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MINUTES

ADVISORY COMMITTEE FOR BIOLOGY AND MEDICINE

ATOMIC ENERGY COMMISSION

UNIVERSITY OF WASHINGTON AND HANFORD OPERATIONS OFFICE

January 13, 14 and 15, 1955

*Corrected.*

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ADVISORY COMMITTEE FOR BIOLOGY AND MEDICINE

January 13, 14, and 15, 1955

ATTENDANCE      Members of the Committee

Dr. Gioacchino Failla, Chairman  
Dr. Shields Warren, Vice Chairman  
Dr. Simeon T. Cantril  
Dr. Edward A. Doisy  
Dr. Curt Stern

Staff of the Division of Biology and Medicine

Dr. John C. Bugher, Director  
Dr. Charles L. Dunham, Deputy Director  
Dr. Paul B. Pearson, Chief, Biology Branch  
Dr. Douglas L. Wolf, Biophysicist  
Mr. Howard C. Brown, Jr., Executive Officer  
Mrs. Frances K. Montgomery, Secretary

Other Atomic Energy Commission Representatives

Mr. Merrill Eisenbud, Manager, New York Operations Office  
Dr. Joseph S. Butts, Consultant

Staff from the University of Washington

Dr. Henry Schmitz, President, University of Washington  
Dr. ~~George N. Aagaard~~, and staff  
Dr. Lauren R. Donaldson and staff  
Dr. ~~Clement A. Finch~~ and staff  
Mr. Neal Hines

Staff of the Hanford Operations office

Mr. David F. Shaw, Manager  
Dr. Herbert M. Parker and staff  
Mr. Kenneth England  
Mr. W. E. Johnson, Manager, General Electric

*James Hanland*

*Robert H. Williams*

University of Washington

Seattle, Washington

January 13, 1955

The Advisory Committee for Biology and Medicine, and Dr. John C. Bugher, Director, Division of Biology and Medicine with his associates visited the University of Washington, Thursday January 13, to inspect the local projects in the fields of biology and medicine.

A very interesting and informative day had been planned by the staff. The morning was devoted to learning of the development of the medical school and its scientific programs.

A series of short talks by local staff members on University research programs were presented with Dean <sup>Asst James Hanland</sup> ~~George N. Asgaard~~, of the School of Medicine presiding. Upon their conclusion, informal visits were made to the clinics, laboratories, and research areas.

After luncheon an inspection was made of the Applied Fisheries Laboratory and discussions were held with Dr. Lauren Donaldson regarding Pacific Proving Ground work.

Dr. Donaldson's staff reported on some aspects of the research program of the Applied Fisheries Laboratory which included:

Program of fundamental studies on the effects of exposure to radiation; Studies of problems related to the fish populations of the Columbia River; Field studies in radiation biology at the Pacific Proving Grounds as well as Future Programs of the Laboratory.

Dr. Donaldson spoke briefly on his recent visit to Eniwetok and of the extensive ecological study in progress and of the collections and readings made at Rongelap. At Rongelap in addition to the physical survey an evaluation was made of the food situation.

In his closing remarks he said that they were indebted to the AEC for providing the Marine Biological Laboratory at Eniwetok. Three times as much work had been accomplished since the laboratory was opened than had been possible before - as "there is no substitute for having a suitable place to work." The Committee felt that the medical and biological research at the University of Washington is guided by an exceedingly competent group of scientists and is progressing extremely well. Many favorable comments were expressed on the buildings and general lay out of the Division of Health Sciences.

Meeting  
Health Sciences  
Auditorium

Dr. Henry Schmidt, President of the

University of Washington had arranged for his colleagues to assemble in the Health Sciences Auditorium to meet the Advisory Committee and to hear an informal address by Dr. Bugher on the scientific programs of the Division of Biology and Medicine and the Atomic Energy Commission. Dr. Bugher spoke of the rapid development of the Medical School and of its scientific research programs and he said that the Committee would look forward in the future to learning of the accomplishments in the utilization of atomic energy in medicine and biology.

After a most enjoyable social hour and dinner the group entrained on a special car on the Northern Pacific from Seattle to Pasco. Previous arrangements had been made for the use of a special car for the Advisory Committee and the staff of the Division of Biology and Medicine in order that they could hold a briefing session on the Agenda that was to be used at the meeting at the Sanford Operations Office on Friday and Saturday, January 14 and 15, 1955.

