

Effects of chloramphenicol, erythromycin, and furazolidone on growth of *Isochrysis galbana* and *Chaetoceros gracilis*

A.I. Campa-Córdova, A. Luna-González, F. Ascencio, E. Cortés-Jacinto^a,
C.J. Cáceres-Martínez

Abstract

This study focused on determining the effects of antibiotics on microalgae used as food for scallop larvae. Six different dose levels of chloramphenicol, erythromycin, and furazolidone were added to cultures of *Isochrysis galbana* and *Chaetoceros gracilis*.

An *in vivo* experiment was subsequently conducted to determine the effect of chloramphenicol and erythromycin on larval survival of the Pacific calico scallop *Argopecten ventricosus* in tanks and on the population of its associated bacteria. Results showed that growth of *I. galbana* was not significantly affected by chloramphenicol or erythromycin at the test doses of 0.5, 1.0, 3.0, 6.0, 9.0, and 12.0 mg/l. *C. gracilis* was significantly sensitive to erythromycin and chloramphenicol at doses higher than 0.5 and 3.0 mg/l, respectively. Furazolidone inhibited the growth of both *I. galbana* and *C. gracilis* at all test doses. Results showed that exposure of scallop larvae to a dose of 6 mg/l chloramphenicol or erythromycin did not significantly affect growth of *I. galbana*, significantly enhanced survival of the scallop larvae, and inhibited the growth of *Vibrio* spp. in tanks. This study demonstrated the adverse effect of chloramphenicol, erythromycin and furazolidone on *I. galbana* and *C. gracilis* microalgae but the positive effect on survival of the scallop larvae, decreasing associated bacterial population.