The cells of *Candida lipolytica* were also enriched in oxygen-18, as expected[2] from the assimilation of labelled intermediate diol. The 15- to 35-fold enrichment in oxygen-18 of the bacterial cells grown on ethylene over those grown on sodium acetate is indicative of an incorporation of molecular oxygen in the primary attack on the ethylene. By analogy, these results may be taken to imply, but not prove, that oxidation of ethylene by this bacterium takes place via ethylene glycol formed by the incorporation of molecular oxygen. Ethylene glycol was shown to serve as a sole source of carbon and energy for the 'ethylene bacterium'.

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Antigenic Structure of *Entamœba histolytica*

IMMUNOLOGICAL investigations on the specific antigens of *Entamœba histolytica* are complicated by the presence of concomitant bacterial flora in the culture. The precipitin reaction in cases of clinical amœbiasis has been investigated[1,2]. Menendez[3] reported the presence of precipitin antibodies in the serum of rabbit immunized with cultures of *Entamœba histolytica*. In the present work the precipitating antigens of these parasites were analysed by agar-gel diffusion and intragel absorption techniques.

Entamœba histolytica, strain *E.H.* 1, was used in this work. The associated bacterial flora in the culture were *Escherichia coli* and *Pseudomonas pyocyaneus*. *Ent. histolytica* grown in Row's hæmoglobin media at 37° C. for 48 hr. was treated with dihydrostreptomycin sulphate to kill the bacteria. In each test, materials from thirty culture tubes were pooled and centrifuged at 2,000 r.p.m. for 5 min. The supernatant fluid was discarded and the deposit was re-suspended in Ringer's solution so as to contain about 100–150 parasites/low-power field. Sera of rabbits hyperimmunized with cultures of *Ent. histolytica* were used and are referred to as 'antiamœba' sera in this communication. Sera were also cultivated against *E. coli* and *Ps. pyocyaneus*.

Diffusion of antigen and antibody in agar gel was carried out according to the method of Feinberg[4] as adapted by Ghosh and Mukerjee[5]. In order to eliminate the reactions due to the antigens of associate bacteria, controls were set up with *E. coli* and *Ps. pyocyaneus* antigens in each test. It can be seen in Fig. 1*a* that 'antiamœba' serum gave rise to three precipitin bands against *E. coli* and two bands against *Ps. pyocyaneus* antigens. But when the amœba culture was used, a number of bands appeared between the antigen and antiserum wells and it was not possible to delineate the specific bands of amœbæ. This was due to the presence of antibodies against *E. coli* and *Ps. pyocyaneus* in the 'antiamœba' serum and the corresponding antigens in the antigenic preparations of amœba. By incorporation of 50 per cent (v/v) anti*coli* and anti*pyocyaneus* sera in the media, it was possible to absorb the bacterial antigens and identify the three specific precipitin bands of amœbæ.

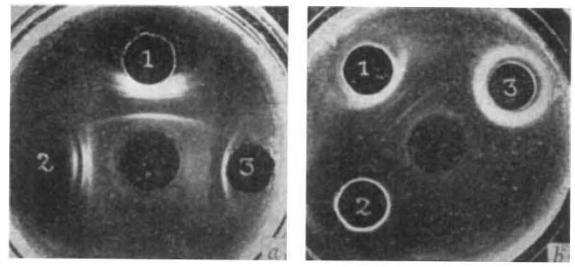

Fig. 1. *a*, Central well; antiamœba serum; 1, amœba antigen; 2, *E. coli* antigen; 3, *Ps. pyocyaneus* antigen. *b*, Intragel specific absorption 50 per cent anti*coli* and anti*pyocyaneus* sera (v/v) in gel. Arrangements of the wells are the same as in Fig. 1*a*. Note unmasking of three specific bands of amœba

On adding 'antiamœba' serum to the media all the bands, including those due to *Ent. histolytica*, were eliminated.

Since the rabbit's blood was used both for the preparation of Row's hæmoglobin media and as the source of antisera, no precipitin band appeared against media controls.

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GENETICS

Skewed Recombination in a Rare Interspecific Jute Hybrid

Islam and Rashid[1] and Swaminathan *et al.*[2] have recently described the morphological and cytological characteristics of the F_1 hybrids between the two cultivated jute species, *Corchorus olitorius* L. and *C. capsularis* L. The F_1 plants studied were intermediate in phenotype, but an interesting genetic situation was found when we examined the F_2 and F_3 generations of two hybrids of *C. olitorius* (♀) × *C.*