - "Study
of the Accumulation and Elimination of Deleterious
Mutations in Experimental Populations Exposed
to Radiation Variations" - \$10,000.

(4) U. S. Department of Agriculture - Dr. P. V. Cardon -
"The Improvement of Soil Management and Crop
Irradiation Through Investigations with Isotopes" -
\$10,000.

Applied Biophysics Branch

(1) University of Florida - Dr. A. A. Bless - "A
Study of Bioelectric Potentials of Plants and
Animals as a Function of Radiation Injury" -
\$10,000.

Biology Branch

Dr. Jensen, together with the Medical Director of the
New York Operations Office, made an inspection of the facilities
of the Long Island Biological Association, Cold Spring Harbor,
Long Island, on February 10. Negotiations are going forward
for laboratory studies on the dynamics of population under the
influence of irradiation, using fruit flies as test animals.
He also visited the University of Nebraska on February 18,
discussing a cooperative project administered by the Argonne
National Laboratory on irradiation of corn pollen. He dis-
cussed the matter of biological synthesis experiments using
algae with Dr. with Mr. and Mrs. Dr. Sculley at the Argonne
National Laboratory on February 19.

Medical Branch, Cancer Research

The Commission has approved a program initiated by
the Division of Biology and Medicine to stimulate cancer
research by utilizing radioactive isotopes beyond what was
originally contemplated. It is proposed to add to the list
for free distribution to cancer investigators other

HIGHLIGHTS

radioactive isotopes and in particular Cobalt 60. It is estimated that an expenditure of \$450,000 will be required annually to further this program.

Applied Biophysics Branch

A joint meeting was held in New York on February 5 with representatives of the United Kingdom and the Atomic Energy Commission in which maximum permissible exposures for humans and permissible levels of radioactive material for wastes, water and air were discussed. The British representatives pointed out that the AEC was the only place they could look for human and animal data for evaluating the maximum permissible radiation levels. It was agreed that the AEC would try to lend assistance to the United Kingdom in obtaining reports from the National Committee on Radiation Protection.

In the general discussion on waste disposal, the question of the maximum permissible level of material polluting public streams was discussed. Several plans now in use by the United Kingdom are being explored by the Atomic Energy Commission to see if they are applicable to similar conditions in the United States.

Radiation Cataract Survey

At the instance of the Division of Biology and Medicine the Division of Medical Sciences of the National Research Council has initiated and is directing an investigation of the ocular changes related to cyclotron exposure. A Committee on Radiation Cataracts has been established for this study. This Committee will submit proposals for study of cases of cataracts and for research to the Division of Biology and Medicine for consideration.

Dr. Lawrence Little visited Oak Ridge on February 1 to attend a Seminar on eye damage.

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