Intellectual Merit Criterion

Overall Assessment of Intellectual Merit

Very Good

Explanation to Applicant

Strengths: The applicant has demonstrated past high intellectual merit as illustrated by their perfect undergraduate and graduate GPA and recognition by multiple undergraduate and graduate awards. The applicant has demonstrated the ability to see the research process through all stages as illustrated by authorship on multiple publications. The applicant has gained a diverse set of technical (e.g., computer programming, data analysis) skills that will support their continuing research. The theory and study hypotheses of the proposed research are well reasoned and articulated suggesting high intellectual merit. Weaknesses: The application does not specify how, if at all, the ideas in the proposed research are separate from those from the NIH RF1 grant that the proposed research is noted to be a part of. In fact, the proposed hypotheses seem to align with those of the grant cited. This limits the ability to judge the intellectual merit of proposed research as it reflects on this specific application. Despite the ongoing Covid-19 pandemic having obviously some implications for the proposed research on immune function, stress, and asthma, there is no mention of consideration of this thus limiting the intellectual impact of the application. This absence is particularly salient given the application suggests that the applicant has considered the effects of Covid-19 on immune function in past coursework.

Broader Impacts Criterion

Overall Assessment of Broader Impacts

Very Good

Explanation to Applicant

Strengths: The application demonstrates a good understanding of what it means to have broader impact in that it lists proposed future community engagement, mentoring, and teaching related initiatives. The focus on interdisciplinary research and dissemination broadens the application's impact. Weaknesses: Though the application provides a fair amount of detail for plans to broaden impact through initiatives such as community engagement with support of the NSF GRFP in the near future, there is limited evidence presented of past or current endeavors to do so thus limiting the ability to judge the applicants broader impact potential. The research proposal mentions that asthma disproportionately affects minoritized communities yet there are no specific considerations for reaching these groups (e.g., recruitment of minoritized communities) in the proposed research plan thus limiting the potential broader impact of the application. The application notes the desire to prioritize training and mentoring of underrepresented students, but there is no specifics on how successful the applicant has been at this or how the applicant may be more successful doing this in the future.

Summary Comments

This application comes from an applicant that has exhibited past high intellectual merit, evidenced by a perfect GPA, numerous academic awards, authorship on publications, and a diverse skill set in technical areas such as computer programming and data analysis. Their proposed research is well-conceived with clearly articulated theories and hypotheses. The application would have been strengthened by clear distinction between the proposed research and a current NIH RF1 grant cited, complicating the assessment of its unique intellectual contribution. Additionally, the omission of COVID-19's implications on their research topic, despite its relevance and the applicant's previous coursework, is a notable oversight. The applicant has outlined future plans for community engagement, mentoring, and teaching, showing a strong understanding of how to have broader impact. Yet, there is a dearth of evidence presented in the application of past or current efforts in these areas, limiting the evaluation of their potential for broader impact. The research proposal recognizes asthma's disproportionate effect on minoritized communities but lacks specific strategies for engaging these groups. The applicant's intent to mentor underrepresented students is clear, but the absence of a detailed plan or evidence of past success in this area weakens their broader impact proposition.

Intellectual Merit Criterion

Overall Assessment of Intellectual Merit
Excellent

Explanation to Applicant
The applicant has impressive academic records. The project focuses on psychoneuroimmunology as a framework to understand body-brain interaction. The project addresses an important research topic and the applicant has necessary skill sets to carry out the proposed activities.

Broader Impacts Criterion

Overall Assessment of Broader Impacts
Good

Explanation to Applicant
The applicant has been active in building scientific community within universities and mentoring undergraduate students. Broader impact could have been stronger with clarification on how the applicant could affect the general community beyond the scientific community as a scientist. It would also be helpful to provide further details on how the proposed research activities could affect the general public.

Summary Comments
The applicant clearly demonstrates a strong potential to be successful in graduate school. Broad impact of the application is good.

Intellectual Merit Criterion

Overall Assessment of Intellectual Merit
Excellent

Explanation to Applicant
The applicant has an excellent academic record. Her proposed research is thoughtful and specific and has the potential to be high-impact.

Broader Impacts Criterion

Overall Assessment of Broader Impacts
Good

Explanation to Applicant
The applicant's proposed research on chronic stress and asthma has potential to make a positive impact in the world. The applicant has disseminate her work via publications and poster presentations. The applicant has identified ways to engage in broader impact and outreach activities and is starting to become involved in these activities.

Summary Comments
The applicant already has an impressive body of research that seeks to understand how psychosocial stress impacts inflammation. The research directions are promising and show potential for high impact. The applicant is encouraged to pursue more outreach opportunities.