Dr Charles S. Dunham

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DEPARTMENT OF HEALTH, EDUCATION AND WELFARE
U. S. Public Health Service
National Institutes of Health
Bethesda 14, Maryland

May 17, 1954

405114

Committee on Radiation Studies
Interim Report of the Executive Secretary

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Because the Committee on Radiation Studies has not met since October 12, 1953, this report is an attempt to give an account of the events related to its program which took place since that time and which might be of interest to the members.

1 - Long-Term Studies in Primates.

Because several different branches of the Federal government appeared to have an interest in the national long-term primate program proposed by the Committee, Public Health Service staff met with representatives of the Office of Naval Research, the Atomic Energy Commission, and the Air Force, for the purpose of obtaining more precise information on how such a program must be organized. The latest revised form of the project, including suggestions made by the Committee members on October 12 and copies of letters pertaining to it from Dr. Snider, were used during the discussion.

All three agencies expressed a definite interest to indicate approval, in principle, of the initiation of the program in some form. Opinion of several, however, was to the effect that attention should be concentrated at the outset on the radiation phase, with the gerontological and other aspects to be developed at a later date. Others expressed the view that the more important aspect of the proposal, was the gerontology or broad research program thereby suggested, and that the radiobiology research would serve as the means of implementing the gerontology program.

Dr. Lawton of the Air Force, pointed out that there is already in progress a very large and highly classified primate program sponsored by the Air Force at the University of Texas.

It was the belief of the group, therefore, that it was important to become fully informed as to the activities of the Air Force primate program prior to proceeding with the plans for this proposal.

At the November meeting of the National Advisory Cancer Council, Dr. Kenneth M. Endicott, Scientific Director, Division of Research Grants, presented for discussion the Committee on Radiation Studies of establishing a long-term program for study of the chronic effects of radiation on primates.

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Dr. Charles L. Dunham added that the Atomic Energy Commission has an interest in this research area, and Dr. Alfred Lawton stated that the Air Force would also be interested, and that they already have such a primate laboratory in operation on a small scale, but the research conducted is designed to fit the particular needs of this agency and the information resulting therefrom is highly classified.

The National Advisory Cancer Council approved the proposal in principle, and recommended that the Public Health Service explore fully the possibility of establishing a primate colony for long-term studies in line with the project outlined by the Committee on Radiation Studies. The Council recommended also that the Public Health Service staff should, administratively, take the initiative with other agencies to implement the program and bring back to the Council a more specific proposal.

At the request of the Cancer Council and the Surgeon General, a Steering Committee was appointed, composed of Drs. Kenneth M. Endicott, Division of Research Grants, Charles L. Dunham, Atomic Energy Commission, and Ray S. Snider, Chairman, Committee on Radiation Studies, to make necessary contacts and to prepare a well-formulated proposal(s) from appropriate universities. In the course of negotiations, it became evident that prior to doing this, thorough exploration was needed of the primate program of the Air Force. A visit by two members of the Steering Committee to both the Austin and San Antonio laboratories was made to see the facilities and to discuss with the Air Force staff their current activities and future plans related to the long-term primate program. A report of the Committee on Radiation Studies will be made by the Steering Committee at the meeting of May 21, 1954.

2 - Proposal for a Central Radiation Biometric Panel.

The opinion of Dr. Harold F. Dorn, Chief, Office of Biometry, National Institutes of Health, concerning the suggested punched card protocol was solicited by the Executive Secretary and submitted to Dr. Furth. A personal conference on this matter was held at a later date with Drs. Dorn, Furth, Meader, and the Executive Secretary attending. It was agreed that final decision should await discussion of this problem at the 1954 Radiation Conference.

3 - Committee Recommendations on Applications for Research Grants.

Because there were only four applications assigned for review by the Committee on Radiation Studies for Council action in February 1954, and because some members were unable to attend the January meeting, several other members questioned the justification of holding a meeting in Bethesda. It was, therefore, decided to cancel the January 7th meeting

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and to obtain the evaluation and recommendations regarding the pending applications by mail ballot. The statements of final recommendations submitted by the members were summarized by the Executive Secretary for use by the National Advisory Councils concerned. The Committee recommendations, together with justifying statements on all applications are appended to this report in the form of summary sheets.

4 - Plans for the Spring Meeting.

