

EXPERIMENTS TO BE PERFORMED WITH ORTHOVOLTAGE X-RAY DURING THE
"GREAT SHUTDOWN" ON PRECLINICAL STUDIES FOR PION RADIOTHERAPY

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FOLDER MES 200 1/3/75-3/31/75

1. CELLULAR STUDIES

Fractionation studies in capsules for eventual use as biological monitors for intravaginal, intrarectal, intra-esophageal, and intraoral measurement.

Fractionation studies in flasks using plateau phase EMT 6 cells.

Dose response curves for the mastocytoma line will be undertaken.

2. DIVISION DELAY WITH HIGH LET -- T_1 and CHO CELLS
MAMMALIAN ORGAN SYSTEM STUDIES -- ACUTE AND LATE EFFECTS

Eight organ systems will be investigated and eight dose points will be explored in each system. Five fractions will be given and consideration will be given to the use of single doses, though this is of lesser interest. The systems to be explored are brain, spinal cord, lung, heart, kidney, spleen, intestine and colon.

3. PIG SKIN STUDIES

Since the reactions of mouse-foot skin have been well documented at HRL by Raju, and since there is excellent correlation between mouse-foot response, pig skin response, and indeed human skin response, a minimal program for qualitative purposes will be undertaken with pigs. Three pigs will receive single dose exposures and three pigs will receive exposures in five fractions.

4. STAFFING

At the meeting of October 8, 1974, attended by Drs. Petersen, Raju, Gomez, and Kligerman, an estimate of the time required to complete these studies was made, with the exception that the fractionated experiments on the mouse tumor systems was not considered. In addition to Dr. Raju and the staff at UNM who are involved in the mammalian systems, it was determined that the requirements would be for one staff person, one technician, and one caretaker. It was assumed that Dr. Gomez would

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be the staff person assigned, working under supervision. I feel that it is imperative that a single identifiable technician be assigned to the project. This does not mean that he could not work on other projects should he not be required on this one. Since the number of mice will be limited, a caretaker should be assigned who could assist the technician at appropriate times.

Dr. Kligerman, Dr. Petersen, and Dr. Key will assign the responsible investigators to each of the organ systems. Dr. Raju will continue with cell studies with the agreement of Dr. Petersen for the remainder of his time on this project.

The Biomedical Building and Animal and Cellular Laboratories should be activated as the primary area for these studies.

5. LONG-TERM MICE OBSERVATION

Because of the relatively inexpensive maintenance cost for mice at UNM (approximately 1¢ per mouse per day) as compared to the cost generated in the past year at HRL, consideration must be given to the transportation of mice to UNM for long-term observation. This would change the requirement for technical and caretaker help at HRL.

6. NOTA BENE

Sue Carpenter will be continued on this grant until her studies are completed (in approximately two months).

Dr. Raju should be provided with a full-time technician (in addition to the one mentioned above) until his activity on this project -- Drs. Petersen, Key and Kligerman.

If the single and fractionated schedules are to be used on the mammalian tumor systems, the possibility of a second technician should be considered during the peak weeks.

1/6/75
M. Kligerman

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