

Gastric Mucin as a Culture Medium for Intestinal Protozoa.

HERBERT L. RATCLIFFE. (Introduced by Balduin Lucké.)

From the Laboratory of Comparative Pathology, Philadelphia Zoological Society, and the Department of Pathology Medical School, University of Pennsylvania.

Mucin is a natural constituent of the intestinal contents; hence the assumption that it might be used as a culture medium for intestinal protozoa. So far as can be determined mucin has not been employed heretofore for this purpose. Samples of gastric mucin prepared by both Armour and Company and the Wilson Laboratories were used. These are dry powders, readily soluble in aqueous media and solutions may be sterilized in the autoclave.

A medium, composed of liver infusion agar slants¹ covered with a solution of 0.3% mucin in 0.7% aqueous NaCl with a 2 mm. loop of sterile rice starch to each tube, was used to isolate *Endamoeba histolytica* from one case of acute amoebiasis, from one human carrier and from 3 *Macaca irus* that were carriers. The amoeba grew in moderate numbers but cysts were not formed. Subcultures were made at 2 or 3 day intervals.

Trichomonas sp. from *Pan niger*, *Cebus fatuellus*, *Macaca irus* and *Tapirus bairdii* grew in abundance in a medium of 0.3% mucin in 0.7% NaCl solution. Subcultures were made at 3 to 4 day intervals. *Trichomonas sp.* and *Eutrichomastix sp.* from various reptiles have grown in abundance in 0.3% mucin in 0.5% aqueous NaCl solution, with subcultures every 7 days. A 2 mm. loop of rice starch to each tube seemed to increase the rate of growth of the flagellates from both mammals and reptiles. This medium, 0.3% mucin in 0.5% aqueous NaCl solution with rice starch, was used also to isolate 4 strains of *Endamoeba sp.* from *Natrix sipedon* and *N. taxispilota*. Growth and cyst formation was abundant. Subcultures were made every 7 days. *Balantidium sp.* from the intestine of *Testuda galapogoensis* has been cultured on this medium also, transfers being made every 7 days. The ciliates grew very well but did not encyst.

Blastocystis, although usually present in fecal material from which these protozoa were isolated, grew poorly in the media containing mucin, and often disappeared after a few subcultures.

¹ Cleveland, L. R., and Collier, J., *Am. J. Hyg.*, 1930, **12**, 606.