**REQUEST FOR PREPROPOSALS**

**Mississippi Research Consortium Submission to the**

**National Science Foundation Experimental Program to Stimulate Competitive Research (EPSCoR) Research Infrastructure Improvement (RII-Track 1) Program**

**Overview:**

The Mississippi Research Consortium (MRC), comprised of the Chief Research Officers at Jackson State University, Mississippi State University, University of Mississippi, and the University of Southern Mississippi, invite preproposals for the upcoming National Science Foundation EPSCoR Request for Proposals.

The mission of EPSCoR is to assist the National Science Foundation in its statutory function "to strengthen research and education in science and engineering throughout the United States and to avoid undue concentration of such research and education". EPSCoR goals are to a) provide strategic programs and opportunities for EPSCoR participants that stimulate sustainable improvements in their R&D capacity and competitiveness, and b) advance science and engineering capabilities in EPSCoR jurisdictions for discovery, innovation, and overall knowledge-based prosperity.

**EPSCoR OBJECTIVES:**

The primary objective of EPSCoR is to stimulate research that is fully competitive in the disciplinary and multidisciplinary research programs of the National Science Foundation.

Specific EPSCoR objectives are to:

- catalyze key research themes that empower knowledge generation, dissemination, and application;
- activate effective jurisdictional and regional collaborations that advance scientific research, promote innovation, and benefit society;
- broaden participation in science and engineering (S&E) by institutions, organizations, and people within EPSCoR jurisdictions; and
- use EPSCoR for development, implementation, and evaluation of future programmatic experiments that motivate positive change and progression.

Pursuit of these goals and objectives bolsters the capacity of jurisdictions to:

- enhance discovery and learning through utilization of cyberinfrastructure and other evolving technologies;
- develop the diverse, well-prepared, internationally competent and globally engaged STEM workforce necessary to sustain the nation's competitive edge;
- facilitate knowledge generation leading to economic development; and

- expand the scientific literacy of all citizens, and disseminate to them the importance of STEM research and education.

The preproposals should incorporate NSF's focus of transformative research – "research that has the capacity to revolutionize existing fields, create new subfields, cause paradigm shifts, support discovery, and lead to radically new technologies," as well as the EPSCoR objectives listed above. Researchers may propose any appropriate thematic area. Previous themes are allowed, but are at neither advantage or disadvantage for the upcoming EPSCoR program.

Researchers are strongly encouraged to form partnerships among the four research institutions when preparing the preproposal.

The preproposal should be no longer than 8 pages (competitive funding information is not included in the 8 pages) from teams of investigators outlining existing or planned research projects with emphasis on the above mentioned. These preproposals will be used to determine the theme for the 5 year EPSCoR project. Financial details are not yet available, funding for the 5 year project is expected to be approximately $4M per year.

**The preproposals must contain the following elements, in the order presented here:**

1. **Cover Sheet** to Include:
   Name of Institution(s) Involved:
   Addresses of Institutions:
   Name of Faculty/Researchers W/E-Mail/Office Phone and Cell Phone/Mail Address:
   Title of Proposed Project:
   List Participating Departments:
   List Project Discipline(s):
   Project Abstract: (250 words maximum)

2. **Project Description:**
   **Science:** Describe the scientific research program. How it is cutting edge and how can national competitiveness be enhanced. Research should be aligned with the MRC's draft of the State's Science and Technology (S&T) Plan (attached). Please include the intellectual merit and broader impacts of your project. Describe any barriers that currently impede your progress.

   **Planned/Existing Research and its Relevance to Cyberinfrastructure:**
   The term "cyberinfrastructure" is broadly defined to include computer applications, services, data, networks, and many other components supporting science. In the EPSCoR preproposal the following definition will be used for 'Cyberinfrastructure': "Describes the new research environments that support advanced data acquisition, data storage, data management, data integration, data mining, data visualization and other computing and information processing services over the Internet. In scientific usage, cyberinfrastructure is a technological solution to the problem of efficiently connecting data, computers, and people with the goal of enabling derivation of novel scientific theories and knowledge."

**Education and Outreach:** Address your plans for K-12, undergraduate, graduate, informal science education, and professional development.

**Collaboration:** Describe the nature and the extent of your collaborations, keeping in mind that the initiative requires multi-institutional involvement. Partnerships with government agencies, national laboratories, and private industries are encouraged. Describe an organization chart and management plan.

**Facilities:** List current facilities available for developing this theme.

**Competitive Funding:** List current and pending support for each participant (standard NSF format, form attached).

**NOTE:** Please be mindful that if your proposal is selected after review by the MRC, you will need to address <u>all</u> the components listed in the solicitation (i.e. diversity, sustainability, workforce development, evaluation, etc.) during your presentation to the MRC. The most current EPSCoR Track I RFP is available at the following URL:
http://www.nsf.gov/pubs/2012/nsf12563/nsf12563.htm

**Assessment of PreProposals**: All preproposals will be reviewed first by the Chief Research Officer (CRO) at the lead PI's home institution. If approved, the preproposal will be submitted by the CRO for consideration by the MRC officers. Researchers with top ranked preproposals will be asked to make a presentation to the MRC representatives.

**Preproposal Submission:**
The preproposal, formatted as a single pdf document, should be e-mailed to the researcher's home institution's CRO **no later than the close of business (5:00 p.m.) on Monday, September 17, 2012**. An e-mail acknowledging receipt of the preproposal will be sent to the researcher from the CRO's office. Failure to receive an acknowledgement by noon on Tuesday, September 18, 2012 indicates that the preproposal has not been received and will not be considered for review.

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