

Search of substances inducing escape responses of *Euplotes aediculatus*

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SUMMARY

In starved conditions, *Euplotes aediculatus* shows an avoiding response to certain substances that ooze out from dead *Euplotes* cells. When a frozen killed *Euplotes* cell was placed in a population of living cells, a patch of cell-free area was formed with the dead cell located in the center. At the periphery of the cell-free area, the cells became actively swimming, and moved away from the center of the area. When such activated cells were sucked into a pipette and transplanted to another place, a new cell free-area was initiated to form. Non-activated cells did not induce such a response. The transplantation could be repeated more than several times, with consistent degree of formation of the cell-free area. This result suggests that the overall avoiding behavior requires not only the initial factor that is derived from the dead *Euplotes* cells, but also another factor that is secreted from the activated living *Euplotes* cells.