## DIPLOCOCCOID FORM OF THE COLON BACILLUS. 11

Here it is interesting to note a point which we again find observed by Rodet—namely, that the human bile has a distinct inhibitory effect upon the multiplication of the colon bacilins. Bile to which a minute drop of a twenty-four-hour old culture had been added remained to all appearances perfectly clear, and apparently no growth had occurred during four days; but when a drop of this bile was added to about 10 c.em. of slightly alkaline broth and placed in the incubator, that broth rapidly became turbid, and there was most abundant development of the bacilli. We are making further observations upon this modification of the bacillus by growth in bile. This, however, may be said at the present time, that possibly the existence of bacteria in the bile may easily be overlooked when the ordinary methods of culture upon solid media are employed, the concentrated bile inhibiting their growth.

One of us (M. E. A.) has already found that human bile (three cases), which was apparently sterile when streaked upon agar-agar, gave abundant enlures of the colon bacillus when a small drop was added to about 10 c.em. of glucose broth.

CONCLUSIONS. Thus far, then, our observations upon the colon bacillus grown outside the body have led us to the following.conclusions :

1. The short form of the normal colon bacillus enlivated upon the ordinary bacteriological media frequently presents polar staining, the appearance given being that of two rounded bodies, staining more deeply than the rest of the bacillus, lying in and united by less deeply steining material.

2. In the more filamentous form a succession of these more deeply staining bodies is at times to be recognized.

3. Growth outside the body under relatively unfavorable conditions renders the polar staining more prominent, so that the shorter forms may closely resemble diplococci, and the filamentous forms show a common unstained or lightly-staining sheath, in which is to be made out a succession of minute dots in pairs and of somewhat larger single ovoid dots.

4. We have so far been unable by modifying the reactions of ordinary media, and by continued growth at a high temperature  $(46^\circ)$ , to produce cultures in which the diplococcoid form alone has been present, although by these means we have gained cultures in which this form has predominated.

the pink the end and was stringy te open fortyldition, ction of dity be

e have Briefly, cure for to the which eady at vell-dege an<sup>3</sup> and <sup>7</sup>

oneally hours, in the i; and, be had it both igs and e from

diplonea-pig ed durcample, a markto this d have though t.