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Kazutami Kiyota,
Dept. of Neuropsychiatry,
Kumamoto University
School of Medicine,
483 Honjo-machi, Kumamoto
Japan. July 13, 1963.

Professor Joshua Lederberg,
Department of Genetics,
Medical Center, Stanford University,
Palo Alto, California, U.S.A.

Dear Professor Lederberg:

It is just one year since I received your letter after meeting you in Kumamoto. Sorry for not writing sooner. How are you? It was a great pleasure for me to know that such a famous scientist like you was interested in our research field.

We are pursuing our studies on the interaction of psychotropic drugs such as phenothiazine derivatives to the proteins in subcellular units of the brain tissue. We have recently separated the chlorpromazine-sensitive protein from the brain and the liver by the technique of crossing paper electrophoresis. The extinction of ultraviolet rays in the protein-chlorpromazine complex separated on paper differs from the extinction in chlorpromazine, brain and liver proteins respectively. The binding of such drugs to the brain proteins depends on such conditions as ionic strength, types of ion, pH and temperature, not only in the crossing paper electrophoresis but also in the extraction of proteins from the tissue. I suppose these phenomena might be based on some denaturation of protein molecules, which is induced by the binding of the drug to the protein under certain conditions. More basic information of the drug's action on the brain protein, together with its psychotropic effects seems to illuminate a highly complex mechanism of the protein molecules which build up the fine structure of the brain tissue. I think a new approach to endogenous factors in endogenous psychosis is expected from the molecular biological point of view.

I am still looking forward to study with you at the Kennedy Laboratories for Molecular Medicine which is to be held September, 1964. So, I would like to hear from you on your research program at the new Laboratories.

Sincerely hoping to hear from you in the near future.

Yours truly.

K. Kiyota

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