Based on a mail ballot, the Committee members first chose to meet in Atlantic City on April 12, 1954 preceding the Federation Meeting, and the Conference was scheduled to be held on April 11, 1954. The dates of the Conference and meeting were later changed to May 20 and 21, 1954 to be held in Cleveland, Ohio following the annual meeting of the Society for Radiation Research.

5 - Resignation of Dr. Simeon Cantril.

It is with regret, indeed, that the Division of Research Grants received Dr. Cantril's resignation from the Committee on Radiation Studies because of the pressure of other commitments which he had undertaken at that time.

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SUMMARY SHEET

Committee on Radiation Studies (MAIL BALLOT)
February 1954 Council Meeting

B-653

Dr. Roberta Rugh, Associate Professor of Radiology(Biology)
College of Physicians and Surgeons, Columbia University, New York 27, N.Y.

"A Study of the effect of Ionizing Radiation on the Development of the Monkey Embryo"

Year	Requested	Recommended	Previous Commitment	Grant Period
1st	$27,432			
2nd(C)	20,000			
3rd(C2)	20,000			
4th(C3)	20,000			
5th(C4)	20,000			

REQUESTED BEGINNING DATE: April 1, 1954

RECOMMENDATION: Approval - 5
Deferral - 1
Disapproval - 5

PRIORITY SCORE: ---

COMMENTS:

Approval

The project aims have merit. It is difficult, however, to see how one can improve upon the results being obtained by the Russels at Oak Ridge and by S. J. Hicks.

In the investigator's laboratory similar studies in lower species proved to be highly successful in defining radiosensitive periods in the embryo and correlating them to developmental stages. Although such a study in primates lacks originality, nevertheless it is worth undertaking. The scientific returns will probably be small; however, newer data may be expected from carefully done experiments, and such studies may yield leads to basic physiologic processes.

The investigator, though a competent embryologist, does not appear to have much originality and depth, but is qualified to do the work. He is a part of an active group interested in this area of research. With their

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FINAL ACTION: February 1954 — Disapproval by National Advisory Neurological Diseases and Blindness Council with advice for resubmission; deferral by National Advisory Cancer Council.

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Committee on Radiation Studies(MAIL BALLOT)
February 1954 Council Meeting

B-653

COMMENTS: (Continued)

Approval (Continued)

advice and encouragement, particularly Dr. Engle's and Dr. Gregersen's, some worth-while results may be expected.

Deferral

Pending resubmission of a more specific and concise proposal by the investigator in his own area of interest.

Disapproval

The applicant is a member of an excellent group of researchers at Columbia University. He has considerable experience in the field of embryology, but he does not have much originality or depth. The project proposed promises little of scientific value; it is well-conceived, but it is unlikely to contribute leads or develop new fields of investigation. The results obtained cannot be expected to be interpretable.

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Committee on Radiation Studies(MAIL BALLOT) C-2185
February 1954 Council Meeting

William H. Bauer, M.D., Professor of Pathology, Director of the Department of Pathology
Arthur W. Burke, Jr., B.A., M.A., Graduate Student, Research fellow.
St. Louis University, School of Dentistry, St. Louis 3, Missouri

"The x-ray sensitivity of ascites tumor in vitro under oxygen and nitrogen at room and low temperature"

Year	Requested	Recommended	Previous Commitment	Grant Period
1st	$9,960			

REQUESTED BEGINNING DATE: July 1, 1954

RECOMMENDATION: Approval - 8
Disapproval - 3

PRIORITY SCORE: 300 (based on 6 ratings)

COMMENTS:

Approval

The problem submitted appears to be a continuation of the work initiated by Mr. Burke, in association with others, at the Oak Ridge laboratories. There is nothing novel or fundamental in the approach proposed, though the experience in the Biophysics Department of this institution in preserving living cells in the frozen state (-190°C), and the experience with ascites tumor suggests that the proposed study of the radio sensitivity of an ascites tumor in vitro would be well carried out. Although no major contribution is to be expected, and the results of this investigation can be predicted from the many data already available in the literature, it seems worth-while to support this project.

The sum requested appears excessive; it is difficult to justify the salaries for both a full-time technician and an animal caretaker. The research fellow and part-time animal attendant should be quite adequate to carry out the work planned. Therefore, approval at the level of $4,500 - $5,000 is recommended.

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FINAL ACTION: Approval; $6,240 plus overhead or $6,739 for one year - 6/1/54 - 5/31/55.
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Committee on Radiation Studies(MAIL BALLOT) C-2185
February 1954 Council Meeting

COMMENTS: (Continued)

Disapproval

The experiments outlined have very little chance of producing data of value. It is doubtful if there were much of any survival of cells frozen in -190°C. The investigators seem to demonstrate little knowledge of physiology.

