



Stony Brook University

July 27, 2021

Re: Writing a letter of reference for the NSF Graduate Research Fellowship Program

Dear Faculty,

Strong letters of reference are essential for a successful NSF GRFP application. To be effective, letters should be targeted to the GRFP competition, which attracts the most talented STEM students in the country (*with ~12,000—15,000 applicants for 2000 fellowships across all STEM fields*). NSF values research experience, achievement, innovation, outreach, persistence, and leadership; GRFP awardees are scientists early in their graduate training, with ambition and potential to change the world. This means that a strong GRFP letter is somewhat different than a letter for graduate school admission. A GRFP letter should address both of NSF's review criteria: *Intellectual Merit* and *Broader Impacts*. These are equally important.

Intellectual merit includes "the potential of the applicant to advance knowledge," based on "the strength of the academic record, the proposed plan of research, the description of previous research experience or publication/presentations, and references." If you have mentored or collaborated with the applicant on a research project, it's helpful to address the specific contributions of the applicant, as well as the status of the project (especially if it's destined for publication or in the pipeline). Vivid details about the applicant's approach, achievements, background, and special strengths are most helpful to reviewers, as NSF GRFP funds *people*, not *projects*. The GRFP application includes a Research Plan Statement as evidence of the applicant's intellectual merit and broader impacts (NOT as a project proposal to be funded). If you are the applicant's Principal Investigator or Research Advisor, do provide feedback on a draft of their Research Plan if you can, but make sure your comments and your letter of recommendation do not overshadow their voice and vision; they should "own" their project. Note: GREs are no longer part of the application.

Broader Impacts include "the personal, professional, and educational experiences, the future plans and prior accomplishments in the integration of research and education, and the potential for future broader impacts." NSF values outreach at all levels of STEM education and practice, inclusion of younger or diverse (especially under-represented) students in science, and communicating science to industry, policy leaders, and the general public. If you are aware of the applicant's relevant past, present, or planned outreach, mentoring, community service, leadership, teamwork, resilience, or ability to persist in the face of adversity, it is helpful to comment on those. Otherwise gifted applicants may fail to sufficiently convey their broader impacts, sometimes through modesty. You may be in a position to assess the potential for impact most directly and effectively; you can say things about the applicant that they cannot say about themselves. Do read the applicant's statements if at all possible.

If you are at the applicant's graduate institution, it is also helpful to comment on the research infrastructure, facilities, mentoring activities, and other training resources available to the applicant.

GRFP deadlines vary each year; see the GRFP Solicitation. The deadline is automatically enforced and absolutely firm (no exceptions). Each year you provide a letter, you will receive an email from NSF with a new ID so that you can register before uploading your letter. The letter can be no longer than 2 pages and should be on letterhead with your name, title, department, and digitized (or digital) signature. Additional info and tips can be found at http://www.nsfgrfp.org/reference_writers. Please feel free to contact me if you have any questions.

Sincerely,

A handwritten signature in blue ink, appearing to be "SB" with a long, sweeping underline.

Susan E. Brennan, Ph.D. (susan.brennan@stonybrook.edu)
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