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Effects of Ultracentrifuging Oxytricha

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throat ailments. The data suggest very strongly that there is a hereditary diathesis for tuberculosis in this family.

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EFFECTS OF ULTRACENTRIFUGING OXYTRICHA

HAROLD W. KIRSHENBLIT
(Introduced by H. W. Beams)

Oxytricha, a hypotrich having two macronuclei, was ultracentrifuged at a force of about 50,000 times gravity for five to ten minutes. It was found that the macronuclei and micronuclei are of different relative densities, the macronuclei being drawn to the centrifugal pole by high-speed centrifuging, while the micronuclei appear to be only slightly affected by the forces used. Oxytricha may be stratified and torn in two, and the fragments are able to move about independently of each other. Fragments without macronuclei are capable of normal activity, the external body form being regained in from fifteen minutes to an hour or more, depending upon the amount of distortion of the fragments. The micronuclei are able to divide while undergoing ultra-centrifugation. Small fragments containing both macronuclei and only a slight amount of cytoplasm are unable to recover, and soon die.

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