

May 19, 1937

Mr. Thomas E. Midgley  
Worthington  
Ohio

Dear Tom:

Several days ago I told you I would write you promptly on the subject of our discussion when you were in Cincinnati last.

I am disposed to feel that there is a very great need for the study of the chemistry of the proteins. I do not presume to be well informed on the present status of the problem. I do know, however, that a number of very important matters are in that vague state in which they are explained by analogy rather than by sound chemical procedure. I happen to be very interested in the nature of the compounds (if they are chemical compounds) which are formed when acids, bases and salts are introduced into protein mixtures. You will remember that Fischer has studied this problem and has come to certain definite conclusions based on analogies, in which fatty acids have been used to portray the role of the proteins. Whether or not he is correct in his conclusions, I can not say, but I think he is quite right in regarding this as one of the very great problems in animal physiology. Are these materials adsorbed by the proteins or do they form chemical compounds, or do both of these phenomena occur. I believe the answer to these questions could be solved by suitable methods but I do not presume to know what the methods should be. The whole problem of the normal behavior of protoplasm, as well as the primary effects of the various poisonous metallic salts and other toxic compounds is involved in these questions. The problem has been recognized for years, and yet I do not feel that any closer approach has been made to its solution than was the case a decade ago.

Mr. Thomas E. Midgley

I am quite in agreement with Machle also as to the importance of adequate molecular weight determinations. I should suspect that the accurate information here might well serve to open a much wider field of study. At any rate, I am quite sure that if you and your associates can answer some of these questions, you will have made yourself even more famous than you are and you will have done physiologists and physicians a very great service.

Sincerely yours,

RAK:is

Robert A. Kehoe, M.D.