January 14 and 15, 1955

Friday, January 14, 1955 The Committee had a most interesting meeting in the Hanford area on Friday and Saturday, January 14 and 15, 1955. The first morning was made up of a tour of the facilities of the Radiological Sciences Department of the General Electric Company. In the afternoon the staff presented over-all discussions of the objectives of their programs and the progress of the work in biology and medicine. The tour included the Biology Section Laboratory which houses the work of the Biology Control, Metabolism and Plant Nutrition and Microbiology. The Aquatic Biology Laboratory which had been completed since the Committee held their 25th meeting at Hanford in January, 1951, includes fish ponds and has as a part of its equipment a thirty-foot river sampling boat. The visit to the Biophysics Laboratories was one of particular interest wherein work on Regional Radiation, Instrument Development, Physics, Methods and Industrial Hygiene was in progress.

Saturday, January 15, 1955

9:00 A. M.

The Chairman convened the meeting and asked Dr. Bugher to open the session by speaking of the current activities of the Division.

Current Activities Dr. Bugher gave a resume of the major happenings in the Division since the December meeting. He mentioned the proposed staff paper to the Commission which would establish a permanent medical research center and medical reactor at Brookhaven National Laboratory. The Committee reiterated their previous recommendations as made at the meeting at UCLA in December, 1954, that money should be appropriated by the Congress to be used by the AEC for the construction of a permanent Medical Research Center at Brookhaven National Laboratory.

Brookhaven National Laboratory Cosmotron Dr. Bugher reported on the short in the

Brookhaven Cosmotron which badly damaged one section of the accelerator. No persons were injured in the accident. He spoke of the damage to the cosmotron itself and related some details on the problems of dismantling it in order to make the necessary repairs. The repairs are being made by regular Laboratory personnel who have been diverted from other tasks and it is hoped that the cosmotron will be again running by March first.

Geneva Conference Dr. Bugher told of his visit to Geneva,  
World Health Organization

Switzerland on December 13, 14 and 15, 1954, together with representatives from Canada, Great Britain and Belgium to participate in a preliminary International Conference at the invitation of the Secretary General of WHO. The purpose of the Conference was to explore with the top staff of WHO medical and health problems associated with the peace-time applications of the atomic energy program and to advise the Secretary General relative to the role that WHO should play in this new area.

Dr. Bugher spoke of the Resolution #230 passed by the General Assembly of United Nations. In accordance with this resolution the Advisory Committee for Peaceful Uses of Atomic Energy is expected to consult with WHO concerning the plans and Agenda for the conference.

An abstract was made of each day's session of the meeting in Geneva and is available in the files of the Division of Biology and Medicine.

International Conference In connection with the discussion on the International Conference which is scheduled to be held in Geneva in August, 1955, Dr. Bugher brought out that both he and Dr. Dunham were quite concerned with the character of the proposed Agenda. He presented a new and revised Agenda for the consideration of the committee which had been formulated in the Division of Biology and

Medicine. He said that this Agenda covers medicine and biology, public health, genetic effects, special isotopes, ecology, waste disposal, etc., and will be presented to the General Assembly for their consideration and approval.

A full discussion ensued on the topics on the proposed Agenda.

The Committee felt that it was better to pick out a few topics in the way of orientation rather than to try to cover the entire atomic energy field.

Dr. Bugher spoke of Ambassador Lodge's statement regarding special training of foreign students in the United States. He brought out that it had been agreed in Geneva that a student should avail himself of what his own country has to offer before obtaining a fellowship in this country. In other words send doctoral or post-doctoral people on exchange fellowships.

Japanese Conference on Radiobiology Dr. Pearson presented a formal report on the

conference held in Japan on Radiobiology and radiological physics. He stated that the conference was held at the request of the Science Council of Japan and that it was considered by all to have been very successful. As a result of this conference the American Embassy in Japan feels that we should encourage closer liaison with Japanese scientists as a means of maintaining good diplomatic relations.

Dr. Pearson explained that, as a gesture of friendship, they had given to the Japanese some radiation detection and monitoring equipment and component parts - and that considerable favorable publicity had been given to this by the Japanese newspapers.

As a by-product of this discussion, the Committee was in full agreement with Dr. Bugher that it would be provident to initiate immediately another oceanographic survey. Suggestions were made that if feasible, it might be well to ask the Japanese to participate in the next survey, as it might further diplomatic relations.

Note A copy of Dr. Pearson's report is in the files of the Division of Biology and Medicine.

Atomic Bomb Casualty Commission Mr. Eisenbud followed by reporting on his visit to the Atomic Bomb Casualty Commission in November, 1954.

