

ATPase activity of the plasma membrane of *Euglena gracilis* and its possible involvement
in membrane extension during euglenoid movement

Kyohei TAKEUCHI and Toshinobu SUZAKI

(Dept. Biol., Grad. Sch. Sci., Kobe Univ.)

SUMMARY

Previous studies have indicated that the motive force for cell shape change (euglenoid movement) in euglenoid flagellates resides in the cell cortex which consists of the plasma membrane and sub-pellicular proteinaceous cytoskeleton. Treatment of *Euglena gracilis* with 0.1 mM chlorpromazine induced a strong and irreversible cell rounding-up. A high, Ca^{2+} -independent ATPase activity was found to be present in the plasma membrane fraction of *E. gracilis* prepared by NaOH-treatment. These results suggest that ATP-dependent membrane expansion is involved in the mechanism of euglenoid movement.