

SPACE LIFE SCIENCES SYMPOSIUM (A1)
Multidisciplinary Space Life Sciences Research (8)

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CAENORHABDITIS ELEGANS PROGENY AND SURVIVAL UNDER SIMULATED MICROGRAVITY

Abstract

The wild type N2 of the nematode *C. elegans* was used to test the effect of simulated microgravity on the brood size and survival. *C. elegans* cultures are maintained in the laboratory on NGM plates seeded with *E. coli* OP50 as a food source. *C. elegans* populations in liquid media (S medium) were exposed to simulated microgravity using the NASA recommended system the HARV (High Aspect Ratio Vessels) for different time intervals. Nematodes kept on a shaker served as the control. When each treatment was terminated, the total population was determined to compare it with the initial population, several L4 stages were isolated separately and their progeny was counted. Eggs were extracted from adults to determine the effect of microgravity on hatching of L1. Result showed that simulated microgravity affected the reproduction, survival and the progeny of the exposed *C. elegans* populations. Simulated microgravity decreased the rate of the reproduction and the progeny, and also increased the mortality of the exposed populations.