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Medical Department

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Dear Brian,

I must apologize for not responding sooner to our very productive meeting on July 25th. After John Nicoloff, Susan, and I left your office we spent about 45 minutes with Dr. Mathias. He seemed quite enthusiastic about the program - in fact he volunteered to go on one of the next surveys (schedule permitting). Our discussions with him covered primarily the mutual advantages of the training affiliation between the Brookhaven National Laboratory Marshall Islands Study and the staff of the University of Southern California Medical School. It included the training of promising (carefully screened) Marshallese for paramedical support. He mentioned the success they have had with Robert Wood Johnson Foundation to train underprivileged Chicanos and blacks. Such a program of cross - cultural paramedical training is beautifully tailored to the Marshallese needs.

Since returning from that trip I have spent most of my time in Washington - working on the details of the proposed expansion.

It now appears almost certain that we will at least double - and most probably quadruple, the present study population over the next year. The doubling will come within the next 6 months. The Department of Energy is currently working out the budget for this and we have good indications of congressional support.

I have attempted to outline the advantages to the University of Southern California from a collaborative effort with the Brookhaven National Laboratory Marshall Islands Study.

An affiliation of the efforts of BNL and USC will provide:

A. An operational base with full logistic support that now includes a large ocean going ship. The ship is equipped with 6 fully equipped examining rooms, a small laboratory and an X-ray. In the future we hope

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to have aircraft support to most of the islands and in addition, each of the islands has a small dispensary.

B. A budget to provide transportation and per diem for team members as well as reimbursement for capital equipment and consumables.

C. A well recognized 25-year history of medical surveillance in this area with an established program and many contacts in the health care delivery field and in the political arena.

D. A coordinating point for logistics in Honolulu under the Pacific Area Support Office of the Department of Energy.

E. A close liaison with the Department of Interior, i.e., in the political status negotiations.

F. An opportunity for exposure to a new third world nation with all the problems and the challenges of a "new health care delivery system".

G. An affiliation with the Brookhaven National Laboratory Marshall Islands Study collaborative group which currently includes a top flight panel of national and international consultants in many fields (please see Enclosure A).

H. A field setting for the training of house staff in tropical medicine and in problems of developing third world health care program, i.e., the medical economics of a developing a primitive system.

I. The possibility to setup a whole series of research projects to improve the health status of the Marshallese. These studies might include such things as further investigation of the high incidence of maturity onset diabetes (much like that of the Pima Indians). Current speculation is centered around the question of a receptor site defect and/or a lack of an active coenzyme that may be dependent upon trace elements such as chromium. A second, very lucrative area might involve the delineation of the unusual biochemical profiles of the Marshallese. We feel that this needs careful HLA studies and would be prepared to support the establishment of a tissue culture facility on Kwajalein.

J. This study has "evolved" over 25 years. At the present time there appears to be a good possibility that the program will expand rapidly. Our present study group numbers about 450, the possible expansion could reach 2,000 in the next year. The expansion groups are really, epidemiologically, different than the 450 "high dose" exposure group. The new group could be called a "range of low level - long term exposed persons." Therefore, a good, coordinated pre-planned epidemiologic study could be devised before the study is begun. This is probably the most compelling reason for basing this study in a department such as yours.

On the other hand, the reasons that Brookhaven National Laboratory and the Department of Energy should form such a collaborative effort would include the following reasons:

A. Our traditional research mandate from the Department of Energy has been

the determination of the life time effects of fallout on the Marshallese exposed radiation on 1 March 1954. The study has focused primarily on the acute "high level" exposed population, particularly on the islands of Rongelap and Utirik (especially on Rongelap). Relatively little data has been collected pertaining to the long term effects of "low level radiation" i.e., above ambient for the rest of Micronesia. Recent developments have stimulated renewed interest in the effects of "low level radiation" and the spectrum that exists on various Marshallese atolls.

B. The Department of Energy/Brookhaven National Laboratory feels that the effects of these exposures are small. In fact, they may be undetectable, but that some surveillance program is highly desirable.

C. The Department of Energy/BNL would prefer the survey group would have a "non-nuclear" academic identity to prevent the immediate association of a "nuclear laboratory examination" with defacto significant exposure. Unfortunately this is a very important element of the Marshallese perception of any medical study.

D. The full-time staff of the BNL Marshall Islands Study consists of one physician, one nurse practitioner and two technicians. We work with a large group of volunteers but are only able to care adequately for 400 - 450 patients. With the projected increase in the study population we would need to vastly increase the resident staff. However, at this time we are currently under a personnel ceiling.

E. This study, since its inception, has been an "inhouse" study. It has been closely related to the Atomic Energy Commission - ERDA - DOE even though Brookhaven National Laboratory is a private institution formed by Associated Universities, Incorporated. Notwithstanding, BNL still carries a label of "a national nuclear laboratory". This has led many U.S. and Marshallese anti-nuclear groups to intimate that the "data" has been manipulated to protect the U.S. government and "pro-nuclear" groups. During my tenure as Principal Investigator I have reviewed as much of the original data and the subsequent data that I can find and I am thoroughly convinced that this is just not true. However, we are in a very poor position with our present organization to disprove this fact.

F. We are in the process of establishing a "review committee" for the entire study. As we currently envision this group, they will be a highly respected group of scientists with no direct affiliations with Brookhaven National Laboratory or the Department of Energy (or any of its predecessors). We feel that they should include at least: 1) an epidemiologist; 2) a radiobiologist; 3) a hematologist; 4) a thyroidologist and 5) an oncologist. This group will monitor the work we do here at Brookhaven National Laboratory and I'm sure they would be delighted to work with any other affiliated groups.

The preceding outline is really just a first try at the possible impact of a collaborative effort by BNL and Southern California. I realize that it needs a good deal of expansion and the filling in of details. I'd be very interested in your thoughts about this approach and any possible problems that you anticipate might arise. I am sending a letter, similar to this, to Dr. Mathias concentrating more on the training aspects than on the epidemiological aspects of the study.

You have a resident expert in this program in the person of John Nicoloff. John is one of our Senior Consultants and certainly understands this program as well as anybody that has been involved with it over the years. In addition there is a Dr. Robert Krone, who is associated with the Southern California graduate school of management studies and systems analysis working with the overseas studies division. I had the pleasure of meeting him in Kwajalein about a year ago and discussing the possibilities of some collaborative effort between Southern California and BNL. He had some suggestions as to the input the hospital administrative people might have in this area. The Southern California extension program in systems management is already well established in the Marshall Islands and has gained great credibility and a great deal of respect in that area.

Thanks again for the monograph on the epidemiology and cancer registries in the Pacific basin. I found it a facinating series of articles. It would appear that there does exist a paucity of data from the Marshall Islands and I am sure that this could be filled in with our combined efforts.

Thanks again for your time on the 25th. Susan and I look forward to seeing you again. Best regards.

Sincerely yours,

Hugh S. Pratt, M.D.
Director of Marshall Islands Study
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