EXECUTIVE SECRETARY'S NOTE:

Mr. Burke, considered a bright, young investigator, is a candidate for the Ph.D. in Biophysics under Dr. B.J. Luyet. The proposed work is related to the studies he is conducting for the thesis required towards the doctorate degree.

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Committee on Radiation Studies (MAIL BALLOT)
February 1954 Council Meeting

C-2283

Titus C. Evans, Prof. of Radiology and Radiobiology
Head, Radiation Research Laboratory
College of Medicine, State University of Iowa, Iowa City, Iowa

"A Study of Possible Factors in Radiosensitivity"

Year	Requested	Recommended	Previous Commitment	Grant Period
1st	20,628			
2nd(C)	8,748			
3rd(C2)	5,940			

REQUESTED BEGINNING DATE: March 1, 1954

RECOMMENDATION: Approval - 7
Disapproval - 4

PRIORITY SCORE: 180 (based on 5 ratings)

COMMENTS:

Approval

The rather broad objectives of the application are here considered as desirable because: (1) the experience and thoroughness of the investigator will lead to careful observations relative to the proposed aims; and (2) in the course of these experiments it is anticipated that other worth-while objectives will become manifest.

The major and necessary item of x-ray apparatus is warranted and will be well used. The rest of the budget for the first year and for the succeeding years is considered modest for the work proposed. The organizational set-up is sound. It is noteworthy that this is one of the few institutions which provides generous support for research in mammalian radiation biology.

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FINAL ACTION: Approval as requested.
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Committee on Radiation Studies(MAIL BALLOT)
February 1954 Council Meeting

C-2283

COMMENTS: (Continued)

Disapproval

The program described represents a survey type approach to searching for a metabolic criteria for radiosensitivity. The research plan outlined is diffuse, not well organized, and gives scant information on procedures. Its scope is such that it would take many years to obtain significant data from the numerous experiments proposed. Moreover, there is already considerable information available on some of the specific aims of the project. In addition, other radiobiologic research groups are investigating some of the listed aims.

Finally, it is apparent that the main purpose of the application is to obtain funds for a high powered x-ray machine. Dr. Evans is well known to these members of the Committee, and they feel that he is doing good, though not particularly original, work. However, since he is being supported by the Atomic Energy Commission and essentially for the same work, and the x-ray machine is required for those studies, it is felt that funds for the equipment should be provided by that agency. If that is not possible, then in his search for additional funds, the investigator should present to the Public Health Service a specific research problem other than that supported by the Atomic Energy Commission. It could include an x-ray machine, if it is needed, but should not be essentially just a request for the purchase of a single piece of equipment.

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Committee on Radiation Studies(MAIL BALLOT)
February 1954 Council Meeting

H-1496(C)

Henry G. Kupfer, M.D., Professor of Clinical Pathology and Director of Laboratories
Medical College of Virginia, Richmond 19, Virginia

"An Investigation of Certain Tissue Protein Changes in Irradiated Animals"

Year	Requested	Recommended	Previous Commitment	Grant Period
2nd(C)	$13,601			

RECOMMENDATION: Approval - 5
Disapproval - 2
No vote - 4

PRIORITY SCORE: 300

COMMENTS:

Approval

The progress report indicates an adequate amount of work and some progress, although no conclusions. Certain statements made in both the application and report are highly uncritical and show considerable unfamiliarity with the known effect of whole body irradiation on tissue fragility. The statistical evaluation is misleading. More animals and repeated experiments are needed to evaluate the significance of the small differences involved.

The sum requested for additional personnel and for animals seems excessive; likewise the sum for travel. Approval is recommended, largely because of the need for checking the electrophoretic data obtained, using other tissues and other species, but in reduced amount. The sums suggested are: $2,744; $3,500; and $5,000.

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FINAL ACTION: Disapproved
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PHS Support; This Project:

Grant No.	Requested	Granted	Grant Period
H-1496	$2,744	$2,744	4/1/53 - 3/31/54

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Committee on Radiation Studies(MAIL BALLOT)
February 1954 Council Meeting

H-1496(C)

COMMENTS: (Continued)

Disapproval

No significant results have come so far from this work, nor are any likely to come. The investigator appears inexperienced and untried, and does not merit further support from the Public Health Service at this time. "He should learn to walk before he tries to run."

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