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## Specificity of Hepatic Anaphylatoxins.\*

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In previous papers<sup>1, 2</sup> it was shown (a) that normal canine organs transplanted by blood vessel anastomosis into horse serum hypersensitive dogs are thrown into typical histamine-like reactions by the toxic products (anaphylatoxins) explosively formed or liberated by the hypersensitive liver during acute anaphylactic shock in the recipient. (b) That immune organs similarly transplanted are completely resistant to the histamine-like action of these hepatic products. And (c) that this acquired anaphylatoxin insusceptibility is not due to circulating antibodies, since it can not be transferred from one animal to another by even massive immune blood transfusion. We have thought to throw light on the nature of hepatic anaphylatoxins by a study of the specificity of this acquired fixed tissue anaphylatoxin resistance.

To do this, tissue transplantations have been made between dogs immunized and sensitized with different antigens. The following is a summary of our results to date:

(1) Urinary bladders of goat serum immune dogs, transplanted into horse serum hypersensitive dogs, show no suggestion of an acquired immunity to the hepatic anaphylatoxins explosively formed or liberated during acute horse serum shock in the recipient.

(2) Horse serum immune urinary bladders, transplanted into goat serum hypersensitive dogs, show no suggestion of an acquired immunity to the hepatic anaphylatoxins explosively formed or liberated during acute goat serum shock in the recipient.

From this it is evident that the hepatic anaphylatoxins are of different chemical nature in goat serum and horse serum anaphylaxis. This finding is in accord with our working hypothesis, that hepatic anaphylatoxins are specific secondary antigens of complex protein nature, presumably denaturation products of the primary antigens used in sensitization and immunization.

This is a preliminary report.

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<sup>1</sup> Manwaring, W. H., Hosepian, V. M., O'Neill, F. I., and Moy, H. B., *J. Immunol.*, 1925, x, 575.

<sup>2</sup> Manwaring, W. H., Reeves, D. L., Moy, H. B., Shumaker, P. W., and Wright, R. W., *J. Immunol.*, 1927, xiii, 63.