**Intellectual Merit**

**Overall Assessment: Excellent**

Your letters, academic record and research accomplishments speak to the highest potential for success in research. Your writing is unusually thoughtful and enjoyable to read. Your proposal using optical tweezers to dissect the motor properties of ClpXA protease interesting and creative. One improvement might have been to develop a model based on the inactive subunit experiments you referenced.

**Overall Assessment: Very Good**

The applicant has very good academic credentials and has demonstrated the ability to conduct research as an undergraduate. The proposal is very well written and indicates a strong likelihood of success. The applicant will receive excellent multidisciplinary training in single molecule biophysics.

**Overall Assessment: Excellent**

The applicant has excellent academic record and received one merit award. The proposed research project on the application of optical tweezers is good but not exceptional. However, the lack of evidence in the participation in scientific conferences and no record of research publications limit the interest in the applicant.

**Broader Impacts**

**Overall Assessment: Very Good**

Your dedication to teaching and communication are well-documented. Your diverse background provides a unique perspective and the potential to provide a role model for other multi-racial scientist. The broader impact criteria could have been greatly strengthened by providing more detailed plans about how you would carry out such activities during the NSF period.

**Overall Assessment: Excellent**

The applicant has demonstrated a strong commitment to science education and the outreach plans described in the proposal are very realistic and likely to have a positive impact. The candidate has a good appreciation of the problems involved in broadening participation by underrepresented minorities and has worked in this direction. The description of the broader impact of the research could have been improved.

**Overall Assessment: Very Good**

The general application and broader impact of the proposed research is of very limited nature. The applicant participated in working with under-represented student group as a teach. This shows the tenacity of the applicant to reach the community. However, more active participation in conferences and involvement in scientific publications enhance the potential of the application.