



Office of Integrative Activities

Major Research Instrumentation

<http://www.nsf.gov/od/oia/programs/mri/>

Regional Grants Workshop 2006

October 23 -24, 2006

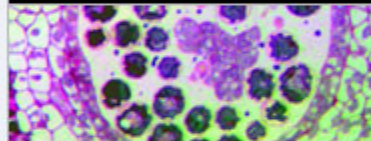
**University of Maryland at College Park
College Park, Maryland**



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Major Research Instrumentation Program

CONTACTS

Name	Dir/Div	Email
Joan M. Frye	OD/OIA	jfrye@nsf.gov

Contact 703-292-8040 or mri@nsf.gov with questions.

PROGRAM GUIDELINES

[05-515](#) Solicitation ([FAQs](#)) *(the deadline date for FY 2006 proposals has passed)*

DUE DATES

Full Proposal: **January 26, 2006**
Fourth Thursday of January annually thereafter.

AWARDS LIST

[2006](#) - [2005](#) - [2004](#) - [2003](#) - [2002](#) - [2001](#) - [2000](#) - [1999](#) - [1998](#) - [1997](#)

SYNOPSIS

The Major Research Instrumentation Program (MRI) is designed to increase access to scientific and engineering equipment for research and research training in our Nation's organizations of higher education, research museums and non-profit research organizations. This program seeks to improve the quality and expand the scope of research and research training in science and engineering, and to foster the integration of research and education by providing instrumentation for research-intensive learning environments. The MRI program encourages the development and acquisition of



Program Administration

- **MRI solicitation (NSF 05-515):** Published electronically on the NSF homepage; hard copy not available (new solicitation available end of October 2006); Other MRI resources available --
 - FAQ's
 - lists of MRI awards (1997-2006)
 - MRI presentations
- **Proposal Submissions via NSF FastLane system required**
- **Note:** At time of submission, each applicant to identify an NSF division pertinent to the content of the proposal



Purpose

■ The MRI Program

- Is designed to increase access to scientific and engineering equipment for research and research training in U.S. academic institutions.
- Seeks to improve the quality and expand the scope of research and research training in science and engineering, and to foster the integration of research and education by providing instrumentation for research-intensive learning environments.
- Encourages the development and acquisition of research instrumentation for shared use across academic departments, among research institutions, and in concert with private sector partners.



Goals

- Support the acquisition, through purchase, upgrade, or development, of major state-of-the-art instrumentation for research, research training, and integrated research/education activities at U.S. Institutions;
- Improve access to and increase use of modern research and research training instrumentation by scientists, engineers, and graduate and undergraduate students;



Goals Continued

- **Enable academic departments or cross-departmental units to create well-equipped learning environments that integrate research and education;**
- **Foster the development of the next generation of instrumentation for research and research training; and**
- **Promote partnerships between academic researchers and private sector instrument developers.**



Eligible Institutions

■ Ph.D. Granting Organizations

Academic organizations that have produced more than 20 Ph.D.s or D.Sci's in all NSF supported fields during the previous two academic years



Eligible Institutions Continued

- **Non-Ph.D. Granting Organizations**
 - **Two- and four-year colleges and universities that have produced 20 or fewer Ph.D.s or D.Sci's in all NSF supported fields during the previous two academic years**



Eligible Institutions Continued

- **Non-degree Granting Organizations**
 - **Independent non-profit research organizations, research museums, and consortia of eligible institutions**



2006 Overview

- **Instrumentation Acquisition or Development**
- **Two proposals for acquisition or development; a third for development; an institution may be part of a consortium**
- **Award Size--\$100,000 to \$2 Million**
 - (exceptions for non-Ph.D. granting institutions and for mathematical and social, behavioral and economic sciences)
- **Cost Sharing—None Required**
- **Deadline for Proposal Submission: Fourth Thursday of January**



Evaluation Criteria

- **Intellectual Merit**
- **Broader Impacts of the Proposed Activity**



Evaluation Criteria Continued

- **Additional Review Criteria:**
 - Plans for using the new or enhanced research capability in teaching, training or learning;



Evaluation Criteria Continued

- **Additional Review Criteria Continued:**
 - For instrument acquisition proposals:
Management Plan;
 - For instrument development proposals:
Management Plan;
 - For instrument development proposals:
Rationale for development of a new instrument.



