# Exocytosis in paramecium

Science, Biology

In Paramecium caudate, trichinosis are IOWA secretors vesicles that are released from the cytoplasm. We first observed how the presence of Alicia blue dye triggers normal secretion of trichinosis, and we then tested four different hypotheses in order to determine how the presence of Ca++ ions in the extracurricular and intracellularenvironmentaffects the secretion of trichinosis.

Our first our hypothesis tested whether extracurricular calcium is required for the secretion of trichinosis by reading cells with EST., an agent that blocks calcium ions; our second tested whether increased calcium will counter the inhibitory effects of EST.; our third tested whether adding different ion, like Magic, can also counter the inhibitory effects of EST.; and our fourth hypothesis tested whether the release of intracellular calcium by adding caffeine or oenophile affects exoticism.

Our results demonstrate that exoticism of tricycles is dependent on the presence of calcium ions in both the intracellular and extracurricular environments. Introduction: Exoticism in eukaryotic cells is the process in which macromolecular material is released from the cell into the extracurricular environment; one example of exoticism is the secretion of trichinosis in paramecium. Trichinosis are secreted from the cell as a defense mechanism when certain stimuli are introduced into the extracurricular environment.

The secretion of trichinosis is controlled by the presence of Ca*+ ions within the plasma membrane and in the extracurricular environment. The purpose of our experiment was to observe the extent to which exoticism is pendant

on the presence of extracurricular and intracellular calcium ions, and to determine if other extracurricular ions can have the same effect as calcium. The cells were first treated with 0. 03% Alicia blue dye, which triggers normal exoticism. Cells were then treated with EST., an agent that inhibits calcium, in order to observe how triptychs secretion is affected when calcium ions are sequestered.

Additional calcium ions were added to the extracurricular environment to determine if the effects f EST. could be countered by increasing calcium. The cells were then exposed to a different ion, Magic, to observe if a different ion could have the same promoting effect in the extracurricular environment as calcium. Finally, the effect of intracellular calcium was tested by treating cells with a calcium oenophile (A23187) and caffeine, which both stimulate the processing of calcium into the cytoplasm of a cell. Results: Table 1: Observations of triptychs secretion in Paramecium caudate.

Data show owe a small sample of cells on a microscope slide responded to the addition of 0. 03% Alcott blue dye, 7. 5 run EST., 0. 14 run A23187 in 1% DMS, 50 run caffeine, and 25 mm magnesium chloride (Magic). The data were obtained by viewing cells under a microscope; the cells were counted prior to treatment and the number of cells secreting trichinosis was counted after treatment.