

Intellectual Merit Criterion

Overall Assessment of Intellectual Merit

Excellent

Explanation to Applicant

The applicant demonstrates experience through several publications and presentations, and creative use of figures in the proposal. The proposed research is novel, on an important topic, and likely impactful. There is potential to do more with the model but this might go beyond the scope of a master's project. The applicant does not discuss career goals and it is unclear how the multiple years of funding would be used, but the applicant shows significant potential.

Broader Impacts Criterion

Overall Assessment of Broader Impacts

Excellent

Explanation to Applicant

The applicant has a unique perspective on the challenges faced by underrepresented groups. She has experience with outreach to grade school students from underrepresented groups, and proposes to continue this. The research focuses on charismatic megafauna thus outreach should be effective. In addition, the research will be published open access and the applicant will supervise REU projects.

Summary Comments

The applicant has proposed an excellent project with considerable broader impacts. The application would benefit strongly from further details on the applicant's short-term career plans.

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Explanation to Applicant

Individual has given a large number of talks, authored/coauthored three publications with one more in prep, received a number of small grants and notable honors, and worked/volunteered with a number of zoos and aquaria. Individual developed independent research project out of a class project on a Channel Island that led to lead authorship on paper as undergrad. Application as a whole highlights an individual at the top of the field as a young scientist coming to graduate school at a level beyond nearly all students. The proposed research is a nice expansion of bioenergetics models, but was challenging to determine how novel it was relative to existing work. The methods appear sound and the individual is already on a strong path after first year of program.

Broader Impacts Criterion

Overall Assessment of Broader Impacts

Excellent

Explanation to Applicant

Works to teach underserved Alaskan students about science, which has been highlighted in local news. First person in family to attend college. Was captain of college soccer team. Has worked as a docent in zoos. Plans to supervise REU student, will develop teaching and outreach materials and publish. What stood out across entire application was that individual is very

committed to outreach, bettering society, and is a natural leader that stands out as model to others.

Summary Comments

A very well rounded and strong scientist that is independent and far ahead of peers. Individual has strong track record and shows demonstrable leadership and outreach skills. Expect the individual to become a role model to others while a graduate student and beyond.

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Explanation to Applicant

Very good publication/presentation record. She has also shown that she can obtain support for her work. A well balanced person who has overcome difficulties associated with been the first member of her father's family to go to college and also a member of an underrepresented minority. Was captain of her universities' NCAA soccer team which helped in the development of her leadership skills. Her research work is already underway. The proposed research is well thought out and relevant. She is well prepared for the work and resources are available.

Broader Impacts Criterion

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Explanation to Applicant

The student has significant teaching and community interaction experience and has presented a good information dissemination plan.

Summary Comments

A solid student who has overcome significant obstacles to get to where she is. Broad research and personal interests and significant breath of knowledge. Excellent leadership qualities.