

Major Research Instrumentation Program

Committee of Visitors - June 14-16, 2000

Summary of Findings and Recommendations

Overall the COV was very impressed with the MRI program and felt that the program has made effective use of the merit review process to generate a collection of awards that is:

- At the very good to excellent level of quality in its scientific and engineering content (Criterion 1);
- Appropriate with respect to award scope, size, and duration;
- Open and supportive of new investigators (higher success rate than across the NSF);
- Leading to important discoveries and new knowledge and techniques;
- Resulting in state-of-the art instrumentation being placed in appropriate laboratories across the research community (although not a large number of interdisciplinary activities are supported);
- Based on adequate reviews by persons with appropriate expertise;
- Absent of reviewer conflict of interest;
- Evaluated by reviewers with good geographic representation;
- Reviewed in a timely manner; and
- Represents a reasonable balance between high risk, multidisciplinary and innovative projects.

However, The COV felt that the characteristics of Merit Review Criterion 2 were less well addressed in the MRI program. They observed the following:

- In some cases, promise of implementation of Criterion 2 is considered by reviewers to variably fund or not to fund proposals;
- Some funded proposals address the issues of Criterion 2 quite well, while others may neglect the subject entirely;
- Often in winning proposals no mention is made of underrepresented groups in the integrative research and educational activities nor do the reviewers note this lack; and
- When a greater portion of the reviewers is female, closer attention is paid to Criterion 2.

The COV also made the following comments/recommendations:

- A greater effort must be made to encourage females and minorities to participate as proposers and reviewers.
- A greater effort must be made to encourage PI's from non-Ph.D. granting institutions and minority institutions to participate in the MRI program.
- The MRI program is maintaining a mix of large and small awards that is comparable to the submission rate of these proposals. The strategy of setting aside \$10 million as a pool for large instrumentation does seem to produce the kinds of results that would be desirable.

- Evaluation of GPRA Outcome Goal 2 is much more difficult given the data available. This is inherent in the program since few concrete results may have been achieved prior to submission of the final reports. In order to respond to GPRA Outcomes 1 and 2 in a meaningful way, the time frame for collecting data must be modified, e.g., random technical audits and extended reporting periods may be useful.
- GPRA Outcome Goals 3 and 4 are beyond the goals of the MRI program.
- It is impractical, given the nature of the instrumentation being developed under the MRI program, to anticipate more than a few partnerships between academic institutions and the private sector. The real excitement of the program seems to arise from the development proposals; therefore, methods to attract greater numbers of such proposals should be considered (e.g., reduce or eliminate the cost sharing requirement for development proposals).
- Information in the MRI solicitation regarding past success rates should be clarified to note the different success rates for lower requested amounts and higher requested amounts. This would aid PI's in preparing more targeted proposals.
- To encourage submission of MRI proposals from non-Ph.D. granting institutions, the MRI program should consider relaxing the restrictions on what is counted as institutional cost sharing.