

INFO

BROOKHAVEN NATIONAL LABORATORY
ASSOCIATED UNIVERSITIES, INC.

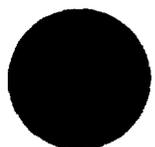
UPTON, L. I., N. Y.

TEL. YAPHANK 4-6262

January 16, 1959

407783

REFER:



Dr. Charles L. Dunham, Director
Division of Biology and Medicine
Atomic Energy Commission
Washington 25, D. C.

Dear Chuck:

In view of the fact that the health of the Marshallese is such a sensitive subject, we would like to obtain approval for carrying out several procedures on the next survey which involve the use of small trace amounts of radioactive materials. Careful consideration of such studies using trace materials is necessary since a policy decision forbidding their use at all in these people would seriously curtail future studies that may be quite important both from the point of view of the health of the people and for scientific reasons. Therefore, perhaps each study should be carefully considered, weighing the merit of the study against the dose of radiation involved.

The following procedures are contemplated for the next survey and preliminary work on them is being carried out using the steel room at BNL. These studies would be carried out only in volunteers who may perhaps be given some compensation.

1. In view of the finding of unexplained high protein bound iodine levels in both exposed and unexposed Rongelap people, we have devised an I¹³¹ thyroid uptake study which will involve oral administration of only 1 μ c of the isotope given orally with water and, by using the highly sensitive gamma spectroscopy in the steel room, it is possible to get a measure of the thyroid uptake in 24 hours even with the administration of such a small amount of I¹³¹. This, as you know, is only a small fraction of the usual tracer dose used and only a few mr of radiation would be received by the individual. We would like to do this study in about 20 volunteers. It would be ideal to do it in 10 exposed and 10 unexposed people, but we would settle for 20 unexposed people.

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2. A disturbing finding also in the Rongelap people as a whole is the anemic tendency. If we can determine the cause of their low hemato-crits, we might be able to help to correct it. We are, therefore, planning on doing a complete erythrocytic investigation. As part of this investigation, it would be necessary to know the red cell mass. To do this we would like to use the Cr⁵¹ technique using tagged red cells which would amount to about 10 μ c of Cr⁵¹ injected, a very small fraction of the M.P.C. This study would be done on 10 unexposed people.

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Dr. Charles L. Dunham

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3. A third study would be designed to determine if changes in skeletal growth and metabolism have resulted from their radiation exposure. A tracer technique using Sr^{85} would be used to measure the size of the exchangeable calcium pool and the rate of accretion of bone salts (ref. Bauer, C. H. and R. D. Ray, Kinetics of Strontium Metabolism in Man, J. Bone and Joint Surgery 40:127, 1958). This offers the only technique available which gives an immediate index of bone growth and metabolism. By using the whole body counter with this technique, the administration of only a very low tracer dose of Sr^{85} (5 μ c) is required. It is proposed to do this study on 5 exposed and 5 unexposed Rongelap volunteers.

It would be appreciated if you can let me know your decision on these proposals (in whole or in part) at your ^{earliest} convenience. If you concur, will other approval be necessary from other agencies, particularly the Trust Territory?

Sincerely,

Bob

Robert A. Conard, M. D.

hlb

*P.S. Everything is progressing smoothly. We leave
the middle of February -*

January 27, 1959

Dr. Robert A. Conard
Medical Department
Brookhaven National Laboratory
Upton, New York

Dear Bob:

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This is in response to your letter of January 16, 1959. I will comment in turn on the studies involving radioactive materials which you have proposed for the Marshall Islanders this trip.

1. I don't think this will give you the answer inasmuch as there is no necessary relation between thyroid uptake and high protein bound iodine. In other words, I don't think it would be worth the inconvenience to the people.
2. Is Cr-51 so much more accurate than a dye when the necessary correction factors are cranked in? I am curious to know what are the possible causes of the low hemocrits as well as the total investigation that you plan to make.
3. I would assume you would have to confine your activities to adults in which case I don't think you would get much of a clue from the study proposed as to the size of the exchangeable calcium pool and the rate of secretion of bone salts. Even in growing experimental animals I am told that the results are not very helpful.

Sincerely yours,

Charles L. Dunham, M.D.
Director
Division of Biology and Medicine

cc: Dr. B^uner

D/C NAVY

Medical follow-up

OFFICE ▶	DIR B&M					
SURNAME ▶	<i>CD</i>					
DATE ▶	1/27/59					

ROBERT A. CONARD, M.D.
32 Ivy Lane
Setauket, L.I., N.Y. 11733

Feb. 7, 1955

Dr. Neil M. Boras
Office of International Health Studies
Dept of Energy,
Washington DC, 20545

Dear Dr Boras,

I was unable to reach you by phone
to comment on the memorandum request for
certain studies I had sent to Dr. C. L. Dunham
in January 1955.

These studies were not done except for
item # 2. We later studied blood volume
in a few mice using Ca^{45} labeled
red cells.

If I can be of any further help please
let me know -

Sincerely,

Robert A. Conard