2006 Proposal and Award Snapshot

- Number of Proposals Received by NSF: 769
- Dollars Requested: \$437,403,458
- Number of Awards: 233
- NSF Dollars Awarded: \$96,962,197



2006 Proposal and Award Snapshot Continued

- Average Award: \$416,147
- Number of Institutions that Participated: 413
- Success Rate: 30.3%



Proposal and Award Information 1998-2006

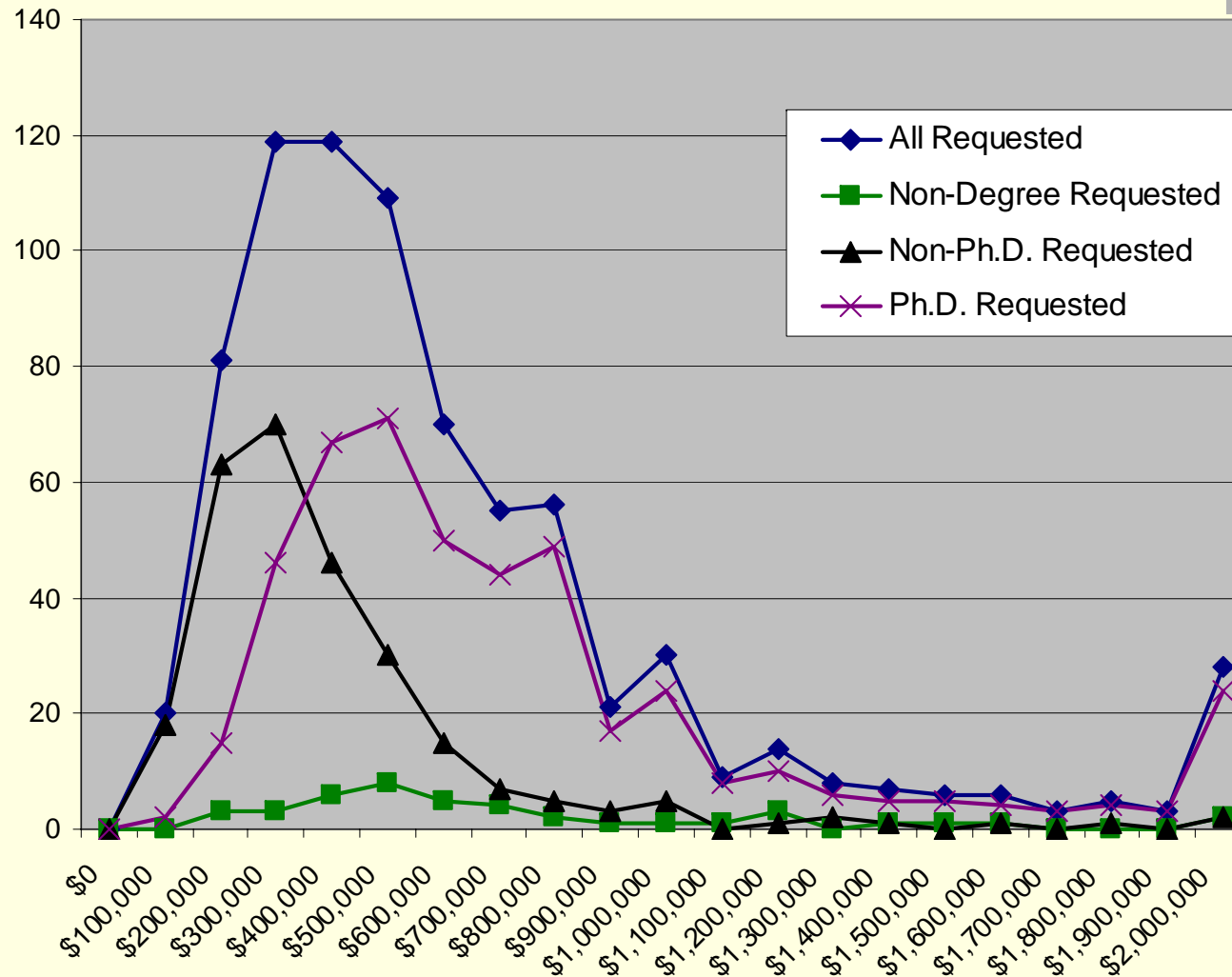
Fiscal Year	# Proposals	\$ Requested	# Awards	Total NSF Funding
1998	479	\$248,512,726	165	\$56,363,744
1999	472	\$261,520,174	166	\$56,772,169
2000	475	\$251,953,775	163	\$54,707,637
2001	741	\$305,490,586	311	\$78,715,649
2002	691	\$296,273,914	279	\$81,318,743
2003	757	\$351,192,737	280	\$91,040,768
2004	838	\$421,372,027	327	\$112,854,311
2005	784	\$473,034,186	256	\$95,572,528
2006^	769	\$437,403,458	233	\$96,962,197
TOTAL:	6,006	\$3,046,753,583	2,180	\$724,307,746

