

## **The Effect of Salinity on Heat Shock Protein 70 Levels in the European Green Crab, *Carcinus maenas*.**

Heat Shock proteins (HSPs) have been known to help organisms to survive in unfavorable conditions. HSPs maintain the integrity of proteins by keeping them from denaturing while enduring many environmental stressors such as temperature, salinity, and heavy metals. HSPs have helped the European Green Crab, *Carcinus maenas* become a successful invasive species. The Green Crab is native to the Atlantic coast of Europe but has invaded areas as far as Australia, Africa, South America and the Pacific coast of the USA. In this study, crabs were kept for 12 days in one of three salinity treatments: 15psu, ambient salinity (32psu), or 40psu. Crabs were sacrificed, gill tissue was processed, and a polyacrylamide gel electrophoresis was run. Gels were scanned to be digitally analyzed using Scion Imaging Software. The high salinity treatment showed a significantly higher amount of HSPs than ambient salinity. There was no significant difference between the other treatments.

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