

of cattle and man, one of us was inclined to regard these as peculiar to cirrhosis, but, as already announced,¹ fuller study having shown their existence in the apparently normal liver, they cannot be regarded as specific of any one disease, although it is possible that they are one factor in the production of certain forms of fibrosis. Under these conditions they tend to take on a relatively deep stain, but in the majority of cases they stain badly, have a characteristic brownish tinge and would seem to be dead.

From several cases of cirrhosis in which these were recognizable cultures gave either vigorous, or what we must now regard as attenuated, growths of a colon bacillus, while after intravenous inoculation of adult rabbits with forty-eight-hour broth growths of our stock culture of the colon bacillus, which is in every respect typical, the liver cells showed these minute diplococcus forms in enormous numbers.

We were, therefore, led to conclude that, while it might be that other bacillary forms may also show a diplococcus-like appearance in the tissues, we had adequate evidence that the colon bacillus can show this appearance, and during the last few months we have conducted a long series of observations bearing more especially upon this diplococcus-like modification of the bacillus. Our work is divisible into two portions:

I. On the production of a diplococoid form of the colon bacillus outside the organism.

II. On the diplococoid form of the bacillus within the tissues.

The former portion has been undertaken in part by Dr. Nicholson; the latter portion and the studies upon growths in body fluids by Dr. Maude E. Abbott.*

PART I.

ON THE PRODUCTION OUTSIDE THE BODY OF A DIPLOCOCCOID FORM OF THE COLON BACILLUS.

While, under ordinary conditions of growth outside the body and ordinary staining by Loeffler's blue, for example, the colon is an

* But for the fact that, by my previous publication on the subject, I have made myself peculiarly responsible for these observations upon the colon bacillus, I would very gladly have left my own name off the title-page, for, in consequence of prolonged absence from my laboratories, the observations have been throughout conducted by Dr. Abbott, and Mr., now Dr. Nicholson, and I cannot sufficiently acknowledge the enthusiasm which they have thrown into the work.—J. G. A.