Intellectual Merit Criterion

Overall Assessment of Intellectual Merit
Excellent

Explanation to Applicant
The applicant provides a research plan that proposes to investigate an appropriate subject area. The past and proposed research sections indicate the ability to plan and conduct research. Co-authorship on two papers and first-authorship on 2 papers in undergraduate research journals are considered a strength of the application. Although the applicant has not yet delivered oral research presentations, a poster presentation has been completed. The undergraduate GPA is very good. Awards and accolades indicate recognition of the quality of the applicants abilities and efforts.

Broader Impacts Criterion

Overall Assessment of Broader Impacts
Very Good

Explanation to Applicant
There is a consistent track record of outreach and leadership. A poster presentation indicates sharing of research with a broader audience at the national level. The applicant has successfully integrated research and education at multiple levels. The plans for future service are appropriate.

Summary Comments
Overall, this is a high quality application from a very promising young scientist.
Intellectual Merit Criterion

Overall Assessment of Intellectual Merit

Excellent

Explanation to Applicant

The candidate has completed her BS degree in 2012 at [BLANK] and has started her Ph.D. program at [BLANK] in the Fall of 2012. The candidate received as an undergraduate several awards and scholarships (e.g., Deans Honor List, Honors Undergraduate Research Scholar, Training grant, Outstanding graduating senior), has an honorable mention for her application in the fellowship program 2013, has worked on several research projects, and is co-author on two publications (one PNAS, BMC Research Notes). The candidate has the goal to later work in a government lab for the Department of Defense or the Centers for Disease control and Prevention. The candidate has demonstrated the management skills and the potential to excel in the undergraduate degree classes, while being active in several student associations, and is also currently active in several organizations. The applicants references demonstrate the potential of the student to be successful in a demanding program. The research program has a biomedical focus and will study how the QseBC two component system will affect the adherence of Escherichia coli to host cells.

Broader Impacts Criterion

Overall Assessment of Broader Impacts

Excellent

Explanation to Applicant

The student has demonstrated with several activities that she has the interest and motivation for outreach activities. She is currently the Vice President of the Microbes and Defense Academic Society and is responsible for community outreach. While being an undergraduate student, the student managed to be active in several student organizations, and continues to take on leadership positions in student organizations.

Summary Comments

The student is relatively young compared to the other applications that I have read so far (continued Ph.D. program directly after finishing her undergraduate degree), but the student is still mature enough, and has demonstrated the clear potential to be a very deserving applicant for the fellowship program.
Intellectual Merit Criterion

Overall Assessment of Intellectual Merit
Excellent

Explanation to Applicant
This is a quite well developed research proposal that builds upon work the applicant contributed to during year-1 graduate school rotations (1 pub, PNAS, 2013); a nice return on investment to a rotation. The research is focused and reasonable. An additional pub has come from graduate work. The applicant has very high level UG preparation for research through great scholastic performance and research experience (1 regular pub & 1 pub in J. Undergrad res), and has received numerous rewards and recognitions for scholarship and academic performance.

Broader Impacts Criterion

Overall Assessment of Broader Impacts
Very Good

Explanation to Applicant
The applicant has demonstrated great creativity and made significant contributions (per LORs) and these suggest future similar performance. Most of the broader impacts derive from the research itself, which is compelling and important (bacterial adherence). Additionally, the applicant has detailed reasonable approaches that will be made to increase broader impact. Finally, the applicant has experience as an UG in presenting results of research through mechanisms (e.g. J. of Undergrad res) that may help the applicant engage with UG-trainees in the future.

Summary Comments

Productivity and well-attested excellence in research, terrific LORs, very good broader impacts, and superb scholastic performance, combine for a very good to excellent application.