

# 2017 Undergraduate Research & Creative Activity (URECA)

## Project Final Report

Within one month of project completion and no later than July 15, 2017, please provide an informative but concise (1-2pp) report that addresses the questions/items below. Please submit reports, along with any project photos that you approve of being distributed or publicized, to both [kmjensen@alaska.edu](mailto:kmjensen@alaska.edu) and [bbuma@alaska.edu](mailto:bbuma@alaska.edu).

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Your Name: Esther Bower

Your Faculty Mentor: Sherry Tamone

(1) What was the original project objective or purpose?

The original project objective was to determine a suitable model organism to study *Pandalus platyceros*. I proposed to use the local dock shrimp *Pandalus danae* to do this research.

(2) With respect to your proposed project activities, what have you achieved thus far?

With respect to the proposed project activities, I have determined using molecular techniques (PCR) that *P. danae* would make a suitable model organism for *P. platyceros* based on similar gene sizes for the androgenic gland.

My mentor and I have almost gotten the entire gene sequenced for the *P. danae* insulin-like peptide from the androgenic gland (IAG) at this point and when done will be able to compare to the published gene sequence for IAG from *P. platyceros*.

(3) Please explain any departures from your original project objectives, proposed activities, and/or notable budget changes.

There have been no departures from original project objectives or budget changes.

(4) What is the current status of your project? If not complete, when do you anticipate completing it? Do you plan to spend any more of the remaining funding?

The funding has all been spent on tools and materials necessary for this project. It is almost complete as we have half the gene sequenced and are in the process of sequencing the rest of the gene currently. It is my goal that the gene sequence be published to the National Center for Biotechnology Information (NCBI) in 2018.

(5) Please summarize the project outcomes and/or any tangible products that resulted (or will result) from the project.

Publish the gene of interest and prove that *P. danae* will make a suitable model organism for studying *P. platyceros* due to its genetic similarities.

(6) Please communicate the personal significance of your project, such as the impacts of the project on your education and experience at UAS; impacts on your future interests and outlook; how this project influenced your relationship with a faculty member; or simply use this space to provide some perspective about research & creative activities for students at UAS.

This project allowed me to further my research on the study of Pandalid shrimps. I have been working with a very large species of shrimp for 3 years and getting experience working with a small shrimp species has greatly influenced my strengths in dissection methods. I feel confident I could isolate almost any tissue in any shrimp species given the correct tools, something I was skeptical about before this project.

This project will give my mentor and I the opportunity to publish another gene sequence and further the knowledge of the genus *Pandalus*. In the future I could use this knowledge to sequence androgenic gland genes in other *Pandalus* species, potentially becoming part of a master's project.

Thank you to the URECA committee for granting me this opportunity and continuing such an awesome program for undergraduate students.