February 1, 1973

TO: Distribution

728984

FROM: R. B. Holtzman

SUBJECT: Notes on visit to Dr. C. Waterhouse in Rochester, New York, January 26, 1973

I delivered three boxes of collection equipment to Dr. Waterhouse for collection of excreta and diet samples from three patients to be kept on her metabolic ward for two weeks each. The materials are listed in the table. The delivered items will be sufficient for the collections from the three patients, except that two to three additional shipping containers and additional bottles for the urine collections must be sent. Since she prefers 2-quart urine collection bottles (average collection is 1200 ml/day), we will send her about 35 additional acid washed ones for the next two patients.

Dr. Waterhouse will collect samples according to our procedures. Urines will be collected and added to a bottle on a 24-hour basis (extra bottles will be used if necessary). Fecals will be collected in plastic bags and stored individually in marked 1-pint ice cream containers. The collection data will be recorded on the forms supplied. We will pool samples at Argonne, if necessary.

For balance and background studies, she will have the patients on a fixed weighed diet and give us 2 days equivalent of this diet each week. (The diet for the patient will be the same every day and they will consume it all, if possible). We can then measure calcium and the nuclides in the diet.

Dr. Waterhouse said the first patient had been in good health for her age, 75+ (born in   ) (before the intestinal block). An entire rib with a cyst had been removed about 1960, she did not know the exact date or if the specimen was still around. The patient has osteoporosis. A bone biopsy, which would weigh about 1 gm and consist of spicules and marrow, might be taken.

She has been doing some bone metabolism studies with Don Taves, M.D., using fluoride concentrations in urine and blood serum to measure these. A fixed fluoride intake from fluoridated water builds up a certain amount in bone. When the person is taken off fluoridated water while in the ward, serum level decreases to a level that depends on the bone turnover rate.

I talked to Dr. Taves about this, but he did not see much application to our problems. He would like to make some studies on our people where he studies changes in bone metabolism induced by such things as Calcitonin.

He has done bone scans, but he does not believe the reproducibility on living subjects is better than 5% because of the soft tissue problems. Would using two or more X-ray lines help eliminate this problem? (R. Schlenker)

I talked to Dr. Gilbert Forbes. He has John Hursh's old iron room with an (8x4) ? crystal on a commercial mount and a Nuclear Data 512-channel analyzer with a typewriter output. The subject sits in a tilting chair. The room could be used for the low energy detector, but clearances are needed from various people. Also, he did not want the room tied up too long. They are mainly measuring ^{40}K in "normal" people now.

While the trip was somewhat hectic, especially getting the boxes there, it was quite profitable. Meeting Dr. Waterhouse was worthwhile, especially to determine her attitude and needs in this study. She was very helpful and cooperative. Talking to Drs. Taves and Forbes was also good.

RBH/jt

Distribution: A. M. Brues, M.D.
               M. S. Littman, M.D.
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               J. Rundo
               A. F. Stehney

Materials Needed and Delivered to Dr. Waterhouse

		Purpose	Needed	Delivered
(1)	Shipping boxes (Styrofoam, 16"x16"x16" inside)	shipping	3	2
(2)	Bottles, poly (LPE), one-quart widemouth, acid washed	urine collection	80	27
(3)	Bottles, poly, two-quart widemouth	diet collection	15	15
(4)	Plastic bags	fecal collection	130	130
(5)	Plastic bag holder, stainless steel	fecal collection	2	2
(6)	Data forms	collection data	100	100
(7)	(Directions for collection)		1 ?	10