He brought out that, in his opinion, the accomplishments and potential yield scientifically of the project justify its continuation at approximately the current level of support for not less than another three years.

Mr. Eisenbud included in his report the following recommendations:

"Recommendations

1. The name of the project be changed to Hiroshima Institute of Medicine, Japan-American Institute of Radiological Studies or some other designation more appropriate in the present context of

Japanese-American relationships than Atomic Bomb Casualty Commission.

2. A Japanese scientist of appropriate stature should be invited to serve in an ex-officio capacity on the CAC. His attendance at at least one meeting a year should be encouraged.

3. The proposal for establishment of an Isotopes Laboratory be approved, subject to adoption of the following objectives:

- a. The Chief, Isotopes Laboratory should be a Japanese national of appropriate scientific stature.
- b. The facilities be made available to the physicians of Hiroshima as a clinical facility.
- c. It be understood at the time of installation that the facility is being provided on a trial basis, and that it may be withdrawn in 6-12 months if its continued maintenance is no longer justified by the demand for its use.

4. Provide inducements to attract capable young Japanese scientists to the project:

- a. Recruit 12 graduates each year and provide them with a one-year residence at the project. Formal lectures, laboratories, exercises and clinics should be arranged and language instruction provided.
- b. After completion of this year in residence, 4-6 of the candidates should be sent to the United States for two years of further training.

c. When the three years of training have been completed, the students should be absorbed into the project.

5. Information programs in Japan and the United States should be directed at achieving a more general appreciation of the existence and aims of the project, and publicizing the scientific findings."

Upon the conclusion of Mr. Eisenbud's report, Dr. Doisy expressed admiration for the excellent reports by Dr. Pearson and Mr. Eisenbud and asked that his impression be considered as a motion.

Dr. Stern seconded the motion and it was approved unanimously.

Note A copy of Mr. Eisenbud's report is available in the files of the Division of Biology and Medicine.

Radioisotopes for Medical Research A brief discussion was held on the changes

suggested in the proposed report to the General Manager on the use of radioisotopes for medical research.

Dr. Warren explained the historical background regarding the subsidy for cancer research and therapy that the Congress had approved during the early days of the atomic energy program or in 1948. A further report and discussion will be held at the meeting which is scheduled to be held at the AEC in Washington on March 11, 1955.

Health & Safety Criteria for AEC Licenses Mr. Brown reviewed the proposed new

regulations concerning the Health and Safety Criteria for AEC Licenses. He referred to the enabling as well as limiting features of the Atomic Energy Act of 1954 and pointed out that the regulations will establish standards for the protection of health and safety against radiation hazards arising out of activities licensed by the AEC.

Hanford Operations Office Dr. Bugher made several favorable comments regarding the present Hanford Program. He said that the staff is looked to for a great deal of advice, guidance and consultation in matters of permissible limits of radiation and that they partake widely in the analysis of the problems of radiology and radiation physics. Dr. Warren expressed commendations for the persons who had to do with the planning of the biological laboratories. He said the transformation of the existing shells at Hanford into efficient and attractive laboratories had been extraordinarily well done and an excellent set up has evolved.

Dr. Cantril stated that Hanford has acted as a Training School and supplied important personnel to many other laboratories which is only one of its notable achievements.

Dr. Parker brought the Committee up to date on the enormous amount of work going on in the Columbia River basin which concerns not only the AEC but other agencies of the government and States. He said that

special emphasis is being placed on the waste disposal program.

Mr. W. E. Johnson The Committee was greatly interested in the report  
Manager, General  
Electric Company

made by Mr. Johnson on the matter of human exposure and of the difficulties in trying to see five years ahead in making plans for the Separation Plants. He explained that this problem is going to require intensive study and effort by Dr. Parker and his staff - for the next two or three years.

Vote of Thanks Dr. Warren made a motion to express the thanks and appreciation of all members of the ACEM and the staff of the Division of Biology and Medicine to the staff of the Hanford Operations Office and to the officials of the General Electric Company for the very worth-while and profitable time they had at Hanford. Dr. Doisy seconded the motion and it was approved unanimously.

Next Meeting The forty-ninth meeting of the ACEM is scheduled to be held at the Atomic Energy Commission in Washington, D. C., on Friday and Saturday, March 11 and 12, 1955.

Adjournment The Meeting adjourned at 2 o'clock in order to make a visit to the Separation Plants and the Meteorology Tower.