*includes MRI Congressional appropriations and directorate/office contributions

^pending proposals were assumed to be non-awards; includes only awards submitted directly to MRI program



Proposals by Dollars Requested, 2006



Means

All: \$568,795

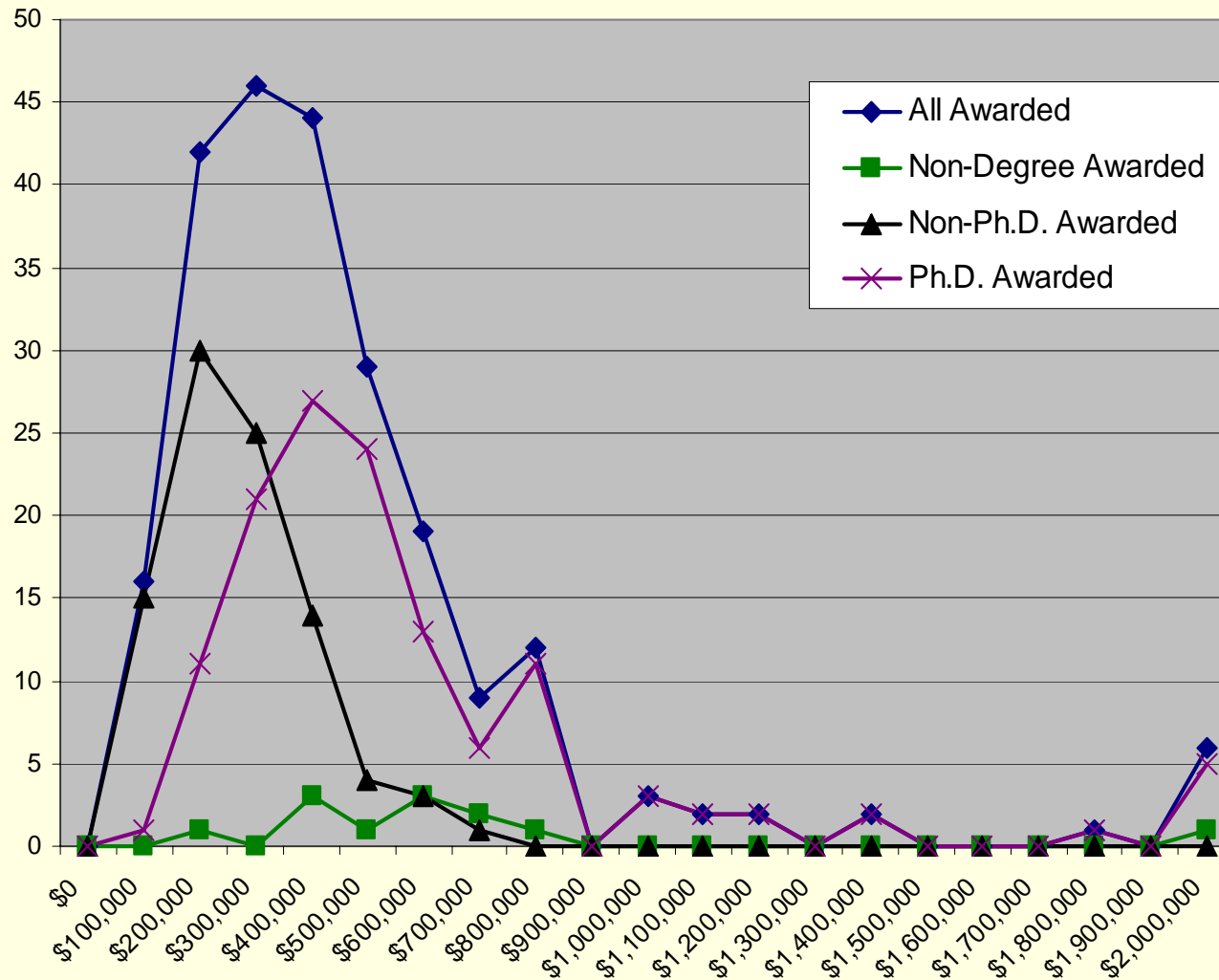
Non-Degree:
\$680,762

Non-Ph.D.:
\$349,665

Ph.D.: \$687,969



Award Amounts in 2006



Means

All: \$416,147

Non-Degree:

