Aldana Aldawsari, J Tissue Sci Eng 2017, 8:2 (Suppl)
DOI: 10.4172/2157-7552-C1-034



# Biological Effects of Low, Medium and High blue-enriched white light in light emitting diode (LED) on *Caenorhabditis elegans*

**Aldana Aldawsari**
Texas Southern University, USA

*Caenorhabditis elegans* is small free-living and bacterial-feeder rhabditid nematode. It is a good model to study the effects of light emitting diode (LED) on the living systems because of its biological characteristics; such as short lifespan of two to three weeks and easy maintenance at the temperature of 20°C. Multiple cells of *C. elegans* including gut, muscle and neuronal cells share homology with humans. Therefore, it has offered many valuable insights into the field of human biological science. This study aims to analyze whether the chronic exposure of the nematode *C. elegans* to the blue-enriched white light in LED light from egg to adult can impact the biology and behavior of *C. elegans*. In this analysis, four treatments were prepared to evaluate these effects that were exposed to no light (dark) which is the control, low-blue enriched, medium-blue enriched and high blue enriched white in LED light sources. The results showed that the low-blue enriched treatment was very much similar to control. In medium-blue and high-blue enriched exposed treatments, the worms acted differently in comparison of control with significant biological differences. Therefore, the findings of this study showed that how blue enriched white in LED lights can decrease the reproduction, late hatching and development to adults, slow locomotion, less heat/cold resistance, and induce generation of ROS (reactive oxygen species) of the free-living organisms such as nematodes that were exposed to LED light. Therefore, the findings will also help in understanding the impact of LED light on living organisms and humans.

## Biography

Aldana Aldawsari is pursuing Ph.D in Texas Southern University, USA.

Aldana-sam2015@hotmail.com

**Notes:**