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FOLDER NAME	31	
NOTES	AEC PROJECT - UCLA - 11/51-52	
FOUND BY	A. MIGNIER.	

724167

1 of 4

UNIVERSITY OF CALIFORNIA PURCHASING DEPARTMENT

September 3, 1952

600

Dr. Stafford L. Warren, Dean
Medical School
C a m p u s

Dear Dr. Warren:

Form AEC 313 has been forwarded to the Atomic Energy Commission in accordance with your letter of August 27, 1952, requesting approval for the use of radioisotopes, on human subjects by the staff members of the School of Medicine, Los Angeles. We will notify you of any action that is taken by the Atomic Energy Commission.

Yours very truly,

DLW

David L. Wilt
Purchasing Agent

DLW:SAM

cc Dr. Fred A. Bryan
Mr. Derwyn M. Severy

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1170796

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SERIES TITLE
 S. WARREN ADMINISTRATIVE FILES-1972-88

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NOTES
 2 of 4

FOUND BY
 A. MIGNIER.

COPY

Memo to: Dr. Warren
 From: N. S. MacDonald

Thank you for the reference to Sherrill's work on Sr deposition in man. His finding that deposition at large amounts of Sr can proceed even when Ca deposition is also high has been observed with Sr.

Of course the weight of Sr⁹⁰ encountered in radioactive toxicity is very small. The effects of Ca intake on the rate of Sr deposition of Sr⁹⁰ may be quite different than that of Sr with stable Sr or with quantities of stable Sr. Part of our current work is aimed at resolving these differences.

N. S. MacDonald
 N. S. MacDonald

UNIVERSITY OF CALIFORNIA

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2.

RESULTS

Five hundred twenty-one readings obtained with the Keleket pocket type irradiation dosimeter showed the following readings:

PRELIMINARY RESULTS OF A SURVEY OF X-IRRADIATION

EXPOSURE TO THE GONADAL REGION IN MAN DURING POSTERO-

ANTERIOR ROENTGENOGRAPHY OF THE CHEST

A. Photofluorographic Survey Unit

No. of Readings:	Dosimeter on skin of lower back of patients. Average individual exposure.	Dosimeter on skin in gonadal region in front. Average individual exposure.
480	8.2 mr	0.88 mr

B. Portable Roentgenographic Unit (Routine Chest Examinations of A. F. P. Personnel)

No. of Readings:	Dosimeter on skin of lower back of patients. Average exposure:	Dosimeter on skin of gonadal region in front of patient. Average exposure:
42	2.5 mr	0.44 mr

Dr. A. Greenfield, Ph. D., Amos Norman, Ph. D. and Marta S. Billings, M. D.

Bibliography:

- (1) Population Genetics and Radiation by Sewall Wright, J. of Cell. and Comp. Physiology 35: Suppl., 187, 1950.

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NOTES	4 of 4
FOUND BY	A. MIGNIER.

June 29, 1953

The following proposed research project is to be submitted to the Project Assembly for approval at the next meeting.

A PRELIMINARY SURVEY OF IRRADIATION
EXPOSURE TO THE GONADAL REGION IN MAN

It has been estimated⁽¹⁾ that as little as 3 roentgens delivered to the gonads might double the spontaneous mutation rate in man. A doubling of the mutation rate, should it obtain in a large fraction of the population, would profoundly affect the future development of the human race. The number of people working at installations at which radiation hazards exist is likely to be small in comparison with the total population; moreover, such installations generally adopt stringent safety procedures to protect their personnel. It would appear therefore that the only threat to the general population, other than atomic warfare, is routine roentgenography.

METHODS

The survey will be divided into three parts:

In Part I the gonad dose delivered to average sized males and females and to children during routine roentgenographic procedures is measured with suitable phantoms.

Part II consists of measurements of the skin dose in the gonadal region of patients during actual roentgenography.

Part III will be an estimate of the total gonad dose received by each sex during child-bearing age from the records of x-ray examinations kept by General hospitals.

RESULTS

Skin doses in the gonadal region delivered during a routine chest survey have been measured on a large number of university students. From those doses it has been calculated that the female gonads receive about 2 mr, while the male gonads receive about 1 mr, during chest examinations with the photofluorographic unit.