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WASHINGTON UNIVERSITY



SCHOOL OF MEDICINE
SAINT LOUIS

DEPARTMENT OF BACTERIOLOGY
EUCLID AVENUE AND KINGSHIGHWAY

May 1, 1941.

Dr. Michael Heidelberger
College of Physicians and Surgeons
Columbia University
New York, N. Y.

Dear Doctor Heidelberger:

Thank you very much for the care you have taken in criticism of my treatment of the kinetics of antigen-antibody reactions. Needless to say this is exactly what I hoped you would do.

I would scarcely care to defend our rate measurements at the present time, but on the other hand I do not feel that our results are incompatible with yours.

So far as heterogeneity of antibody is concerned, I should have been more explicit in the statement of my conclusion. This was not intended to imply that the antibody fractions of different reactivity, which you have demonstrated, may not also differ in reaction rate and accordingly introduce an uncertain error. Rather, I was considering the possibility that different antibody molecules might be directed toward distinctly different determinant groups which, if it exists, should introduce an enormous steric factor into the reaction rate. This would be the kind of "heterogeneity" under discussion between Landsteiner (J. Exp. Med., 1936, 63, 325) and Hooker and Boyd (J. Immunol., 1936, 30, 41). Obviously any decision concerning this based on reaction rates would be of the crudest kind.

Thank you again, and you may be sure your suggestions will be put to use in future experiments.

Very sincerely yours,

ADH/McK

A. D. Hershey,

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