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MINUTES
 ADVISORY COMMITTEE FOR BIOLOGY AND MEDICINE
 SEVENTH MEETING
 Held at
 Brookhaven National Laboratories
 Upton, New York
 March 13, 1948

DEPARTMENT OF ENERGY DECLASSIFICATION REVIEW	
SINGLE REVIEW AUTHORIZED BY: <i>AA diiazalle 5/23/94</i>	DETERMINATION (CIRCLE NUMBER(S))
REVIEWER (ADB): <i>yes</i>	1. CLASSIFICATION RETAINED
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MINUTES

Advisory Committee for Biology and Medicine

March 13, 1948

The seventh meeting of the Advisory Committee for Biology and Medicine of the Atomic Energy Commission was convened by the Vice Chairman, Dr. Ernest W.

Members

Present

Goodpasture at 1:30 p.m. at the Brookhaven National Laboratories, Upton, New York. Present at the meeting were the following members: Drs. E. W. Goodpasture, A Baird Hastings, G. W. Beadle, J. T. Wearn, and Detlev W. Bronk; also attending were Dr. Shields Warren, Director, Division of Biology and Medicine, Drs. John Z. Bowers, G. Failla, D. D. Van Slyke, B. S. Wolf; and Mr. David Low, Mr. Robert Tumbleson, Mr. John Derry, and Mrs. Frances R. Montgomery.

Representa-

tives of

Brookhaven

Representing Brookhaven National Laboratories: Dr. P. M. Morse, Director; Dr. L. F. Nims, Chairman of the Biology Department; Dr. L. B. Borst, Leader of the Nuclear Reactor Project; Dr. F. P. Cowan, Health Physics Officer; Capt. R. D. Conrad, USN (Ret.), Asst. Director, Planning; Dr. R. A. Patterson, Asst. Director, University Liaison; and Dr. L. R. Thiesmeyer, Executive Asst. to Director.

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Representatives of Universities
Representing Associated Universities, Inc.:
Mr. Eldon C. Shoup, Executive Vice President; and
Mr. John Jameson, Asst. Treasurer.

Minutes of Meeting of February 14, 1948
The first order of business presented to the Committee by the Vice Chairman was a discussion of the minutes of the meeting of February 14, 1948. Dr. Hastings made a motion to adopt the minutes, motion was seconded by Dr. Bronk and unanimously approved.

Fellowship Program
Report on Progress of the Fellowship Program:
Organization within the National Research Council:
Dr. Detlev W. Bronk, Chairman, National Research Council, discussed in considerable detail the organization proposed by the National Research Council for the implementation of the Fellowship Program as sponsored by the Atomic Energy Commission. Dr. Bronk stated that inasmuch as there will be a fellowship program available in physical sciences under the categories of physics, chemistry, mathematics, astrophysics, possibly geology, and others, as reported to him by Dr. Holbrook M. MacNeille, Chief, Fundamental Research Branch, Research Division, as well as in biology and medicine, it was deemed wise to set up five new committees in the National Research Council. The committees will handle the administration of the Fellowship Program and the selection of

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candidates. The names of the Chairman of each of the committees are incorporated in the following statement as issued by the National Research Council:

"The National Research Council is announcing a new program of fellowships supported by funds provided by the Atomic Energy Commission as a part of the Commission's responsibility for future atomic energy research. Accordingly, these fellowships will be awarded in the many fields of science related to research in atomic energy and the products of atomic energy processes. A considerable number of these fellowships are available to young men and women who wish to continue in graduate training or research for the doctorate in an appropriate field of science. Others of these fellowships will provide training in biophysics applied to the control of radiation hazards. An additional number of fellowships will be assigned to those below the age of 35 who have already achieved the doctorate and who wish to secure advanced research training and experience in those aspects of the physical, biological and medical sciences related to atomic energy.

"The candidates will be selected by the fellowship boards of the National Research Council established for this program. In the postdoctoral field, there will be three groups of fellowships. For the selection of fellows for advanced research and training in the general field of the physical sciences, a board has been established with Dr. Roger Adams, Professor of Chemistry, University of Illinois, as Chairman. In the general field of the biological sciences, exclusive of the medical sciences, selections of postdoctoral fellows will be made by a board under the chairmanship of Dr. R. G. Gustavson, Chancellor of the University of Nebraska. For the selection of postdoctoral fellows in the medical sciences, a board has been set up under the chairmanship of Dr. Homer W. Smith, Professor of Physiology, College of Medicine, New York University.

"The program provides for two groups of fellows in the predoctoral field. One group of fellows will work in the biological and basic medical sciences including applied biophysics relating to the measurement and control of radiation hazards and the effect of radiation upon health. Selections will be made by a board under the chairmanship

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of Dr. Douglas Whitaker, Professor of Biology, and Dean of the School of Biological Sciences, Stanford University. Another group of predoctoral fellows will be selected for study and research in the general field of the physical sciences. Selections will be made by a board under the chairmanship of Dr. Henry A. Barton, Director of American Institute of Physics.

