

July 20, 1953

Mr. Lewis L. Strauss  
Chairman  
U. S. Atomic Energy Commission  
1901 Constitution Avenue, N.W.  
Washington 25, D. C.

Dear Mr. Strauss:

I would like to report to you on the recent activities of the Advisory Committee for Biology and Medicine and to apprise you of a few of the significant developments which have occurred in connection with the Committee's most recent meetings. Before doing so, however, perhaps it might be timely and helpful to summarize very briefly the functions of the Advisory Committee for Biology and Medicine, as we have interpreted them, and the working relationship which exists between the Committee and the Division of Biology and Medicine.

Technically, the Committee is advisory to the Commission, not to the Division of Biology and Medicine. We have not, as a general rule, regarded it as wise, or within the scope of our authority, to approve or disapprove specific actions of the Division. The presumption is that the Division is competent to make operating decisions. Evidence to the contrary would be regarded by the Committee as a personnel matter and would be discussed with the Commission on that basis. Rather, the Committee regards its function to be that of assisting the Division in sighting and identifying its research objectives; helping to formulate a well-balanced and integrated research program; and guiding the Division in the initiation and support of research in order to assure best utilization of available facilities and scientific potential. As retiring acting chairman of the Committee I might make the further observations that the Committee serves as a nexus between the Commission and the medical and biological academic world, and we would like to believe that it assists in maintaining scientific vigor in the Commission's research program. In addition, the guidance of the Committee on research policy matters and in decisions involving health and safety should be of service to the Commission.

In order to assure optimum effectiveness it has been the Committee's desire and the Division's practice to make it possible for the Committee to hear about health problems and program responsibilities from the operating people who have them, and to visit and inspect AEC facilities. For these reasons, at least three of the five yearly meetings are held at locations where the Division has a substantial research or health protection interest. From the Committee's view this practice has aided the Committee greatly in understanding these problems.

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On May 8 and 9, with the approval of the Commission, the Advisory Committee for Biology and Medicine met with representatives of the Canadian Atomic Energy Project in Chalk River under the auspices of the Technical Cooperation Program. The Canadians were most grateful for the opportunity to exchange information of mutual interest and their hospitality reflected their appreciation. The minutes of this meeting contain in detail the subjects discussed and decisions reached. There are two points, however, which I believe are particularly significant and should be of interest to you:

1. It is evident that the Canadians have led the way in making available for medical purposes high specific activity cobalt sources for teletherapy and have demonstrated that cobalt therapy can be achieved with a relatively small capital investment, when compared with multi-million volt X-ray equipment.
2. The Canadians are keenly aware of their strategic position between the United States and the polar route of a possible Russian attack. Consequently, some of the lethargy which is found in the United States on civil defense matters is almost completely absent there. They expressed considerable interest in the civil defense program in the United States and especially those phases which had to do with protective construction and prevention against and treatment of radiation, thermal and blast injury. We all came away more convinced than ever that in so far as United States civil defense is concerned, the international boundary line should serve as a reminder of our interdependence, especially in the biomedical field wherein most of the data are unclassified. It was the unanimous feeling of the Committee that a closer liaison should be maintained with the Canadians.

More recently, namely, on June 26, 27 and 28, 1953, the Committee met in Boston for the purpose of reviewing the research programs supported by the Division at the Cancer Research Institute of the New England Deaconess Hospital, the Massachusetts General Hospital, and the School of Medicine at Harvard University. The Committee inspected the physical facilities and reviewed the research programs at all three institutions. Briefly, the Committee's reactions to the programs reviewed were these:

Cancer Research Institute, New England Deaconess Hospital. (F.Y. 1953 - \$169,388). The research conducted under the direction of Dr. Shields Warren at this recently dedicated institution involves a number of unique investigations related to acute radiation injury. Outstanding are the histopathological and histochemical studies with the new ultraviolet absorption color-translating microscope, the endocrine changes in parabiotic rats, and the hematologic aspects of radiation injury. More recently special emphasis has been placed on the pulmonary pathology resulting from the inhalation of particulate material, a subject of fundamental concern in the genesis of lung carcinoma.

Massachusetts General Hospital. (F.Y. 1953 - \$54,435). The research group at the Massachusetts General Hospital is headed by Dr. Joseph C. Aub. His group, comprising an unusual collection of scientific talent, is mainly interested in the investigation of biochemical effects of radiation at cellular and subcellular levels. You may recall that the program at the Brookhaven National Laboratory involving neutron capture treatment of brain tumors is a cooperative effort with Dr. Sweet who is a member of the Massachusetts General Hospital research group.

Harvard Medical School. (F.Y. 1953 - \$130,448). After reviewing the research underway at Harvard, it was the opinion of the Committee that the work generally is basic research of excellent quality. The program falls into several distinct fields, each with its group leader. The biophysical laboratory, which includes many service functions to other parts of the University, is the largest single program. Biochemistry is directed by Dr. A. Bird Hastings, toxicity of radioactive substances by Dr. Joseph C. Aub, and special pathology by Dr. Shields Warren. The Committee was pleased to learn that in addition to the studies previously conducted on the effects of ingested radioisotopes, the Harvard group proposes to study radiation changes in human and experimental pulmonary tissues preliminary to more intensive work related to the effects of radioactive particles. More precise quantitative answers to questions pertaining to the effects of such inhaled particles are urgently needed.

Over the weekend the Committee reviewed the Off-Site Research Program which now involves 370 contracts in over 150 institutions throughout the nation. Of this number there are approximately 264 contracts which are of the grant-like, joint participation variety. In connection with this review, the problem of overhead reimbursement on grant-like contracts was again discussed. Our previous deliberations on this thorny problem were reported by Dr. Alan Gregg in his letter to Chairman Gordon Dean of February 6, 1953. At this meeting, the Committee made the strong and unequivocal recommendation that all institutions receive uniform treatment and that there be a clear and workable AEC policy on overhead uniformly applied.

The next meeting of the Committee is scheduled to be held at the AEC in Washington, D. C. on September 11 and 12, 1953.

The meeting in Boston, which I was privileged to chair, marked my last meeting as a member of the Advisory Committee. As you know, it is Committee policy that members serve on a rotary basis, one of the seven members retiring each year. You may recall that it was in September of 1947, when you were serving your first term as Commissioner, that I accepted Mr. Lilienthal's appointment to serve on the Committee. I should like to take this opportunity to try to tell you how much it has meant to me to have had the privilege of serving on this Committee. It has been a most stimulating and educational experience to serve with

this splendid and outstanding group of men on the Committee and in the Division of Biology and Medicine. Throughout the six years there was full and frank discussion of every problem and the highest ideals and standards were maintained. The members were motivated by a determination to maintain the highest type of program, always conscious that the opportunity was ever present for constructive advice to the Commission. The confidences shown by the Commission in the work of the Committee has been most heartening. For me it was a rich and rewarding experience and I shall continue to have the keenest interest in the work of the Commission and especially in that of the Division of Biology and Medicine.

With best wishes for every success in your regime as Chairman of the Atomic Energy Commission.

Yours sincerely,

Joseph T. Wearn, M.D.  
Acting Chairman  
Advisory Committee for  
Biology and Medicine