

Nematode Nightmares: RF Radiation Effects on the *C. elegans* Neuron

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A connection between cell phones and various types of cancers, reproduction damage, and neurological damages has been suspected for years. The focal point of this analysis is to further elucidate the concept that exposure to these radiowaves could have an effect on the body. In this study, the nervous system and the reproduction of *Caenorhabditis elegans* (*C. elegans*) was tested. Animals were exposed to cell phone radiation, alongside a control group that was not exposed, for 2 hours per day for 2 months. 2 stimulus tests were conducted over the last week of exposure. In test 1, worms were grazed lightly and responses were recorded. In assay 2, worms were prodded with a platinum wire to produce a reaction. Both gentle and harsh touch tests showed the exposed group to respond significantly less frequently than the control. Assay 3, conducted by recording the number of body bends in animals counted over 3 minute periods, showed the exposed group to be more active than the control. In my fourth test, I observed effects on the brood size of the groups. The exposed group showed a higher larvae count after 3 days. In the last assay an aversive compound was placed across the center of a test plate, a drop of an attractant was placed on one side and animals were inoculated onto the other side in a drop form. Worms that crossed the barrier are said "mutants". A significantly higher rate of exposed worms crossed over, indicating a higher mutation rate.