



MINUTES

Advisory Committee for Biology and Medicine

April 8-9, 1949

The fifteenth meeting of the Advisory Committee for Biology and Medicine of the Atomic Energy Commission was held at the Brookhaven National Laboratory, Upton, New York, on April 8 and 9, 1949.

Committee Members Present. The meeting was convened by the Chairman and the following members were present: Dr. Alan Gregg, Chairman, Dr. Ernest W. Goodpasture, Vice-Chairman, Drs. G. W. Beadle, Detlev W. Bronk, A. Baird Hastings, E. C. Stakman and J. T. Wearn.

Committee
Members
Present

Staff Members of A.E.C. Present. Members of the staff of the Atomic Energy Commission who were present: Drs. Shields Warren, John Z. Bowers, Paul B. Pearson, Professor Harry L. Bowman, Colonel J. P. Cooney, Mr. L. Joe Deal, Mr. Oliver Townsend, Mr. Clement Palazzolo and Mrs. Frances R. Montgomery.

Staff
Members of
A.E.C.
Present

Staff Members of Brookhaven National Laboratory Present. Representatives of the Brookhaven National Laboratory who attended included: Dr. Leland J. Haworth, Director, Dr.

Staff
Members
of Brookhaven
National
Laboratory
Present

Donald D. Van Slyke, Asst. Director for Biology and Medicine,

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CLASSIFICATION CANCELLED
AUTHORITY: DOE-DPC
BY E. S. SCHEIDT, DATES
1/18/2006 to 6/12/91
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Dr. Lee E. Farr, Chairman, Medical Department, Dr. Leslie F. Nims, Chairman, Biology Department, Dr. G. B. H. Kuper, Chairman, Instrumentation Division, Dr. F. P. Cowan, Chairman, Health Physics Division.

Also attending were Dr. G. Failla, Department of Radiology, Columbia University, Dr. Bernard S. Wolf, Medical Director, New York Operations Office, Mr. E. L. Van Horn, Area Manager, Brookhaven Area.

Representing Assoc. Univ., Inc.

Representing Associated Universities, Inc. Mr. Eldon C. Shoup, Executive Vice President.

Minutes of Meeting of February 12, 1949

Minutes of Meeting of February 12, 1949. The minutes of the meeting held on February 12, 1949 at the Atomic Energy Commission in Washington, D. C., were discussed.

Dr. Hastings moved their adoption. The motion was seconded by Dr. Wearn and unanimously approved.

Report on Research Projects

Report on Support of Research Projects. Dr. Bowers reported that the following projects had been approved for support by the Division of Biology and Medicine of the Atomic Energy Commission since February 12, 1949.

To Oak Ridge:

- (1) North Carolina State - Dr. W. C. Gregory - "Peanut Seed Irradiation - \$17,145
- (2) North Carolina State - Dr. N. S. Hall - "The Movement of Ions Through Soil Systems" - \$20,850

- [REDACTED]
- (3) University of Virginia - Dr. C. L. Gemmill - "The Effect of Beta Radiation on the Distribution of Phosphate in Red Blood Cells and in Cardiac Muscle" - \$10,500
 - (4) University of North Carolina - Dr. A. Roe - "Supplies And Equipment for Carbon 14 Research" - \$2,000

To Chicago Office:

- (1) Henry Ford Hospital - Dr. F. W. Hartman - "Pilot Experiment" - \$1,500
- (2) University of Michigan - Drs. R. L. Kahn and F. T. Hodges - "Universal Serologic Reaction Following Irradiation" - \$25,000
- (3) University of California - Dr. H. Becks - "Studies on the Metabolism on Radioactive Fluorine and Particular Reference to Dental and Skeletal Structures" - \$5,000
- (4) Oklahoma A. & M. - Dr. O. M. Smith - "Study of Cytogenetic Effect of Irradiation, Using Radioactive Isotopes on Bacteria" - \$5,740
- (5) Ohio Agricultural Experiment Station - Dr. R. S. Davidson - "Physiology and Genetics of Plant Pathogenic Microorganisms When Grown in Presence of Various Radioisotopes" - \$2,400
- (6) University of California - Dr. M. Kleiber - "Research on the Metabolism of P32 and the Utilization of Metabolites Such as Acetate, Lactate, etc." - \$16,000
- (7) University of Minnesota Medical School - Dr. G. E. Moore - "Study of Methods and Instr. to Improve the Localization of Radioactive Materials in the Body" - \$16,000

To New York Office:

- (1) Yale University - Dr. E. C. Pollard - "Monomolecular Layers of Serological Agents" - \$4,500
- (2) Yale University - Dr. E. C. Pollard - "Irradiation of Viruses and Large Molecules" - \$8,000
- (3) Long Island Biological Assn. - Dr. M. Demeriec - "Study of the Accumulation and Elimination of Deleterious Gene Mutations in Experimental Populations Exposed to Radiations" - \$55,000


