



DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE  
PUBLIC HEALTH SERVICE  
NATIONAL INSTITUTES OF HEALTH  
BETHESDA, MARYLAND 20014

National Cancer Institute  
13 May 1969

VIA AIRMAIL

Dr. Joshua Lederberg  
Department of Genetics  
Stanford University  
300 Pasteur Drive  
Palo Alto, California 94304

Dear Dr. Lederberg:

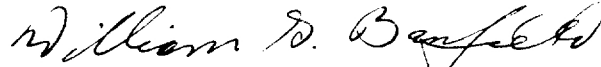
We have a hamster lymphoma which, after careful study, has not been found to contain a virus. It can be transmitted by feeding the tumor and by the tumor cells being picked up from the blood stream by a mosquito and transferred to another animal. This last is a new method of spreading disease, that is to say, by the transmission of mammalian cells through a vector. It would seem that these experimental results have to be given serious consideration as they might apply to the transfer or origin of human tumors or even other disease states. When broaching such an idea one usually receives the answer that a human cell will not grow in another individual. However, the problem can not be dismissed so easily. The immunological competence of individuals to react to foreign cells varies considerably. Even the immunological state of a single individual varies from time to time depending upon his health and undoubtedly many other factors. Even various sites within a single individual will vary in their immunological response depending upon injury, previous immunological history and possibly other factors. To add to this, little or no work has been done on how the body will respond to small inocula of foreign cells, possibly directly into the blood stream, and in turn, how the inoculated cells will respond to their new environment.

Enclosed is a summary "Hamster Lymphoma, TM", of this work and the more detailed publications.

I am also enclosing the first observation of polyoma in thin section. Previous to this it was recognized that some agent was producing tumors in mice but as a result of this work it was almost certain that a virus was the agent and the race to uncover tumor viruses, especially in man, was on. However, in man, no malignant tumor virus has yet been found.

I have been following your column since it first appeared in the Washington Post having known of you from about 1945 at Yale and after that through Kay Wilson a very good friend of mine. Since you did not seem to be aware of the cell transfer possibility in your cancer articles, I thought that this might be of interest to you.

Sincerely yours,

A handwritten signature in cursive script that reads "William G. Banfield". The signature is written in dark ink and is positioned above the typed name.

William G. Banfield, M.D.  
Laboratory of Pathology

Enclosures