

In vitro segmentation induction of *Mesocestoides corti* (cestoda) tetrathyridia

Markoski, Melissa M.

Bizarro, Cristiano V.

Farias, Sandra

Espinoza, Ingrid

Galanti, Norbel

Zaha, Arnaldo

Ferreira, Henrique B.

Mesocestoides corti is a suitable model for studying cestode development because of its ability to reproduce asexually and segment in vitro. The cultured parasite is also capable of sexual differentiation and, probably, reproduction. To establish conditions that increase the efficiency of in vitro *M. corti* larvae (tetrathyridia) segmentation, we tested the effects of an inducing agent and some physical parameters in cultures. We found that a 5% CO₂-95% N₂ gas phase, an incubation temperature of 39 C (instead of 37 C), and a 24-hr pretreatment with trypsin (105 BAEE/ml, BAEE = N^ε-benzoyl-L-arginine ethyl ester unit of trypsin activity) in Roswell Park Memorial Institute (RPMI) 1640 medium supplemented with 20% fetal bovine serum (FBS) are able to increase individually or synergistically the segmentation rate of tetrathyridia. A segmentation rate of up to 100% was achieved on day 4 of culture, when all these conditions were used simultaneously, in comparison with an average rate of 40% o