\$611,131

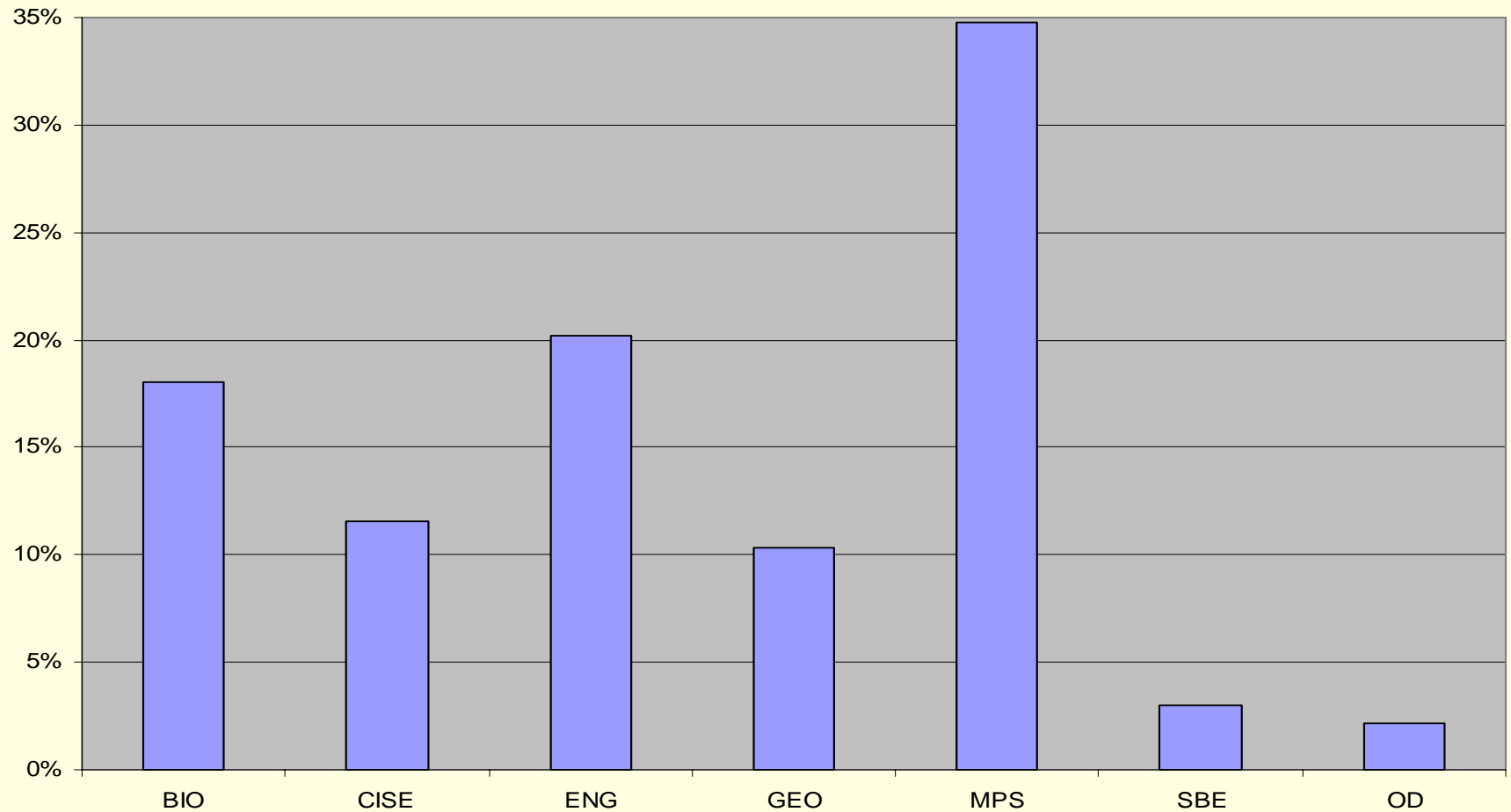
Non-Ph.D.:

