

The Effect of Light Intensity on Carbonic Anhydrase Concentrations Within *Anthopleura elegantissima*

Carbonic anhydrase is one of the most crucial enzymes found in nearly all animals. Carbonic anhydrase is especially important in symbiotic cnidarians around the world that maintain a population of zooxanthellae within their cells that require carbonic anhydrase to fix CO₂ for the zooxanthellae. *Anthopleura elegantissima* was exposed to different levels of light and DCMU for 4 weeks. The effect of these different treatments on carbonic anhydrase activity levels were measured after 4 weeks of treatment; there was a significantly lower in carbonic anhydrase in anemones that were receiving less than 100% light intensity. This shows *Anthopleura elegantissima*'s ability to adapt quickly to the natural change in light intensity that occurs frequently in the intertidal zone of the pacific northeast.