"Awards will be made for the academic year 1948-49. The program is administered by the National Research Council. Further information can be secured by writing to the Fellowship Office, National Research Council, 2101 Constitution Avenue, Washington 25, D. C."

There was a general discussion of the stipends of fellowships to be awarded and Dr. Bronk was of the belief that this could be ironed out in conferences among the committees and in all probability an agreement will be reached at \$3,000 as the basic stipend. Dr. Bronk thought it worthy of mention that of the five chairmen that have accepted appointments three of them were outside the Northeastern Area, one from California, one from Nebraska and one from Illinois.

The subject of income tax was discussed and Dr. Bronk stated that the fellowships would not be subject to deduction for income taxes as inquiry has been made of U. S. Public Health Service as to their fellowships and word has been received from them that they had been adjudged free of such deductions.

Dr. Bronk stated that he had a letter from Dr. Shields Warren which clarified the relation of the National Research

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Council with the Atomic Energy Commission in regard to predoctorate fellowships in biology and medicine.

The letter reads as follows:

"On January 28, 1948, the Commissioners approved a training program for scientists in the medical and biological aspects of atomic energy. On January 24, 1948 the General Manager signed a letter to you requesting that the National Research Council undertake the administration of such a program. Subsequently, there were preliminary conversations in regard to this program between various representatives of the National Research Council and the Atomic Energy Commission.

"The proposal from your office expressing the willingness of the National Research Council to administer this program was received, and at the meeting of the Advisory Committee for Biology and Medicine of the Atomic Energy Commission of February 14, 1948, certain broad policies were there delineated. This letter is to serve to state the views of the Advisory Committee for Biology and Medicine and the Division of Biology and Medicine of the Atomic Energy Commission.

"The Advisory Committee for Biology and Medicine and this Division would like to see established within the National Research Council a subcommittee of the National Research Council on Fellowships of the Atomic Energy Commission for training in biology, medicine, and health physics. It was further suggested that this subcommittee should develop under it appropriate panels in biology and agriculture and in the medical sciences. Not over seventy-five postdoctoral fellowships would be awarded by these two panels in the scholastic year 1948 as two-year fellowships. Of this number, approximately one-third would be in biology and agriculture and two-thirds in medical sciences. No hard and fast division is intended.

"A third fellowship panel constituted under the overall Committee would have responsibility of the selection of 100 predoctoral fellows. This fellowship training including health physics, (biophysics), biology and the basic medical sciences, will envisage two types of fellows: (a) Those of predoctoral research caliber, and (b) those studying health physics at the technical level.

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"The Atomic Energy Commission will provide sufficient funds to cover payment of fellowship stipends, reimbursement for tuition and necessary laboratory fees of institutions providing training, expenses incident to the convening of the appropriate fellowship boards and the other expenses necessary for the maintenance of an adequate administrative organization within the National Research Council.

"It is our understanding that the National Research Council will select the fellows, and according to your offer, operate the administrative and fiscal details of the program, including setting of stipends (in conjunction with the Division of Biology and Medicine of the Atomic Energy Commission), disbursement, maintenance of appropriate records on fellows, and necessary accounting. The Division of Biology and Medicine of the Atomic Energy Commission will develop teaching programs as necessary with such institutions or other facilities as it may select, and will pass on the programs of the fellows. The need of preserving to the fellow initiative in the place and type of training is recognized.

"It may be necessary to provide a period of fundamental training so that the fellows may gain maximum benefit from the fellowship program. While this is regrettable, the critical shortage of trained personnel dictates that such expediency is justifiable. It is understood that at all times there will be complete exchange between National Research Council and Atomic Energy Commission of knowledge and ideas so necessary to the success of such a program.

"This Division is deeply grateful for the willingness of the National Research Council to undertake this program, which is expected to continue for five years or as long as is necessary to maintain an adequate number of personnel in training in these particular fields."

Basic Training Centers: Dr. John Z. Bowers reviewed the training program up to the present time by discussing the meetings held with representatives of Duke University, University of North Carolina, State College of the

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University of North Carolina, Wake Forest College, Bowman Gray School of Medicine of Wake Forest College, Rice Institute, Baylor University School of Medicine, University of Colorado, University of Colorado School of Medicine, University of Denver, Reed College, and University of Oregon School of Medicine, on his recent trip around the country. He stated plans and ideas are now crystalizing at all of the selected universities to have the programs get underway early in the fall. Dr. Bowers emphasized to the representatives of each university that the Division of Biology and Medicine would rather develop a different type of training at each university in order to keep the training as elastic as possible. Furthermore Dr. Bowers suggested to each group that they undertake a broad program in biology and medicine with reference to broad dissemination of knowledge in atomic energy in their respective areas.