\$224,664

Ph.D.: \$534,570

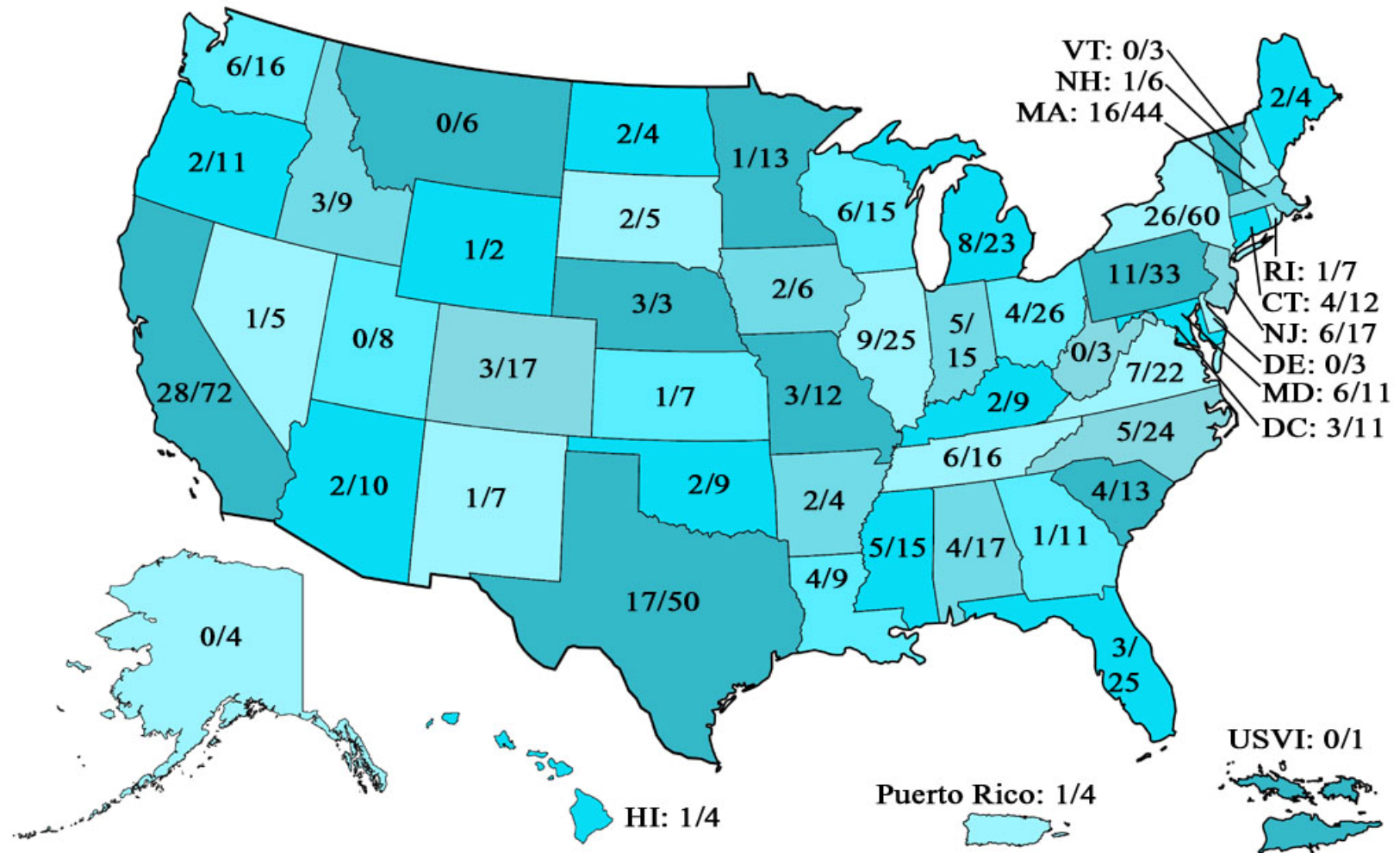


Awards by NSF Directorate, 2006





Number of Awards/Proposals by State, 2006





2002 – 2006 MRI EPSCoR Proposals and Awards

	Fiscal Year	2002	2003	2004	2005	2006
EPSCoR States	Proposals	152	160	166	167	179
	\$ Requested	\$62,564,719	\$69,248,428	\$83,644,817	\$104,226,081	\$103,056,869
	Awards	60	54	62	57	48
	\$ Awarded	\$14,251,375	\$12,820,977	\$21,862,288	\$21,551,693	\$14,413,179
	Success Rate	39.5%	33.8%	37.3%	34.1%	26.8%
All States	Proposals	691	757	838	784	769
	\$ Requested	\$296,273,914	\$351,192,737	\$421,372,027	\$473,034,186	\$437,403,458
	Awards	279	280	327	256	233
	\$ Awarded	\$81,318,743	\$91,040,768	\$112,854,311	\$95,572,528	\$96,962,197
	Success Rate	40.4%	37.0%	39.0%	32.7%	30.3%



