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July 13th, 1948

Professor Manfred M. Mayer,
Department of Bacteriology
School of Hygiene and Public Health,
Johns Hopkins University,
615 N. Wolfe Street,
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Dear Manfred,

I was delighted to get your hemolysis paper, for, as I've said before, it certainly starts a new era in the knowledge of immune lysis. I've read it carefully and have only a few minor suggestions and questions:

Can you have a slide made for me of Fig. 9? I'd like very much to show that when I lecture on C' in Geneva and Zurich in October.

Is it correct to say that "the velocity curves have a catalytic appearance"? Just what constitutes a "catalytic appearance" and, without knowing their previous history, how could some of the curves in Fig. 1 be distinguished from the uncatalytic precipitin curves? Of course the latter are not velocity curves, but do they not have a "catalytic appearance"?

Why could not the dissimilar kinetic behavior of antisera A and B be explained on the basis of their non-hemolytic antibodies? These would compete in A by blocking reactive sites but the effect would eventually be overcome (possibly in part by reversal) and the serum should ultimately overtake B in the later stages.

While I think your figure of 50A being necessary for the lysis of one red cell probably is much better than our 500, and certainly approximates Brunn's value (which you really ought to mention), the discrepancy is not so great when you consider that our figures were at the 30 or 45 min. level, rather than 440 min. If this is valid it might be well to point out the difference in conditions for as we did not consider the velocity aspect, our value was not a true minimum. Yours would still be the better figure as the minimum number of molecules of A permitting lysis regardless of conditions.

Looking forward to seeing you soon,

Yours,

MH:jm

Michael Heidelberger