

BPT012-P06

Room: Convention Hall

Time: May 24 17:15-18:45

Phagocytotic ability of epithelium cells from *Adipicola pacifica* gill

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The mytilid bivalve *Adipicola pacifica* is a dominant species at whale falls off Cape Nomamisaki, which harbors two types of symbionts extracellularly on its ctenidial epithelial cells. These symbionts are thought to be digested in vacuoles of the epithelial cells through phagocytotic activities. However, no clear evidence of the phagocytosis has been demonstrated. Here we tested the phagocytotic ability of ctenidial epithelial cells in *Adipicola pacifica* by use of fluorescence-labeled particles including *Escherichia coli*. Dissected gill tissues were incubated with the labeled *E. coli* overnight. Trypan blue was treated after the incubation for quenching of fluorescence from the *E. coli* that was not phagocytosed. The labeled *E. coli* was observed in the epithelial cells of *Adipicola pacifica*. These results suggested that *Adipicola pacifica* are able to acquire extracellular particles through phagocytotic activity of the ctenidial epithelial cells. However it was not clear whether *E. coli* was actively phagocytosed because of a few quantity of *E. coli* engulfed.

Keywords: *Adipicola pacifica*, phagocytosis, whale bone