was digested by this same enzyme preparation has yielded results which are similar to those just described.

Conclusions. Digestion of an anterior pituitary extract by trypsin under suitable conditions may destroy interstitial-cell stimulating activity, leaving a pure gametogenic effect in adult hypophysectomized male rats. It appears that interstitial-cell stimulation or luteinization is caused by the same substance which is largely destroyed by the digestion.

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Effect of Induced Hypercholesterolemia on Antibody-Response in Rabbits.

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Although it is generally assumed that cholesterol in blood and tissue is related in some manner to processes of immunity,[1, 2] the mechanism of this action is not clearly understood. It seemed important to determine whether the production of antibodies by the organism was influenced by the level of cholesterol in the blood.

Seventeen rabbits (9 controls and 8 experimental) varying in age from 3 to 5 months were fed Ralston-Purina rabbit-chow once daily. Hypercholesterolemia was produced in the experimental group by feeding 1 g of cholesterol mixed with the food 3 times a week for a period of 5 to 8 weeks. After this time, the blood-cholesterol usually exceeded 350 mg per 100 cc and immunization was then begun. The feeding of cholesterol to the experimental group was continued throughout the experiment.

All animals received intravenous injections of increasing amounts of a typhoid vaccine containing 10^9 organisms in 1 cc. Injections of 0.2, 0.3, 0.4, 0.6, 0.8, 0.9, and 1.0 cc were made on the 1st and 5th, 8th, 11th, 14th, 16th, 19th, and 21st day respectively.

Agglutinative tests were done before injections of vaccine and at weekly intervals for 5 weeks thereafter. The titer was that dilution which, after refrigeration overnight and after careful agitation, still showed macroscopic clumping. The results are given in Table I.

1 Muller, G. L., *Medicine*, 1930, **9**, 119.

2 Stoesser, A. V., and McQuarrie, I., *Am. J. Dis. Child.*, 1935, **49**, 658.

TABLE I.

Rabbit No.	Weeks 0 Titer	0 Chol.	1 Titer	1 Chol.	2 Titer	2 Chol.	3 Titer	3 Chol.	4 Titer	4 Chol.	5 Titer	5 Chol.
Control Group												
28	0	114	1:40	117	1:160	165	1:320	170	1:1280	162	1:1280	155
29	0	99	1:40	110	1:40	98	1:160	92	1:320	100	1:320	96
30	0	92	1:40	89	1:320	101	1:160	121	1:640	110	1:640	108
26	0	85	1:40	73	1:160	100	1:320	110	1:320	75	1:320	101
27	0	110	1:40	116	1:80	115	1:160	83	1:320	85	1:320	96
51	0	86	1:40	89	1:640	108	1:1280	131	1:1280	119	1:640	120
53	0	85	1:40	87	1:1280	121	1:1280	116	1:2560	123	1:2560	130
54	0	79	1:40	79	1:1280	94	1:2560	110	1:1280	104	1:1280	110
56	0	90	1:160	88	1:320	107	1:1280	108	1:2560	151	1:2560	140
Avg	0	93	1:55	94	1:475	112	1:835	115	1:1175	114	1:1100	117
Experimental Group												
31	0	407	1:320	721	1:2560	1000	1:2560	1154	1:1280	986	1:1280	1415
33	0	390	0	750	1:1280	986	1:5120	949	1:5120	950	1:2560	1390
36	0	421	0	417	1:1280	600	1:5120	694	1:2560	773	1:2560	1173
37	0	535	0	475	1:1280	637	1:10240	620	1:5120	675	1:5120	1014
25	0	789	1:80	841	1:640	883	1:5120	927	1:2560		1:1280	603
27a	0	417	1:160	514	1:320	547	1:1280	522	1:2560	525	1:2560	475
28a	0	852	1:160	721	1:320	803	1:2560	798	1:2560	882	1:1280	791
29a	0	357	1:80	475	1:160	529	1:640	682	1:640	556	1:640	568
Avg	0	521	1:100	614	1:980	748	1:4080	793	1:2800	764	1:2160	929

Blood-cholesterol (modified Sackett's method[3, 4]) is expressed in mg per 100 cc of whole blood.

Conclusion. Following injection of rabbits with typhoid vaccine, a higher agglutinin-titer against *E. typhosa* was obtained in those with induced hypercholesterolemia† as compared with control rabbits having normal blood cholesterol.

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Macromolecular Components of Untreated and of Formolized Normal Chick Embryo Tissue.*

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Macromolecular substances have been found in healthy tissues of both plants and animals.[1] In experiments associated with studies of the equine encephalomyelitis virus protein[2] and the non-infectious immunizing principle[3] of formalin-treated virus-diseased chick embryos,[4] we have obtained such substances from normal chick tissue and from the tissue treated with formalin.

Chick embryos incubated for 11 days were harvested, chilled, the heads removed and the bodies ground in a Ten Broeck grinder held in cracked ice. The resulting body mince was made to a 20% suspension and extracted as indicated. Large particles were removed with the angle centrifuge and the resulting extracts fractionated by

3 Sackett, G. E., *J. Biol. Chem.*, 1925, **64**, 203.

4 Mirsky, I. A., and Bruger, M., *J. Lab. and Clin. Med.*, 1932, **18**, 304.

† Because cholesterol, *per se*, in increased concentration in the blood might produce false agglutination, the sera of 3 rabbits with marked hypercholesterolemia (700 to 800 mg per 100 cc) produced by the feeding of cholesterol were tested; no clumping was observed.

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1 Wyckoff, R. W. G., *Cold Spring Harbor Symposia on Quantitative Biology*, 1938, **6**, 361.

2 Wyckoff, R. W. G., PROC. SOC. EXP. BIOL. AND MED., 1937, **36**, 771.

3 Beard, J. W., Finkelstein, H., Sealy, W. C., and Wyckoff, R. W. G., *Science*, 1938, **87**, 89.

4 Beard, J. W., Finkelstein, H., Sealy, W. C., and Wyckoff, R. W. G., *Science*, 1938, **87**, 490.