

3046

Studies on anaphylaxis with the products of peptic digestion of proteins.**KARL LANDSTEINER.**

[*From the Laboratories of The Rockefeller Institute for Medical Research, New York City.*]

Experiments were made on anaphylaxis with the digestion products of egg-albumin, recrystallized once. They require completion because the albumin still contained egg-globulin and probably a little ovomucoid. Nevertheless the results seem to leave little doubt as to the formation of sensitizing antigens as a result of the digestion. The digestion products killed, with typical symptoms of anaphylaxis, guinea pigs sensitized several times with 0.1 gm. of these substances, but did not shock animals—with one exception—sensitive to egg-albumen or egg-globulin. Conversely, the animals sensitized to the "peptone" were not definitely sensitive to re-injection with albumin but reacted distinctly to globulin. Acid albumin resulting from peptic digestion of the egg-albumin had practically no effect on the animals sensitized with either albumin or peptone and did not desensitize them against a subsequent injection of the homologous antigen. The nature of the active substance in the digestion products is still to be determined (cleavage or some other change), also the degree of species specificity.

Two peculiarities appeared from the experiments, namely, the fact that the injection of the digestion products had but a very small desensitizing effect (see Walzer and Grove¹) and, secondly, that a subcutaneous reinjection of the peptone produced a distinct local reaction, hyperemia and edema.

Inconstant effects resulted from injections of horse serum proteins heated for several hours with 10 per cent sulfuric acid on the steam bath.² In a number of cases the animals reacted on reinjection of the original protein. It is difficult, however, to exclude the presence of small amounts of the original or slightly changed proteins in the material used.

¹ Walzer, M., and Grove, E. F., *J. Immunol.*, 1925, x, 483.

² Hailer, E., *Arb. a. d. kais. Gesundheitsamt*, 1914, xlvii 527.