- [REDACTED]
- (4) Columbia University - Dr. S. W. Werner - "Use of Radioactive Iodine in Developing Quantitative Assay Method for Thyrotropic Hormone" - \$4,600
 - (5) Connecticut Agricultural Experiment Station - Dr. A. E. Dimond - "Therapy of Plant Disease by Nuclear Radiations" - \$8,000

b. Proposals extended since February 12 meeting:

- (1) University of California, Berkeley - Dr. A. P. Krueger - "Relationship between Radiation Damage and the Immunity State" - \$33,000; Original grant \$25,000; Total \$58,000
- (2) Beth Israel Hospital, Boston - Dr. H. L. Blumgart - "Studies of Radioactive Iodine Therapy of Graves Disease and other Related Thyroid Disorders" - \$44,500; Supplement \$12,000; Original grant \$54,142; Total \$110,642
- (3) Memorial Hospital, New York - Dr. C. P. Rhoads - "Cancer Research" - \$140,000 - (Sloan Kettering Institute)
Physics Division - \$36,530
Protein Chemistry Division - \$48,092
Experimental Pathology Division - \$37,355
Original Grant - \$139,977; Supplement \$140,000; Total \$279,977
- (4) Sloan-Kettering Institute - Memorial Hospital - Dr. Rulon Rawson - "Study of Thyroid Cancer with Radioactive Iodine" - \$40,000; Supplement \$16,666; Total \$56,666.
- (5) Meharry Medical College - Dr. P. F. Hahn - "The Use of Radioactive Gold in the Treatment of Various Tumors by Direct Infiltration" - \$60,000
- (6) University of California - Dr. J. H. Lawrence - "Effects of Irradiation on Animal Tissues" - \$33,250; Supplement \$33,250; Total \$66,500

Several of the projects were discussed in detail.

The Committee discussed the practice in some institutions of supplementing fellowships with other funds.



The Committee unanimously recommended that:

"Funds allotted to institutions by the Atomic Energy Commission in the field of biology and medicine shall not be used to supplement stipends received by holders of full-time fellowships awarded for training purposes".

Training
Program

Training Program. Dr. Bowers presented current information on the training program and requested advice of the Committee on several problems--whether or not the Division of Biology and Medicine is sufficiently active in the training field and whether or not wide enough scientific areas are encompassed. The question of the level of scientific competence of the persons who should be devoting a considerable amount of their time to the training program was discussed.

It was the unanimous opinion of the Committee that training programs should be initiated at other facilities in addition to the Oak Ridge Institute for Nuclear Studies and that in these developmental stages considerable latitude should be granted in the establishment of curricula. The Committee suggested that a full report covering all phases of the training program including the policy of the Atomic Energy Commission concerning the allocation of funds for such programs be presented for consideration at the September meeting.

Fellowship Program. Dr. Paul B. Pearson, Assistant Chief of the Biology Branch, and Dr. Bowers, reported on the status

[REDACTED]

of the Fellowship Program as sponsored by the Division of
Biology and Medicine.

There have been forty-six additional awards made at the
Predoctoral level in Biology and Biophysics, fifteen Post-
doctoral awards in the Biological Sciences and twenty-five
awards in the Postdoctoral Medical Sciences, making a total
for the periods 1948-49 and 1949-50 of one hundred seventeen
awards at the Predoctoral level in Biology and Biophysics,
twenty-one awards at the Postdoctoral level in the Biological
Sciences and fifty awards at the Postdoctoral level in the
Medical Sciences.

Brookhaven
National
Laboratory

Brookhaven National Laboratory. The Committee was impressed
with the progress that has been made in the Brookhaven biology
and medical programs since the meeting there on March 13, 1948.
The programs seemed to be well-integrated with competent
personnel heading the various sections.

Dr. Leland Haworth, Director of the Laboratories, dis-
cussed the over all program and pointed out that a number of
scientific personnel in the life sciences and the physical
sciences are working together on projects. He emphasized
the increasing participation in the program that the labora-
tories had received from the Associated Universities, Inc.
The laboratory offers facilities and space for scientists to
persons from Universities or industrial laboratories. At

[REDACTED]

present there are twenty-five or thirty persons on such an arrangement, of which half are faculty members and half graduate students working for Doctorates. It is anticipated that this number will be increased to sixty or seventy in one or two years.

Dr. Donald D. Van Slyke outlined the biology and medical programs in general terms. Dr. Nims and Dr. Farr presented more specific reports on their respective programs.

The research studies in plant ^{ecology}~~pathology~~ were of interest. A program has been initiated to secure data on the yield of the significant economic crops of the region before operation of the reactor.

