



Pacific Northwest Laboratories

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February 14, 1979

Dr. Charles Bieber
Stanford Medical Center
Stanford, CA 94305

Dear Dr. Bieber:

A report on your use of whole body irradiation to assist in suppressing transplant rejection appeared in the Seattle Times (January 14) and a copy was sent to me. I thought you might be interested in a program in progress here which appears relevant to your work.

We have developed a fully portable irradiator with the assumption that lymphocyte suppression will also suppress graft rejection. Thus, pre-transplant treatment by irradiating blood suppresses the number of circulating lymphocytes and continuing irradiation of blood for a few weeks following transplantation suppresses the lymphocytes from functioning as initiators of the rejection process. This type of treatment should allow the new organ to recover function in the absence of the heavy chemotherapy which is so detrimental to full recovery of function. The post-transplant treatment period (blood irradiation) may also permit the new organ to become in some way more immunologically compatible with the host. We presume that chemotherapy could be used subsequent to removing the irradiator to maintain a degree of immunosuppression sufficient to prevent rejection.

Up to this time we have done limited testing of our irradiators in animals, measuring effects on circulating lymphocytes and other blood components as well as effects on skin graft rejection. The data indicate a potential for usefulness of the irradiators and I am now exploring possibilities for additional evaluation leading to possible clinical evaluation.

I am enclosing a reprint of our article which describes the irradiators and will be glad to discuss the matter further if you wish. I can be reached by phone on (509) 942-3044.

Sincerely yours,

F. P. Hungate
F. P. Hungate, Ph.D.
Staff Scientist
Biology Department

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enclosure
cc: S. Marks
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REPOSITORY PNL, Engi Bldg, HUMAN SUBJ
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