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Alleged "Reflex" Occular Immunity.*

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Following repeated injection of *B. typhosus* vaccine into an anterior chamber of the rabbit eye, Shamburow[1] found the specific *B. typhosus* agglutinin titer of the aqueous humor of that eye increased to as much as 8 times the synchronous agglutinin titer of the blood stream. The non-vaccinated eye often showed 2 to 3 times the synchronous serum titer. He believes his data prove: (1) a local synthesis of specific agglutinin in the vaccinated eye, and (2) a neurological reflex, causing a similar local antibody synthesis in the non-vaccinated eye.

In our attempts to confirm his data, 8 half-grown rabbits were repeatedly injected in one anterior chamber with heat-killed or living *B. typhosus,* doses and time intervals being the same as that used by the Russian investigator. Forty-eight parallel titrations of the resulting antiserums and immune aqueous humors are summarized in Table I, each recorded titer being the mathematical average of the readings from 8 rabbits.

TABLE I.

Samples withdrawn immediately before	*B. typhosus* agglutinin titer		
	Blood Serum	Vaccinated Eye	Non-vaccinated Eye
1st *B. typhosus* injection	1:10	0	0
2nd injection (7th day)	1:1380	1:352	1:1.2
3rd injection (14th day)	1:1710	1:388	1:1.2
4th injection (21st day)	1:2840	1:400	1:1.2
28th day	1:2840	1:500	1:5
35th day	1:1160	1:500	1:5
42nd day	1:940	1:225	1:5
49th day	1:640	1:125	1:5(?)
56th day	1:445	1:42	1:1.2

In no individual rabbit of our series did the agglutinin titer of the aqueous humor of the vaccinated eye exceed one-half of the synchronous serum titer, nor did the titer in the non-vaccinated eye even exceed 1% of that of the blood stream. From these data we see no reason to assume either a local or a "reflex" synthesis of specific agglutinins in the occular tissues.

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[1] Shamburow, D. A., *Z. f. Hyg. u. Infektionkr.*, 1932, **114**, 456.