Non-Ph.D. Granting Institutions

■ FY 2005

- Number of Proposals Submitted: 281
- Dollars Requested: \$97,697,185
- Number of Awards: 109
- MRI Dollars Awarded: \$25,829,731
- NSF Dollars Awarded: \$26,422,103

■ FY 2006

- Number of Proposals Submitted: 270
- Dollars Requested: \$94,409,449
- Number of Awards: 92
- MRI Dollars Awarded: \$19,478,024
- NSF Dollars Awarded: \$20,669,110



Non-Ph.D. Granting Institutions

Continued

■ FY 2005

- Success Rate: 38.8%
- Average MRI Award:
\$236,970
- Average NSF Award:
\$242,405
- Number of States
- Represented: 43*
- Number of Institutions
Represented: 206

■ FY 2006

- Success Rate: 34.1%
- Average MRI Award:
\$211,718
- Average NSF Award:
\$224,664
- Number of States
- Represented: 39*
- Number of Institutions
Represented: 192

*includes Puerto Rico



Minority Serving Institutions

■ FY 2005

- Number of Proposals
- Submitted: 79
- Dollars Requested: \$41,065,845
- Number of Awards: 26
- MRI Dollars Awarded: \$9,203,854
- NSF Dollars Awarded: \$9,241,854
- Success Rate: 32.9%
- Average MRI Award: \$353,994
- Average NSF Award: \$355,456
- Number of States: 21*
- Number of Institutions Represented: 52

* includes Washington, D.C. and Puerto Rico

■ FY 2006

- Number of Proposals
- Submitted: 66
- Dollars Requested: \$23,211,136
- Number of Awards: 24
- MRI Dollars Awarded: \$4,823,738
- NSF Dollars Awarded: \$5,564,581
- Success Rate: 36.4%
- Average MRI Award: \$200,989
- Average NSF Award: \$231,858
- Number of States: 15^
- Number of Institutions Represented: 41

^ includes Washington, D.C., Puerto Rico and U.S. Virgin Islands (USVI)



2005 Committee of Visitors (COV)

- In September 2005, a panel of ten external experts assessed both the process and the results of the MRI Program for years 2000 – 2004.

- Major findings of the COV:
 - MRI awards are consistently of high quality.
 - Increased attention is given to “broader impacts” by applicants, reviewers, and NSF program officers.
 - MRI portfolio is balanced among high-risk, multidisciplinary, and innovative projects.
 - MRI program meets all of the “ideas, tools and people” goals of the NSF Strategic Plan.



2005 Committee of Visitors (COV) *Continued*

- **Two Major recommendations of the COV:**
 - **Encourage the requirement of an explicit management plan for each instrument acquisition proposal.**
 - **Better documentation of the impact of awards on science and society for NSF reporting and programming purposes.**



Characteristics of a Strong MRI Proposal

- **Well-Planned, Well-Written Proposal**
 - Cohesive research and training plan
- **Appropriate Justification for the Requested Budget**
 - Solid, Well-Defined Research and Training Goals
 - Not a Laundry List of Items
 - Not Requesting More Than Needed
 - Limited Salary Requests
- **Collaborations, If Appropriate**



Characteristics of a Strong MRI Proposal Continued

- **Strong Research and Training Record of Principal Investigators and His/Her Team**
- **Well-Developed Management Plan**
 - **Facilities**
 - **People**
 - **Commitment**
- **Clearly Addressed NSF Review Criteria**
 - **Intellectual Merit**
 - **Broader Impacts**



Contact Information

Dr. Margaret E. M. Tolbert

Senior Advisor

OIA/OD/NSF

mtolbert@nsf.gov - 703-292-8040

Dr. Joan Frye

Staff Associate

OIA/OD/NSF

jfrye@nsf.gov - 703-292-8040



For Answers to Questions about the MRI Program:

mri@nsf.gov

For details on the MRI Program:

<http://www.nsf.gov/od/oia/programs/mri/>