Dr. Farr outlined the organization of the medical department into pathology, physiology, bacteriology, biochemistry and medical branches. He stated that the hospital program for clinical investigation on thyroid cancer and radioactive iodine have been initiated and that from twelve to fifteen patients with malignancies and other types of diseases will be studied with radioactive isotopes.

Dr. Kuper and Dr. Cowan outlined the progress of the Department of Instrumentation and Health Physics Division and spoke of the close correlation of the Division with the medical departments.

[REDACTED]

Dr. Kuper summarized the monitoring systems as they relate to radiation over-exposure and x-ray exposures when they are given in the medical departments.

It was reported that in view of the few experienced health physicists, instructions in monitoring are given to new members of several of the Building Survey Sections as well as to members of the Pile Operation Division.

Radiation
Cataract
Survey

Radiation Cataract Survey. A request of the Division of Medical Sciences of the National Research Council for an annual allocation of \$300,000 for a cataract survey was considered. Dr. Warren advised the Committee that he had approved a transfer of \$15,000 to the National Research Council as an initial step for this survey. After a full discussion the Committee unanimously adopted the following:

"It is recommended that the Division of Medical Sciences be requested to continue the established panel as an advisory group and that sufficient funds be allocated for indicated physical examinations on the radiation cataract cases. It is further recommended that the Radiation Cataract Committee advise the Division of Biology and Medicine as to indicated research projects for coordination with the existing research program of that Division and administration by the Division of Biology and Medicine."

Budget

Budget. Dr. Bowers informed the Committee as to the allocation of funds for the various activities in the Division of Biology and Medicine.

Tests. Colonel James Cooney, MC, USA, Division of Military

Tests

Application, discussed briefly some of the radiological problems associated with past tests and contemplated future tests.

Sixth
Semiannual
Report

Sixth Semiannual Report to Congress. Dr. Warren summarized the progress that has been made in assembling material for the Sixth Semiannual Report to the Congress. He reiterated his request that each member of the Committee supply the Division of Biology and Medicine with suggestions for discussion in this report.

Hanford
Disaster
Plans

Hanford Disaster Plans. Professor Harry L. Bowman, Professor of Civil Engineering at Drexel Institute and Consultant to the Division of Biology and Medicine, presented an oral report on his recent trip to Hanford at which time he studied possible effects of an atomic attack. A written report is in preparation.

Civil
Defense

Civil Defense. The Committee was informed on present and proposed activities in Civil Defense. The Committee reaffirmed its interest in the problem and suggested that they would appreciate a clear definition of their responsibilities in this regard.

Other
Business

Other Business. The next meeting of the Advisory Committee for Biology and Medicine was suggested for Saturday, June 11, 1949, at 1901 Constitution Avenue, Washington, D. C.

Flash
Burns

The meeting adjourned at 4:00 P.M.
See Appendix "A" attached.

[REDACTED]

APPENDIX "A"

Dr. Shields Warren presented the following letter for informal discussion by the Committee:

4 April 1949

Dr. Shields Warren
Atomic Energy Commission
1901 Constitution Avenue
Washington 25, D. C.

My dear Doctor Warren:

At its first meeting on 17 March, the Subcommittee on Burns, National Research Council, adopted a resolution stressing the importance of studies on thermal burns in relation to atomic bombing, and urging that such studies be undertaken at the earliest possible moment with adequate support.

The Committee on Surgery, meeting on 21 March, found itself in wholehearted agreement with this resolution and unanimously adopted the following recommendation for transmission to the government agencies concerned with medical research:

"That the Committee on Surgery recommends that, in view of the inadequacy of present progress, every effort be made to strengthen and augment our knowledge of the therapy of burns."

I take pleasure in transmitting this recommendation for your information.

Very sincerely,

/s/ Lewis H. Weed

Lewis H. Weed, M.D.
Chairman, Division of
Medical Sciences
National Research Council

(APPENDIX "A")

After a thorough discussion, it was unanimously agreed that Dr. Warren should dispatch the following letter to Dr. Weed:

April 13, 1949

Dr. Lewis H. Weed
National Research Council
2101 Constitution Avenue
Washington 25, D. C.

Dear Dr. Weed:

This is in reply to your letter of April 4, 1949, transmitting the recommendation of the Committee on Surgery.

We agree that this is an important field of research but that thermal burns are a broad problem, only a small part of which is related to the effects of the atomic bomb.

It is anticipated that the work of the Atomic Bomb Casualty Commission will contribute to our knowledge on the long-term aspects of the burns resulting from an atomic bomb. We expect to continue our support of the research project of Dr. Herman Pearse which is a broad study of the flash burn problem.

Thank you for your interest in this regard.

Yours sincerely,

/s/ Shields Warren

Shields Warren, M.D.
Director, Division of
Biology & Medicine