

To obviate this difficulty, it seemed to us that we might obtain more decisive results by employing very young rabbits from three to six weeks old. In our control sections of the livers of these very young rabbits we have found that the diplococci appear to be absent. Upon making a like series of inoculations into these very young rabbits, and killing at two, four, and twenty-four hours, we hoped definitely to settle the question. But here, at first, we had wholly negative results. By our routine methods of staining we were unable to detect any bacteria within the cells, even when we employed sections that had been cut in paraffin. So opposed to all our previous results and conclusions did these appear that for a time we were on the point of relinquishing this paper. It is possible that either the carbol-thionin used by us for the experiments was defective or our technique modified in some slight degree, for at the best the carbol-thionin method does at times show itself wanting. But our failure was so constant that we hardly believed that this explanation would suffice.

Now we have attempted to stain other sections from the same blocks by other methods, and we eventually found that staining for half an hour with Loeffler's methylene-blue, washing with tepid water, and then passing through absolute alcohol and xylol, we obtained sections in which the tissue is relatively faintly stained and in which we are able to detect within the cells peculiar small diplococci having the faintest brown tinge. These were obtained from the livers of animals which had been inoculated two and four hours before death. Our failure to recognize these bodies is in fact due to their minute size and their very faint stain. We have examined control livers also from young animals by the same methods with negative results.

It would seem clear to us that the rate at which the colon bacilli are taken up and destroyed in the liver varies to some extent in different animals according to the condition of the tissues and the virulence of the microbe. It is to be noted that the culture employed in this latter series was from the same stock as that employed previously—a stock which had been grown outside the body for an additional six months. And here we may notice that the most powerful staining diplococci, and also those having the deepest brown tinge, were in the livers of rabbits dying from three to four weeks after inoculation, as again in certain of our control animals. Our experimental animals, which had been kept alive at the most for twenty-four hours, have