Training on applied biophysics: Dr. G. Failla suggested that "selected instructors at basic training centers be urged to spend the summer at one of the Atomic Energy Commission installations to familiarize themselves with the problems in order that they may plan the courses they will give with a better understanding of the needs of the fellows. Health physicists and others could

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cooperate with instructors in the preparation of the courses.

He suggested that the best qualified applicants for Health Physics Fellowships be given the opportunity to acquire a broad training in biophysics leading to a Ph. D. degree to supply the demand for first-rate men in this field in Atomic Energy Commission installations, universities, and industry.

Suggestion that clearance of visiting instructors be obtained beforehand."

Medical
Aspects of
Hazard Pay

Medical Aspects of Hazard Pay:

The Committee thoroughly discussed the medical aspects of hazard pay and recommended that exposure to permissible dosage of radiation and exposure to toxic material under satisfactory safeguards be regarded as not hazardous to health.

Commercial
Synthesis of
Isotopes
Policy

Policy with Regard to Encouragement of Commercial
Synthesis of Isotopes:

Moved by Dr. Hastings, seconded by Dr. Wearn and unanimously approved that the Committee approve in principle the encouragement of commercial firms to undertake synthesis of radioactive compounds and suggested exploring the legal aspects of contractual aid.

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Policy with
Regard to
Isotope
Farms

Policy with Regard to Isotope Farms:

The basic premise of isotope farming is to grow plants in media that contain radioactive isotopes that will synthesize them into organic compounds which may in turn be fed to animals and elaborated into other compounds. These compounds could be isolated and used for tracer experiments. Carbon 14 is one of major importance in this connection. P³² would be another. The question of what level of radiation should be used to get the most effective combination of highest activity with survival of the organism is still open. Moved by Dr. Hastings, seconded by Dr. Bronk and unanimously approved that up to \$15,000 be made available to explore the possibilities of "isotope farming."

Research
Projects

U. S. Department of Agriculture:

Dr. Warren reported on his recent conversations with Dr. P. V. Cardon of the Bureau of Plant Industry regarding determining the influence of radioactive materials on plant growth. The Soils Division of the Department of Agriculture proposes to act through the Experimental Station to determine the effect of low activities of particularly alpha but to some extent beta and gamma radiation on the growth and vigor of seedlings and the maturity of various crops.

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Dr. Warren recommended that the Advisory Committee for Biology and Medicine and the Division of Biology and Medicine cooperate and support this experiment. Moved by Dr. Beadle, seconded by Dr. Bronk and approved unanimously that Dr. Warren's recommendation be approved.

At 2:30 p.m. the Committee went into executive session.

Brookhaven

Brookhaven National Laboratories:

National

Laboratories

There was an extensive discussion of the program in biology at Brookhaven. The Committee noted with some apprehension that a relatively large group of personnel was being developed in biology at Brookhaven without adequate evidence of an integrated program with the degree of guidance that is desirable in an installation of this importance. The Committee recommended that personnel in the Division of Biology be frozen at the present level, and that emphasis be placed on the provision of facilities for guest investigators rather than as at present, exclusive emphasis on the building up of a local group of investigators. The Director of the Division of Biology and Medicine was requested to transmit this viewpoint to Dr. Philip J. Morse, Director of the Brookhaven National Laboratories, and to Dr. Leslie Nims, Chairman, Biology Department, and to explore with

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them the best means of making facilities available for guest investigators. The Committee felt that the projected additional laboratory and greenhouse facilities being planned or constructed should be pushed to completion. The Committee further felt that the proposed conversion of three of the old hospital buildings to provide a 40-bed hospital for medical care and medical research should be carried on promptly.

Civilian
Defense

Civilian Defense:

The problem of civilian defense was discussed in the light of the interest shown by many doctors and civic officials in this problem. The broad plans for the newly created Office of Civilian Defense were discussed and the Committee requested Dr. Goodpasture, Vice-Chairman, to transmit the Committee's interest and willingness to assist in a Civilian Defense Program to the Commissioners.

Biophysics
Program

Biophysics Program:

The Committee recommended that the program in biophysics at various universities be studied with a view to providing them increased support and strengthening their facilities where it would be to the advantage of the Atomic Energy Commission.

Southern
Research Insti-
tute

Southern Research Institute:

The Committee endorsed the action of the Director of Division of Biology and Medicine approving support

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in the amount of \$15,000 for the Southern Research
Institute for the study of "Body Retention of Carbon 14."

University

University of Illinois:

of

Illinois

The Committee gave full consideration to the request
for a betatron at the University of Illinois, and it was
recommended by them that the present policy of providing
special equipment at regional laboratories be continued
and that that policy be extended only to universities
having intimate contractual relations with the Atomic
Energy Commission.

April Meeting
of Advisory
Committee for
Biology and
Medicine

The next meeting of the Advisory Committee for Biology
and Medicine was set for Friday and Saturday, April 23 and
24, 1948 at the University of California, Berkeley,
California.

The meeting adjourned at 4:20 p.m.

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