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MINUTES

111th Meeting

ADVISORY COMMITTEE FOR BIOLOGY AND MEDICINE  
U. S. ATOMIC ENERGY COMMISSION

January 13-15, 1966

Puerto Rico Nuclear Center  
San Juan, Puerto Rico

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The 111th meeting of the Advisory Committee for Biology and Medicine was held at the Puerto Rico Nuclear Center on January 13-15, 1966. Committee members present were Drs. Fred J. Hodges (Chairman), James H. Sterner (Vice-Chairman), William F. Bale, Philip P. Cohen, Earl L. Green, Carl V. Moore, Morell B. Russell, Harvey M. Patt (Scientific Secretary), and Miss Rosemary Elmo (Executive Secretary). Dr. Mary I. Bunting was unable to attend. Also present were Dr. C. L. Dunham, Director, Division of Biology and Medicine, and various members of the DBM staff.

The agenda was devoted to 1) scientific presentations and a tour of facilities arranged by Dr. John C. Bugher, Director of the Puerto Rico Nuclear Center, 2) a discussion of Nuclear Center affairs and items of general interest with senior staff of the Nuclear Center in attendance, and 3) an executive session of the ACBM. The meetings on January 13 and 14 took place in Río Piedras and on January 15 in Mayaguez.

The purpose of the Nuclear Center was reviewed by Dr. Bugher who emphasized that the base program was concerned with education and training in nuclear science and was oriented primarily to the needs of Central and South American scientists. The research activities are intended mainly to complement the educational objectives. There are, however, at least two research areas in which the Center can make a special contribution, viz. terrestrial ecology and marine biology.

Presentations by the Nuclear Center staff covered:

1. The Rainforest Ecology Program (Odum and Kline)
2. Virology and Schistosoma Programs (Weinbren)
3. Activities of the Radioisotope Division (Roig)
4. Nuclear Medicine (Irizarry)
5. Oncology and Radiotherapy (Marcial)
6. Sugarcane and Food Irradiation Programs (Luse)
7. Marine Biology (Lowman)
8. Physics (Cobas)
9. Nuclear Science and Engineering (Gomberg)

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The present status of the various research activities is summarized in progress reports made available to the ACBM. The Committee had an opportunity to observe at first hand the ecology program at El Verde. Another highlight of the meeting was a field trip at Mayaguez aboard the Shimada. The studies of trace element cycling in marine organisms by Lowman and of terrestrial ecology in the El Verde Rain Forest by Odum are particularly noteworthy and represent an important contribution to the total DBM program. The ACBM was also pleased to learn of the progress by Marcial in the development of an effective training and clinical research program in radiation therapy and of the associated studies in cancer epidemiology.

The problem of securing adequate financing for Nuclear Center activities was placed before the ACBM by Dr. Bugher, who noted that the budgetary ceiling for the core training program, which has existed for three years, has placed a severe constraint on maintenance of even the present level of activity. If the training program is to keep pace with developments elsewhere in Latin America, upgrading is essential and additional support must be found for this. This program is now funded by the AEC's Division of Nuclear Education and Training. It was formerly funded by the Division of International Affairs. Dr. Bugher indicated that the Nuclear Center Advisory Committee has suggested that additional support might be sought from the National Institutes of Health through a contract mechanism with the AEC similar to that at Oak Ridge. While this arrangement might be appropriate for certain activities, the ACBM noted that an approach for support of the base training program in nuclear science and technology might be made to an agency with an international mission such as the Agency for International Development. Partial support by the Commonwealth or University of Puerto Rico is apparently not possible at the present time.

Dr. H. D. Bruner, Assistant Director of DBM, briefed the ACBM on the recent visit to the Soviet Union of several U. S. scientists who are interested in "Radioneurobiological" problems. Conferences were held at ten laboratories with representative Soviet scientists. Dr. Bruner noted that the electroencephalographic studies were of high quality, although there was some question about significance of the conditioned reflex studies. It appears that certain aspects of CNS function are more radio-sensitive than formerly thought by many U.S. investigators.

Dr. John Totter, Associate Director for Research, DBM, advised the ACBM of a recent report by Dr. F. C. Stewart on cytogenetic effects of irradiated media. (Nature 208:850, 1965). He noted that the results were not surprising and probably not pertinent to the practicality of food irradiation. Although extensive tolerability studies have already been made, DBM may encourage a further study in mammals with the specific objective of determining whether there are any chromosome changes with high levels of irradiated food in the diet.

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Dr. Robert Rabson, of DBM, informed the ACBM of the recent review of photobiological and chemical research. The report of the ad hoc review committee is not yet available. Dr. Rabson emphasized the effective interaction of the participants in the several regional information meetings.

Dr. Dunham noted that the Oak Ridge Graduate School of Bio-Medical Science has been formally activated as a component of the University of Tennessee. The Ford Foundation may provide interim financial assistance. He indicated also that, because of budgetary limitations, the proposed expansion of biomedical research activities at Oak Ridge will proceed at a more modest pace than recommended in the DBM staff paper.

Mr. Charles Eason, Chairman of the Task Force on Federal-State Cooperation in Workmen's Compensation for Radiation Injury, described for the Committee the Commission's activities in the workmen's compensation field since the October meeting of the ACBM. Dr. William T. Doran, Chairman of the Interagency Committee on Records and Reports Systems for Occupational Experience with Ionizing Radiation, described the Committee's recommendations. The system proposed would be an employer-state-federal record system which would include State audit and experts' review and analyses functions. The Advisory Committee for Biology and Medicine endorsed the outlined plan as sufficient for public discussion and advised that the Records System be sent to interested parties for review before a final program is instituted by the Commission.

In the executive session, the ACBM reviewed nominees for the 1966 E. O. Lawrence Award in the life sciences. The following were recommended to the General Advisory Committee in order of priority, 1) Ernest C. Anderson, 2) Mortimer M. Elkind, and 3) George Casarett.

The Minutes of the 110th meeting of the ACBM were approved as circulated.

The 112th meeting will take place on March 10-11, 1966 at the Lawrence Radiation Laboratory, Livermore, California, with an executive session at the AEC San Francisco Operations Office, Berkeley, on March 12.

Respectfully submitted,

/s/

Harvey M. Patt  
Scientific Secretary, ACBM