

Pilot Study to Establish the Nature and Impact of Effective Undergraduate Research Experiences on Learning, Attitude, and Career Choice

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Summary of Merit Review and Recommendation

Note to Reader: This statement has been prepared by staff of the National Science Foundation in order to provide an illustration of the proposal review process and the award recommendation. While it draws on actual points made by the proposal reviewers, review panelists, and program officer, it is a synopsis and synthesis of the actual reviews and award decision. We recognize that all proposals and reviews have strengths and weaknesses. We therefore offer this only as an example of a “typical” set of points made for a funded proposal, and we hope this serves to illuminate the process and to provide helpful guidance to prospective investigators.

The proposed project, a multi-institutional effort involving four participating institutions, is a 3-year pilot study designed to develop an evaluation process for undergraduate research programs. The project is designed to incorporate qualitative and quantitative methodology to address issues related to the value of undergraduate research experiences, both for students and faculty, including the elements of good research experience.

The panel felt that the topic is critical to understanding the role of undergraduate research in the literature and at many institutions. Undergraduate research is also one vehicle for recruiting and retaining underrepresented groups. The panelists were encouraged by the fact that the project builds on collaborations already in existence and that all of the participant institutions had vested in the project.

The panel also had some concerns about the proposal. The investigators define undergraduate research as activities that lead to a publication, which they thought too narrow a definition. The panel suggested that, at some point, the study be expanded to include an institution with a significantly large minority population [Note: The program officer discussed this with the principle investigator who agreed to over sample underrepresented populations. Given that this is a pilot study, no new institutions were added.]

Based on the ratings and discussion of the panel review and the comments contained in the written reviews, the program officer recommended that the proposal be funded