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MONTHLY STATUS AND PROGRESS REPORTS

FOR

MARCH 1949

UNIQUE DOCUMENT # SAA2000512370000

U.S ATOMIC ENERGY COMMISSION

Issued April 19, 1949

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(UNCLASSIFIED) V - BIOLOGY AND MEDICINE

Appointments

Dr. John E. Bowers, Deputy Director of the Division of Biology and Medicine, has been appointed by the Commission to serve as an associate member on the Joint Panel on Medical Aspects of Atomic Warfare of the Committee on Medical Sciences, Research and Development Board, National Military Establishment.

Speeches

Dr. John Bowers addressed the National Society for Prevention of Blindness in New York City on March 17, 1949, on "Atomic Energy and Eyesight".

Dr. Lawrence W. Tuttle delivered a paper before the American Chemical Society in San Francisco on Monday, March 28, on "Evidence for the Existence of the Tricarboxylic Acid Cycle in Higher Plants Based upon the Utilization of Carbon 14 Labeled Acetate".

Research Projects

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

Medical Branch

(1) Columbia University - Dr. S. C. Werner - "Use of Radioactive Iodine in Developing Quantitative Assay Method for Thyrotropic Hormone" - $5,200.

(2) Harvard Medical School - Dr. Hastings, Dr. C. B. Anfinsen, Dr. S. J. Gray, Dr. A. K. Solomon, Dr.

[redacted]

Shields Warren and Dr. J. C. Aub - "Research with Isotopes on Medical Problems, Training in Isotope Techniques, Research on Enzyme Action, Metabolism of Organic Compounds in Mammalian Systems; Use of Radioisotopes as Diagnostic and Therapeutic Agents in Malignancies - $271,124 (Transferred from ONR)

Biology Branch

(1) University of California - Dr. Max Kleiber - "Tracer Studies with Large Animals" - $16,000

(2) Ohio Agricultural Experiment Station - Dr. R. S. Davidson - "Physiology and Genetics of Plant Pathogenic Micro-organisms When Grown in the Presence of Various Radioisotopes" - $2,400

(3) Oklahoma A & M College - Dr. A. Eisenstark - "Study of Cytogenetic Effect of Irradiation, Using Radioactive Isotopes on Bacteria, for Example, Radioactive Phosphorus, and the Radioactive Alkali Metals, on Azotobacter chroococcum". - $[illegible],710

(4) The Connecticut Agricultural Experiment Station - Dr. A. E. Dimond - "Therapy of Plant Disease by Nuclear Radiations" - $8,000

(5) Michigan State College and Department of Physiology, Michigan Agricultural Experiment Station - Dr. L. F. Wolterink and Dr. E. F. Reineke - "Hormonal and Nutritional Factors which Alter the Effective Half-lives and Differential Absorption Ratios of Calcium, Manganese and Cobalt in the Animal Body" - $[illegible],899

(6) Washington State College - Dr. Orlin Biddulph - "The Absorption, Translocation and Disposition of Various Elements in Plants" - $13,600, and,

(7) Washington State College - Dr. N. Higginbotham - "The Rate of Movement of Ions into and Through Plant Parenchyma Tissue as Affected by Rate of Water Uptake" - $[illegible],021. Total grant to Washington State College - $[illegible],621

Applied Biophysics Branch

(1) University of Chicago - Dr. Paul [illegible] - "High-speed Reflector Cameras for Master International Micro-filming" - $[illegible],[illegible]

Biology Branch

Mr. Elmer Higgins [illegible]

of the Interior, and consultant to the Division of Biology and Medicine, participated in a conference at the Oak Ridge National Laboratory on the waste disposal problem particularly concerned with fish populations in contaminated waters.

Fellowships

The Fellowship Program of the Division of Biology and Medicine in both the medical and biological sciences is being strengthened by additional fellowships that have been awarded recently by the Postdoctoral Fellowship Board in the Medical Sciences and the Pre-doctoral Fellowship Board in the Biological Sciences of the National Research Council.

In the medical sciences, twenty-five awards were made on March 15, 1949 and forty-six awards were made in the biological sciences on March 26. However, acceptances of all the awards have not been received by the NRC.

Applied Biophysics Branch (Training Program)

A tentative program dealing with the nation-wide training of all types of individuals who will be working with radioactive isotopes has been prepared. This visualizes breaking down the training into several different categories:

(1) A one- or two-month course for radiation detection, which would be given to service personnel and civilian defense workers.

(2) A one- or two-month course in radioactivity decontamination for similar groups.

(3) A one-year course given to college graduates who intend to go into health physics activities. This course would be similar to that now being carried out by the AEC/NRC fellowship program.

(4) An advanced one-year course for dealing with contamination problems in the utilization of radioactive materials, designed specifically for people who are engaged in research activities.

It is suggested that special training centers be established at several points in the country and that their activities be coordinated through a single training director.

This program has been reviewed by the Advisory Committee for Biology and Medicine who have agreed with it in substance. It now remains to work out details.

Radiation Hazards

Professor Harry L. Bowman, Professor of Civil Engineering of Drexel Institute of Technology and consultant to the Division of Biology and Medicine, made an investigation during March of the hazards connected with the facilities at Hanford in event of an air burst of an atomic bomb.

Professor Bowman is planning to submit a formal report to the Commission which will cover construction of buildings, the protection afforded apparatus and the percentage of production in various lines.

Contracts

Negotiations are progressing satisfactorily between the Division of Biology and Medicine and the Office of Naval Research for the Atomic Energy Commission to handle direct contractual relations with various institutions instead of through the Office of Naval Research for continued support of research in the fields of radiation energy and biological functions.

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